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ABSTRACT BOOK

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#4504 : Left arm - V2 ECG lead misplacement: a largely unknown entity which can easily be misdiagnosed as a pulmonary embolism

Preferred format : Oral presentation

Authors:

Salman Qureshi (1), Louise Ballesty (1), Yarlini Ponnambolan (1), Sam Kuan (1), Richard Lynch (1)

1. Emergency Medicine, Midland Regional Hospital, Mullingar, Mullingar, IRELAND

Keywords: ECG, lead misplacement, pulmonary embolism

Abstract :

Left arm – V2 ECG lead misplacement: a largely unknown entity which can easily be misdiagnosed as a pulmonary embolism.

Introduction: Correct electrocardiographic (ECG) lead placement is essential for accurate ECG analysis. ECG lead misplacement does occur and, if unrecognized, can masquerade as pathology with the potential for erroneous diagnosis and unnecessary management. Left arm-V2 lead misplacement, for example, can easily be misdiagnosed as pulmonary embolism.

Aims: To determine if any significant changes in QRST morphology occurs in limb leads and V2 between normally placed and misplaced LA V2 leads.

Methods: Two ECGs, one normal the other with LAV2 misplacement were recorded in 75 patients. ECGs with bundle branch block, ventricular hypertrophy, axis deviation and those of poor quality were excluded (13 in total). Statistical analysis, with 2-tailed T-test and Wilcoxon signed-rank test was performed.

Results: 62 pairs of ECGs were included for analysis. There was a statistical significant difference in mean amplitude in S1 (0.75 versus 8.35; difference 7.65mm; 95%CI 6.3 to 8.9), Q3 (0.59 versus 3.39; difference 2.8; 95%CI 2.17 to 3.42) T3 (0.94 versus -1.9; difference 2.83; 95% CI 2.14 to 3.53) and R3 (5.34 versus 13.65; difference 8.3; 95%CI 6.87 to 9.73). The presence of S1Q3T3R3 (very deep S waves in lead I, deep Q, very tall R and deeply inverted T waves in lead III) was statistically significant for LAV2 misplacement. Statistically significant differences were noted throughout the limb leads.

Conclusion:

The presence of S1Q3T3R3 pattern appears to be pathognomonic for LAV2 misplacement. Healthcare professionals responsible for recording/interpreting ECGs need to be familiar with this, largely unknown entity, which can easily be misinterpreted as pulmonary embolism.

#4505 : Acute myocardial infarction in a young male with prothrombin gene mutation

Preferred format : ePoster

Authors:

Luis Ángel Mateos Vega (1)

1. ACUTE MEDICINE AND EMERGENCY DEPARTMENT, HOSPITAL CLÍNICO UNIVERSITARIO, Valencia, SPAIN

Keywords: clot, myocardial, infarction, prothrombin, thrombosis

Abstract :

G20210a mutation of prothrombin gene results in difficulty in degradation of prothrombin and favours a procoagulation state that increases the risk of thrombosis. Although it is a relatively frequent cause of venous thromboembolic disease, we present here a case report of myocardial infarction caused by coronary occlusion from a thrombotic clot in a patient with this mutation.

We received in the A&E department a 36-year-old male with previous history of knee injury followed by a pulmonary embolism. He was on acenocumarol and had the INR within normal limits. He complained of atypical chest pain of three-hour long. He had no changes in initial ECG, and blood samples and chest X-ray were performed following the initial examination. After a sudden worsening of his pain he suffered two episodes of cardiac arrest with ventricular fibrillation that were defibrillated with 200J discharge to defibrillate them, with ST elevation in the new ECG performed. The patient was trasferred to the Intensive Care Unit, where an episode of ventricular tachycardia was treated with IV amiodarone and magnessium sulfate. Cardiac catheterization was performed, finding an occlusion of the circumflex artery that was treated with a stent after previous administration of clopidogrel. He was discharged home 1 week later.

#4506 : Intravenous Caffeine versus Intravenous Ketorolac for the Management of Moderate to Severe Migraine Headache in the Emergency Department; a Randomized Controlled Trial

Preferred format : Oral presentation

Authors:

Alireza Baratloo (1), Alaleh Rouhipour (2), Mohammad Mehdi Forouzanfar (1), Saeed Safari (1), Benjamin Wolkin Friedman (3), Ali Abdalvand (4)

1. Emergency Department, Shoahadaye Tajrish Hospital,, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Pediatric Speciaist,, Private Researcher, Tehran, IRAN, ISLAMIC REPUBLIC
3. Department of Emergency Medicine, Montefiore Medical Center, , Albert Einstein College of Medicine, New York, USA
4. Department of Emergency Medicine, , University of Calgary, Calgary, CANADA

Keywords: Migraine Headache; Ketorolac; Caffeine; Pain Management; Emergency Department

Abstract :

Objective: Ketorolac is a standard agent for abortive management of migraine headache in the emergency department (ED). The objective of this study was to determine if intravenous caffeine is as effective as intravenous ketorolac for the treatment of moderate to severe migraine headaches.

Methods: This randomized double blind clinical trial was conducted between January and December 2014 in two EDs in Tehran, Iran. Patients who met International Classification of Headache Disorders, 2nd edition criteria for migraine were enrolled. Based on an online random number generator, patients received 60 mg caffeine citrate or 60 mg ketorolac infused intravenously over 10 minutes. Visual analog scales (VAS) were used to measure pain at baseline and one hour and two hours after infusion. Therapeutic success was defined as improvement of 3 points on the VAS without requirement of rescue medication. A sample size calculation determined the need for at least 102 patients.

Results: 193 patients were approached for participation and 110 patients were randomized. 55 patients were assigned to each group of whom 75.5 % were women. Baseline pain scores were comparable between the groups. Therapeutic success after 60 minutes was achieved by 63.6 % of patients in the caffeine and 70.1% of patients in the ketorolac group (p=0.23). After 120 minutes, 87.3 % of the caffeine group and 83.6% of the ketorolac group achieved therapeutic success (p=0.49). Subgroup analysis did not reveal any association between age or sex and outcome.

Conclusion: In this multi-center, randomized double blind ED study, intravenous caffeine was as effective as intravenous ketorolac for first line abortive management of acute migraine.

#4507 : Correlation of Central Venous Pressure with Venous Blood Gas Analysis Parameters; a Diagnostic Study

Preferred format : Oral presentation

Authors:

Alireza Baratloo (1), Alaleh Rouhipour (2), Saeed Safari (1), Mohammad Mehdi Forouzanfar (1), Sima Rahim Taleghani (1)

1. Emergency Department, Shoahadaye Tajrish Hospital,, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Pediatric Speciaist,, Private Researcher, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Shock, Septic; Central Venous Pressure; Blood Gas Analysis; Emergency Department

Abstract :

Introduction: This study was conducted to assess the correlation between the amounts of central venous pressure (CVP) with venous blood gas (VBG) analysis parameters to facilitate septic shock management in emergency department.

Methods: This diagnostic study was conducted from January 2014 until June 2015 in three main educational medical centers, Tehran, Iran. All patients with diagnosis of septic shock were enrolled and those with known heart failure, renal failure, initial CVP more than 8 cmH2O, and raising CVP more than 3 cmH2O following fluid challenge test were excluded. For selected patients, peripheral blood sample was taken for testing the VBG and anion gap (AG) was calculated. All mentioned parameters registered again after infusion of 20 cc/kg normal saline 0.9% in 30 minutes.

Results: Totally 93 patients with septic shock were enrolled including 63 males & 30 females. T he mean age was 72.53±13.03 and the mean Shock Index (SI) was 0.79±0.30. PH & AG showed significant reverse correlations with CVP, While HCO3 showed a significant straight correlation with CVP. These relations can be affected by the treatment modalities used in shock management as fluid therapy, mechanical ventilation & Vasopressor treatment.

Conclusion: It is likely that there is significant statistical correlation between VBG parameters with CVP, but for being clinically practical, still needs further research.

#4508 : Intravenous Caffeine for the Treatment of Acute Migraine: a Pilot Study

Preferred format : ePoster

Authors:

Alireza Baratloo (1), Alaleh Rouhipour (2), Nazanin Behnaz (3), Ahmed Negida (4)

1. Emergency Department, Shoahadaye Tajrish Hospital,, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Pediatric Speciaist,, Private Researcher, Tehran, IRAN, ISLAMIC REPUBLIC
3. Department of Ophtalmology, , Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
4. Faculty of Medicine,, Zagazig University, Zagazig, EGYPT

Keywords: Caffeine; Migraine without Aura; Emergency Treatment

Abstract :

Background: Caffeine has a long profile of use as an adjuvant therapy for headache and migraine. This study evaluates the safety and efficacy of intravenous Caffeine Citrate for patients with acute migraine headache.

Methods: In this single arm study, we enrolled 61 patients who were diagnosed with migraine according to International Headache Society Criteria. Patients received 60 mg caffeine citrate intravenously as a drip in about 10 minute. VAS pain scores were measured on baseline and one hour and two hours after caffeine infusion. Statistical analysis was performed by SPSS version 22. Wilcoxon and Mann-Whitney tests were employed to test differences in VAS pain score.

Results: The improvement in VAS pain score was >3 point change from baseline to one hour after IV infusion (P<0.001) and >5 point change from baseline to two hours after IV infusion (P<0.001). Patients, who received other medications before caffeine IV infusion, did not show better improvement after one hour (P=0.304) or two hours (P=0.926) than other patients.

Conclusions: IV infusion of 60 mg Caffeine citrate is safe and well tolerated. It achieved therapeutic success for patients with acute migraine headache after one and two hours. Further controlled studies are recommended.

#4510 : Patient Satisfaction Before and After Executing Health Sector Evolution Plan

Preferred format : ePoster

Authors:

Alireza Baratloo (1), Alaleh Rouhipour (2), Behrouz Hashemi (1), Saeed Safari (1), Mohammad Mehdi Forouzanfar (1)

1. Emergency Department, Shoahadaye Tajrish Hospital,, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Pediatric Speciaist,, Private Researcher, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Delivery of health care; Emergency service, Hospital; Patient satisfaction

Abstract :

Introduction: After long discussions, carrying out health sector evolution (HSE) plan began on May 5, 2014 throughout Iran. Shohadaye Tajrish Hospital, Tehran, was also included in this plan. This study aimed to evaluate the level of emergency department patient satisfaction, before and after running this plan.
Methods: This cross-sectional study analyzed the data extracted from a standard questionnaire filled out by the patients presented to the emergency department of Shohadaye Tajrish Hospital over 6-month periods before and after the beginning of HSE.

Results: 3665 patients were surveyed. After the execution of the plan, satisfaction decreased significantly regarding pre-discharge training ($p = 0.03$), hospitalization room condition ($p = 0.0002$), restroom sanitation ($p = 0.007$), waiting time to be visited by the physician ($p = 0.04$), accuracy and duration of physical examination ($p = 0.007$), feeling confident and desirable outcome ($p = 0.03$), commitment to religious and moral principles ($p = 0.01$), and handling financial affairs ($p = 0.03$).

Conclusion: Based on the results of the present study, after execution of HSE plan, patient satisfaction has decreased significantly regarding pre-discharge training, hospitalization room condition, restroom sanitation, timely visit of the physicians, accuracy and duration of physical examination, suggestions for wellbeing of the patient, handling financial affairs, and commitment to religious and moral principles.

#4511 : EVIDENCE OF MEDICAL STAFF EXPOSURE TO PROFESSIONAL RISKS AT THE AMBULANT CENTRE OF VLORE DURING THE PERIOD 2014 - 2015.

Preferred format : ePoster

Authors:

Denada Selfo (1), Skender Skenderi (2), Christos Chatzis (3), Majlinda Zahaj (1)

1. Lecturer, University of Vlora, Vlore, ALBANIA
2. Lecturer, University of Tirana, Tirana, ALBANIA
3. Lecturer, University of Crete Crecce, Crete, GREECE

Keywords: Key words: biosecurity measures,hospital waste management, professional risks

Abstract :

EVIDENCE OF MEDICAL STAFF EXPOSURE TO PROFESSIONAL RISKS AT THE AMBULANT CENTRE OF VLORE DURING THE PERIOD 2014 - 2015.

Denada Selfo1, Skender Skenderi2,Christos Chatzis3, Majlinda Zahaj4
University of Vlora1,*University of Tirana2*,*University of Crecce3*, *University of Vlora4*

Abstract

Aim:A study for extending the knowledge and information about evidencing of professional risks, use of biosecurity measures, hospital (or ambulant) waste management and the professional treatments from the medical staff in a country of Vlora. ***Material and Methods:***There was a questionnaire used for information gathering at this study. The questionnaire was self-administrated for the medical staff, Medical Centre “Shushice” of Vlora.The data was evaluated,structured and tabled with the SPSS method version 17.00 ***Results:***About 43% belonged to the age of 20-30 years,79% were females. About73% were with high education.54% of them share the ambulant wastes, 67% of the nurses are not happy with the hygienic and sanity conditions and 86% of them think that their centre needs reconstruction. About 92% of the nurses were vaccinated for prophylaxis before job acceptance. About 80% of the nurses admitted the absence of the needed materials for the safety preservation at work and for job performance. About 52% of the nurses applied the safety measures in the working environment. Most of them about 96% were informed about the professional risks.There was 61% of nurses who were drilled with needles during the injections. **Conclusion:**The use of protective elements especially the handles was applied by more than half of the nurses. This ascertains an increase of their use comparing to another study in 2013-2014 where only 40.5% of nurses had declared that they always use the personal protection elements.Shows an increase in the informing level comparing to year 2013-2014.

Key words: biosecurity measures,hospital waste management, professional risks

#4512 : EVIDENCE OF MEDICAL STAFF EXPOSURE TO PROFESSIONAL RISKS AT THE AMBULANT CENTRE OF VLORE DURING THE PERIOD 2014 - 2015.

Preferred format : Oral presentation

Authors:

Denada Selfo (1), Skender Skenderi (2), Christos Chatzis (3), Majlinda Zahaj (1)

1. Lecturer, University of Vlora, Vlore, ALBANIA
2. Lecturer, University of Tirana, Tirana, ALBANIA
3. Lecturer, University of Crete Crecce, Crete, GREECE

Keywords: Key words: biosecurity measures,hospital waste management, professional risks

Abstract :

EVIDENCE OF MEDICAL STAFF EXPOSURE TO PROFESSIONAL RISKS AT THE AMBULANT CENTRE OF VLORE DURING THE PERIOD 2014 - 2015.

Denada Selfo1, Skender Skenderi2,Christos Chatzis3, Majlinda Zahaj4
University of Vlora1,*University of Tirana2*,*University of Crecce3*, *University of Vlora4*

Abstract

Aim:A study for extending the knowledge and information about evidencing of professional risks, use of biosecurity measures, hospital (or ambulant) waste management and the professional treatments from the medical staff in a country of Vlora. ***Material and Methods:***There was a questionnaire used for information gathering at this study. The questionnaire was self-administrated for the medical staff, Medical Centre “Shushice” of Vlora.The data was evaluated,structured and tabled with the SPSS method version 17.00 ***Results:***About 43% belonged to the age of 20-30 years,79% were females. About73% were with high education.54% of them share the ambulant wastes, 67% of the nurses are not happy with the hygienic and sanity conditions and 86% of them think that their centre needs reconstruction. About 92% of the nurses were vaccinated for prophylaxis before job acceptance. About 80% of the nurses admitted the absence of the needed materials for the safety preservation at work and for job performance. About 52% of the nurses applied the safety measures in the working environment. Most of them about 96% were informed about the professional risks.There was 61% of nurses who were drilled with needles during the injections. **Conclusion:**The use of protective elements especially the handles was applied by more than half of the nurses. This ascertains an increase of their use comparing to another study in 2013-2014 where only 40.5% of nurses had declared that they always use the personal protection elements.Shows an increase in the informing level comparing to year 2013-2014.

Key words: biosecurity measures,hospital waste management, professional risks

#4514 : Factors affecting difficulty in extubation after initial successful resuscitation in cardiopulmonary arrest patients

Preferred format : Oral presentation

Authors:

YOUICHI YANAGAWA (1)

1. Department of Acute Critical Care Medicine, Shizuoka Hospital, Juntendo University, Izunokuni, JAPAN

Keywords: extubation, cardiopulmonary arrest, outcome

Abstract :

Purpose: We retrospectively investigated the factors affecting the difficulty of extubation after an initial successful resuscitation.

Methods: From October 2013 to July 2015, a medical chart review was retrospectively performed for all patients with cardiopulmonary arrest (CPA). The exclusion criteria included patients who experienced CPA in the hospital, patients with traumatic CPA, and those who died within a week and who did not undergo tracheal intubation in the course of the resuscitation. The subjects were divided into two groups: the difficulty in extubation (DE) group, which included patients who remained tracheally intubated for two weeks after their collapse; and the Control group, which included patients who could undergo extubation and who were free of tracheal intubation within two weeks after their collapse.

Results: There were 8 patients in the DE group and 12 patients in the control group. The rates of female patients, underlying pulmonary disease, flail chest and the average age in the DE group were significantly higher in comparison to the Control group. In contrast, the rate of patients who returned to consciousness and the survival rate were significantly lower in the DE group than in the Control group.

Conclusion: This study demonstrated that among the patients with OH-CPA who obtained spontaneous circulation and survived for more than one week, female, advanced age, underlying pulmonary disease, the complication of flail chest and persistent unconsciousness, were risk factors for difficult extubation.

#4516 : Mortality rate in alterated state of consciousness patients ; comparison between mode of patient arrival.

Preferred format : ePoster

Authors:

Laddawan Kiettikunwong (1), Nathida Sumatchotimaytha (1)

1. Emergency medicine, Rajavithi Hospital, Bangkok, THAILAND

Keywords: Alterated state of consciousness , mode of transportation , First responders , EMS , Private transportation , Mortality rate

Abstract :

Background: Emergency medical services (EMS) provide adequate pre-hospital treatment and transports patient to the appropriate hospital. Patient who has altered state of consciousness is emergent and need a proper management and transportation.

Objective: This study aims to determine mortality in altered state of consciousness patients with different mode of arrival.

Materials and Method: A retrospective chart review was performed for 200 consecutive alteration of consciousness patients presenting to Rajavithi hospital from January 2013 to December 2014. Patients with cardiac arrest, pediatric, pregnant and trauma were excluded. The patients were divided in three groups by mode of transportation. One-way ANOVA was used to determine the strength of correlation between demographic variables, as well as the variation between individual transportation.

Result: No statistically significance differences in mortality rate existed when compared between ALS 40.7% ,BLS 66.7% and private car 38.8%. ($p = 0.85$). Sepsis (37.5%) and neurological cause (21.5%) which top etiology, lead to alteration of consciousness. However the mean of GCS in patients who transported by ALS is significantly less than the others ($p = 0.001$). Modified early warning score (MEWS) is significantly higher, in patients transport by ALS, between death in hospital and discharge alive ($p = 0.047$, 95%CI -2.67; -0.02). It is the same as MEWS in patients who transport by private car, death in hospital had significant greater score than discharge alive ($p = 0.006$, 95%CI -3.19; -0.55).

Conclusion : The study shown higher mortality rate in BLS group but there was no statistically significant. The study also shown significantly less GCS score in patients transport by ALS group. Appropriate pre-hospital treatment and evaluation should be promoted in order to help EMS development in the future.

#4517 : Study on Epidemiological Situation of HIV / AIDS in Albania

Preferred format : ePoster

Authors:

Glodiana Sinanaj (1), Arjan Harxhi (2), Mikel Nakuci (2), Majlinda Zahaj (1), Brunilda Miftari (3), Brunilda Subashi (1), Denada Selfo (1), Rozeta Luci (1)

1. 1Department of Nursing, Faculty of Public Health., University of Vlore, Albania., Vlore, ALBANIA
2. 2Faculty of Technical Medical Sciences, , Service of Infection Disease., Tirane, ALBANIA
3. 2Faculty of Technical Medical Sciences, , Service of Infection Disease., Vlore, ALBANIA

Keywords: situation, HIV/AIDS, epidemiological, transmission.

Abstract :

Background: HIV continues to be a major global issue of public health that has received more than 34 million lives so far. Only in 2014, about 1.2 million people have died globally from causes related to HIV. Globally, by the end of 2014, the number of people living with HIV was 36.9 million, with 2 million new cases in 2014 alone. HIV infection is diagnosed through rapid diagnostic tests that detect the presence or absence of antibodies to HIV. These tests provide rapid results; essential for early diagnosis and treatment.

Aim: The evaluation of the epidemiological situation of HIV / AIDS in Albania.

Materials and methods: Data of this study were collected by the Institute of Public Health, Tirana as far as the spread of the virus in the population.

Results: From 1993 to November 2015 by registered 870 cases, of which 40 are children. Most of them are men, who make up 70 percent of those affected."In terms of distribution by gender HIV positive cases, 613 of them are male and 257 are female. Meanwhile, in 2015 they reported 63 men and 24 women diagnosed with HIV / AIDS ". Sexual way of transmission of the virus continues to dominate in our country, which is found in 94 percent of cases. Meanwhile, other ways are at low rates from mother to child transmission, as well as through blood transfusions. Of the 40 children affected, 31 of them have contracted the virus from the mother during pregnancy.

Conclusion: "The distribution by age group shows that in our country predominates 35-44 age group, followed by the age group of 25-34, which is a sexually active age group," further stated in the report of IPH. The first cases of those affected by what is known as the disease of the century in our country, appeared in 1993.During these years there were those who failed in the face of battle. Throughout this year they have killed 9 people, while by 1993 the number has gone to 161.

#4519 : Overcrowding. A task to solve.

Preferred format : Oral presentation

Authors:

Jiri Soupal (1), Jan Bydzovsky, MD, PhD.,Doc. (1), Jaroslav, MD Kratochvil (1)

1. Emergency Department, University Hospital Motol, Prague, CZECH REPUBLIC

Keywords: Overcrowding, ED, patient flow, time of treatment, waiting time, time to needle, time to intervention, time to bed, interdepartmental cooperation.

Abstract :

In the spring of 2015 University Hospital Motol in Prague opened whole new, larger and modern Emergency Department (ED). Most of the acute outpatient clinics in the hospital were closed and ED was designated as one and only place, thrue which all of the emergency patients come. Number of visits at the ED rose dramatically. So the doctors, nurses and administrators of ED experienced fist hand real crisis, which lasted for weeks and months. Crisis was by the most defined as boarding of patients in the deparment and overcrowding of waiting area and departmental space. Communication troubles and conflicts between ED staff and consultants from other services was daily bussiness. Personell was overwhelmed by patients and tasks, health care people used to "emergencies" started to feel under more pressure than bearable. At he same time complaints from patients (mostly about long times and lack of communication) skyrocketted. We went quickly thru the literature and tried to use some of the recommendations and experiences from it. Author of this presentation shares knowledge from the recent publications. Definition of the overcrowding, its symptoms and consequences are presented. Possible solutions, tips and trics are discussed. Finally author shows results from his department, where number of visits rose by 100% interanually as the new department was opened. Changes in work organization, changes in communication with other departments and push to get the whole hospital to understand the specifics of how the ED operates, push to cooperate, created momentum towards improvement. Our time to treat in the ED changed from almost 200 minutes in July 2015 to 80 minutes in February 2016. At the worst times we used the comparison to the McDonnalds fastfood service. In case of doubling of number of customers you either work twice faster, or need to invest in another unit with the same number of beds and personell. In our case, we, together with other departments, managed to work faster. Overcrowding and boarding is no more common, people are sensitive for signs of looming problem and manage to prevent it in most cases. Author describes specific steps which were put in place to shorten time to treat, steps taken to comfort and inform the waiting "crowd" and steps to prevent overcrowding and its consequences. Author shows results of statistics of patient flow over the mentioned period (June 2015 - February 2016) and presents our own research of patient satisfaction with waiting and treatment time from period before and after the measures taken place. In conclusion, worldwide phenomenon of ED overcrowding occurres in the heart of Europe too and thank to the shared experience and own work we (so far) managed to solve it. It is, nevertheless the lasting problem which will probably occur in any new ED in other places and which is the canary of the level of cooperation within the whole hospital.

#4522 : Inappropriate interpretation of high-sensitive troponin-I values is associated to non-occlusive coronary angiographies

Preferred format : ePoster

Authors:

Arturo J. Fuentes-Gómez (1), David González-Kladiano (1), Celso Montoya-González (1)

1. Emergency department, The American British Cowdray Medical Center, Mexico City, MEXICO

Keywords: Cardiac biomarkers, myocardial infarction, troponin I, high-sensitive troponin I, coronary angiography, delta approach

Abstract :

High-sensitive troponin assays, designed for the earlier myocardial infarction detection, have increased the false-positive rate for this disorders; so it is necessary an accurate selection of the individuals with high values that will benefit from coronary angiography. **Objective:** To evaluate the rate of angiographies without severe coronary occlusion between a conventional troponin-I (TnI) method and a high-sensitive troponin-I (hs-TnI) assay. **Methods:** A total of 128 patients from the emergency department with suspicion of non-ST segment elevation myocardial infarction, were retrospectively analyzed. In 64 patients were evaluated the initial values of conventional TnI, while in other 64 patients, hs-TnI was investigated. Following TnI measures were review, and decisions of angiography were categorized by the basal values and TnI elevations. **Results:** Conventional TnI method showed 42% of angiographies without severe coronary occlusion; hs-TnI assay had a higher sensibility, and 31% of angiographies wasn't associated to severe occlusions. However, while the area under the ROC curve was examine for both methodologies, conventional TnI, due to its specificity, tended to higher results. When elevation criteria (absolute delta, and relative delta) were approached for hs-TnI, all the angiographies demonstrated severe coronary occlusions. **Conclusions:** A single hs-TnI measurement wasn't more accurate than conventional TnI method in terms of the area under the ROC curve, so elevation criteria must be considered when hs-TnI is used, in order to decreased the angiographies without coronary occlusion.

#4523 : Multiple Cystic Lung Disease in an Adolescent Boy

Preferred format : ePoster

Authors:

Ozgur Sogut (1), Demet Tas (1)

1. Department of Emergency Medicine, Haseki Training and Research Hospital, Istanbul, Turkey, Istanbul, TURKEY

Keywords: Multiple cystic lung disease, adolescent, giant lung cyst, pneumothorax

Abstract :

Background: Cystic lung disease is defined as intrapulmonary air-containing multiple cysts surrounded by sharply demarcated thin walls. Although cystic lung disease is rare, incidental detection has increased significantly in recent years by screening using computed tomography. We present a case report of a multiple cystic lung disease diagnosed with chest radiography and thoracic computed tomography.

Case: A 15-year-old previously healthy boy was involved in a traffic accident and presented to our emergency department (ED) with complaints of chest pain and mild shortness of breath. On physical examination, he had complained for the last 2 hours of the right hemithorax pain in the fifth intercostal space radiating to the right midaxillary line. He had no past medical or surgical history. Chest x-ray demonstrated doubtful multiple thin-walled cystic lesions in the right lung. Computed tomography (CT) scan of thorax revealed a well- defined thin-walled, and 9.97 x 8.78 cm in diameter giant air cyst occupying the right upper lobe parenchyma with multiple air-space cysts. The patient was finally diagnosed as a multiple cystic lung disease and he underwent elective thoracic surgery for cyst removal.

Conclusion: Patients with cystic lung disease may be asymptomatic or present with nonspecific symptoms, such as chronic cough or shortness of breath, as it was in this case. They are at increased risk for spontaneous pneumothorax. Hence, surgical treatment of multiple cystic lung disease plays a crucial role in the prevention of pneumothorax.

#4525 : Critical incident debriefing after failed paediatric resuscitation and childhood death: a review of the literature

Preferred format : Oral presentation

Authors:

Craig Swinburne (1)

1. Department of Paediatrics, Wishaw General Hospital, Wishaw, UK

Keywords: critical incident debriefing, debriefing, resuscitation, death, children, paediatric

Abstract :

Critical incident debriefing after failed paediatric resuscitation and childhood death: a review of the literature

Dr Craig Swinburne, Department of Paediatrics, Wishaw General Hospital, Wishaw, Scotland, UK.

Introduction

Approximately 6000 children and young people aged between 0 and 19 years die in the UK annually, with approximately two thirds of deaths occurring in infancy. Although childhood death in the UK is a rare event, the resuscitation and death of a child remains one of the most stressful critical incidents encountered by healthcare staff. Critical incident debriefing aims to reduce the adverse sequelae associated with such events while also enhancing patient care.

Purpose

To review current practices in critical incident debriefing following failed paediatric resuscitation and childhood death.

Materials and Methods

A literature search was performed using OVID, Web of Science, MIDIRS, CINAHL and EMBASE databases. A total of 21 papers were identified, 5 of which were deemed relevant and included in the literature review. A further 13 papers were identified independently of the literature search and were included for review.

Results

This literature review explores current practices in critical incident debriefing following failed paediatric resuscitation and childhood death. The review focuses on the aims of debriefing, debriefing techniques, patterns in the use of debriefing, indications for debriefing, attitudes towards debriefing and barriers to debriefing.

Conclusions

Critical incidents involving children carry increased risk of adverse outcome for health care staff. Emergency department staff in particular are known to be at increased risk of developing adverse psychological sequelae. Despite a lack of evidence to support its use it is clear that health care staff support debriefing and find it beneficial. Not only does it support health care staff but it also helps to enhance patient care. Ideally debriefing should occur within several days following a critical incident, should be led a senior member of staff with appropriate training in debriefing and should address medical, emotional and psychological issues. Further research is required to address the lack of evidence regarding the use of debriefing interventions in paediatric practice.

#4530 : Impact of prehospital critical physician team on time on scene and transport time following major trauma: analysis of a national trauma registry

Preferred format : Oral presentation

Authors:

Alistair Maddock (1), Alasdair Corfield (2), Michael Donald (3), Hearns Stephen (4), David Fitzpatrick (5)

1. Emergency Medical Retrieval Service, ScotSTAR, Glasgow, UK
2. Emergency Department, Royal Alexandra Hospital, Paisley, UK
3. Emergency Department, Ninewells Hospital, Dundee, UK
4. Emergency Department, Royal Alexandra Hospital, Glasgow, UK
5. Research & Development, Scottish Ambulance Service, Stirling, UK

Keywords: emergency medical services; mortality; prehospital care; critical care; trauma; registry

Abstract :

INTRODUCTION

Studies in several countries suggest there may be a benefit to patients who receive physician-led prehospital critical care, especially more seriously injured patients. Data about the effect of physician-led prehospital care on on-scene time and time to hospital arrival is mixed with some studies showing a longer scene and transport time for physician led teams. Scotland has three prehospital critical care teams; we wished to investigate whether treatment by such a team was associated with an increased on-scene time.

METHODS

We performed a retrospective cohort study of patient data from the Scottish Trauma Audit Group, covering all trauma patients admitted to hospitals in Scotland, for the four calendar years 2011-14. We compared those who were seen by a physician-led prehospital critical care team to those who received standard ambulance care. We excluded patients seen by other physicians, most of whom cannot provide critical care. The primary outcome measure was time from first ambulance resource arrival to departure of patient from scene.

EXCLUSIONS

Patients seen by non critical care physicians (e.g GP)

Patients pronounced life extinct at scene

RESULTS

A total of 13,135 patients were included in initial dataset. Of these 13,135 eligible patients, 603 patients were seen by a non-critical care doctor and in 2280 cases, it was not recorded whether care was from ambulance service or other staff, leaving a total of 10,252 patients available for analysis. Of these patients, 503 (4.9%) were seen by a prehospital critical care team and 9749 (95.1%) received standard ambulance care. Complete time series data was available for 74.4% (7627 / 10252) of eligible cases.

Analysis showed the mean time spent on scene for the group of patients where a prehospital critical care team attended was 53.7 minutes versus 32.3 minutes where no prehospital critical care team was in attendance. The difference was 21.4 minutes (95%CI 19.0 to 23.8,$p<0.001$).

There were significant other differences between those patients attended by a versus those receiving standard ambulance care. Those attended by a prehospital critical care team were likely to be younger (44.5 v 54.8 years, $p<0.001$), were more severely injured (median ISS 17 v 9, $p<0.001$) and were more likely to receive intubation at the scene of the incident (30.0% v 0.9%, $p<0.001$). They were also more likely to be transported by air (30.0 v 2.8%, $p<0.001$)

DISCUSSION

Our data shows attendance of a physician led prehospital critical care team in associated with a longer on scene time. However the group attended by prehospital critical care physicians are more seriously injured and have a larger number of invasive procedures done. Geographical location was not recorded in this study. More air transports suggests more remote location and possibly longer waiting on scene for resources to arrive.

Our data is based on the time of initial ambulance resource arrival (which may not be the prehospital critical care team) until patient leaves scene. Some of the on-scene time may reflect wait for a prehospital critical care team to arrive due to dispatch issues.

PAIN MANAGEMENT / ANALGESIA / ANESTHESIA

Jiri Soupal

#4532 : Combination of a low dose ketamin and midazolam in adult ED trauma patients.

Preferred format : Oral presentation

Authors:

Jiri Soupal (1), Jan Bydzovsky, MD, PhD.,Doc. (1), Jaroslav, MD Kratochvil (1)

1. Emergency Department, University Hospital Motol, Prague, CZECH REPUBLIC

Keywords: ketamin, midazolam, analgesia, sedation, opioids, NSA, VAS, monitoring, non anesthesia physician, monitoring, hemodynamic stability, respiration

Abstract :

Authors discuss practice of monitoring, treatment and evaluation of pain in trauma patients at the emergency department. They describe their departmental policy of pain management. They discuss known literature and studies of ketamin and benzodiazepine usage in emergency department settings. They describe new departmental ketamin/midazolam recommendations. They show how ketamin is safely used in case of opioid/NSA treatment failure or as first line analgosedation for trauma patients with pain. They describe suitability of this combination for small procedure (drilling, repositttion etc.) analgosedation.They show compliance of non anesthesiologist physicians in ED team to this policy. Further, they show change of pain level, change in levels of patient and personnel satisfaction with this new policy implementation. They discuss occurrency of side effects and possible pitfalls. Finally, they discuss further development of analgesia and analgosedation in their ED (ultrasound guided regional anesthesia).

#4535 : The effects of preoperative and postoperative coagulation profile on outcome of endovascular aortic repair performed for ruptured abdominal aortic aneurysm

Preferred format : ePoster

Authors:

Yohei Kawatani (1), Kurobe Hirotsugu (2), Hayashi Yujiro (1), Taneichi Tetsuyoshi (1), Ito Yujiro (1), Nakamura Yoshitsugu (1), Suda Yuji (1), Tetsuya Kitagawa (2), Hori Takaki (1)

1. Cardiovascular surgery, Chiba-Nishi General Hospital, Matsudo, JAPAN
2. Cardiovascular surgery, Tokushima University Hospital, Tokushima, JAPAN

Keywords: ruptured abdominal aortic aneurysm, endovascular aortic repair, partial thromboplastin time, intensive care unit, coagulopathy

Abstract :

[Introduction] Presently, endovascular aortic repair (EVAR) is reported to be an effective treatment for ruptured abdominal aortic aneurysm (rAAA). However, the mortality associated with rAAA remains high. Previous reports indicated that a major cause of death in patients with rAAA is hemorrhage due to coagulopathy following open repair for rAAA. The factors that might affect survival in patients with rAAA who undergo EVAR are not well known. The aim of this study was to evaluate the effects of perioperative and postoperative coagulation status on survival in patients with rAAA following emergency EVAR.

[Methods] In this retrospective study, we reviewed patients who were admitted to our hospital with enhanced computed tomography (CT)-confirmed rAAA between October 2013 and December 2015. Patients with symptomatic abdominal aneurysm without evidence of hemorrhage in CT images were excluded. In our facility, EVAR is considered as the first-line surgical treatment for rAAA. However, if EVAR was contraindicated, open repair was performed. Blood tests were performed at the time of admission to the emergency department (preoperative status), at the time of admission to the intensive care unit (ICU) postoperatively. Major coagulopathy was defined as an international normalized ratio or activated partial thromboplastin time (APTT) ratio of ≥1.5.

[Resurts] Twenty-five patients who underwent EVAR were enrolled. (No patients died in the ER, 1 was considered not fit for surgery and 46 went to theatre. Of 46 cases, 25 underwent EVAR.) The mean patient age was 76.4±9.92 years. The male:female ratio was 18:7. Eighteen patients experienced postoperative shock. The mean operation time was 115±32.5 minutes. Blood transfusion: red cell concentrates, 10.0±5.70 units; fresh-frozen plasma, 4.4±3.3 units; and platelet concentrate, 5.5±13 units. Three patients died of abdominal compartment syndrome within 24 postsurgical hours. An additional 2 patients died between 24 hours and 30 days postsurgically; 1 patient died due to respiratory failure and 1 due to cancer. Twenty patients (80%) survived. None of the patients had a major coagulopathy preoperatively, whereas 9 (36.0%) presented with major coagulopathy postoperatively. Although preoperative prothrombin time (PT), APTT, and major coagulopathy were not observed, postoperative APTT and major coagulopathy were associated with 24-hour survival [Survived : Non-survived 38.9±8.7:108.7±63.4 P=0.006(APTT), 6:3 P=0.037(major coagulopathy)] and 30-day survival [Survived : Non-survived 38.1±7.9: 95.7±57.9 P=0.002 (APTT), 5:4 P=0.010 (major coagulopathy)]. APTT was significantly greater in patients who died compared with those who survived at both 24 hours [Survived : Non-survived 11.9±9.2: 75.0±58.9 P=0.006] and 30 days [Survived : Non-survived 11.3±8.9: 62.7±54.1 P=0.002]. Hemoglobin, hematocrit, and platelet counts were not significantly different between those who survived and those that died.

[Discussion] Preoperative APTT, PT, and major coagulopathy were not observed. However, APTT on admission to ICU was significantly longer in patients who did not survive. Additionally, postoperative major coagulopathy was more frequently observed in patients that did not survive. Moreover, the differences between preoperative and postoperative APTT or major coagulopathy were significantly higher in non-survivors suggesting that progressive coagulopathy might have strong adverse effects on survival.

[Conclusion] Postoperative APTT and major coagulopathy were asocciated with mortality.

#4538 : Does Psyche Pain Manifest as Agitation in the Emergency Setting? A Pilot Study

Preferred format : Oral presentation

Authors:

Zun Leslie (1), Downey Lavonne (2)

1. Emergency Medicine, Sinai Health System, Chicago, USA
2. Health Policy, Roosevelt University , Chicago, USA

Keywords: Psyche pain, agitation, psychiatric patients

Abstract :

Objective- The objective was to determine a patient's level of psyche pain when they present to an Emergency Department (ED) and whether there was a relationship between this psyche emergency Department and whether there was a relationship between this psyche pain and the patient's level of agitation.

Methods – This was a prospective study using a convenience sample of 100 patients presenting to an ED with a psychiatric complaint. This study was conducted in an urban, inner city trauma center with 55,000 ED visits a year. After obtaining consent, a research fellow administered validated tools for assessing agitation, Brief Agitation Tool (BAM), Positive and Negative Syndrome Scale-Excited Component (PANSS), Agitation Calmness Evaluation Scale (ACES), Psychological Pain Assessment Scale, Mee-Bunney Psychological Pain Assessment – MBPPAS and a self-assessment of agitation at admission. SPSS version 22 was used for statistical analysis and the study was IRB approved.

Results-A total of 74 patients were enrolled at this time. The most ED diagnosis was depression, schizophrenia or bipolar disorder. Majority of the patients were African-American (59%), falling in the 25-44 year old age range (56%), 52% male and 48% female. Psyche pain as rated by MRPPAS as marked (18.9%) or moderate (67.6%). The self-reported tool demonstrated 20% none, 16% mild 21% moderate and 42% marked level of agitation. The agitation rating varied by the tool with the self-reported level of agitation having the highest correlation with level pf psyche pain ($p<.05$).

Conclusion-Psychiatric patient frequently present to the emergency department with a high level of psyche pain and high level of self-reported agitation. This correlation may signal the need to address a patient's level of psyche pain and agitation early in the evaluation process.

#4539 : Comparison of Self-Administered Post Traumatic Stress Disorder Tool vs. Researcher Administered Tool in the Emergency Department

Preferred format : Oral presentation

Authors:

Zun Leslie (1)

1. Emergency Medicine, Sinai Health System, Chicago, USA

Keywords: PTSD, Self-Administered,

Abstract :

Objective: The purpose of this study was to determine whether patients in the emergency department would utilize a self-administered posttraumatic stress disorder (PTSD) assessment and referral vs. a researcher administered tool to establish their level of risk for PTSD and seek assistance.

Methods: This was a convenience sample of patients, consenting and assenting, 12 years and older, who presented with a non psychiatric illness, to a level one inner city adult and pediatric Emergency Department. The survey, a validated four question PTSD self assessment and referral tool, was randomized so that half of the patients completed the survey on their own and half were assisted by research fellow in completing the survey. Those who screen positive on the tool were contacted one week later to determine if they have scheduled an appointment or were seen for a follow-up appointment. This study was IRB approved.

Results: A total of 299 participants completed the survey, half (149) of which were self administered. The total amount of participants who tested positive for PTSD was 35% (105). Fifty in both groups tested positive. There was a significant difference (.01) between those who self administered the tool and those who had the tool administered in relationship to whom was more likely to follow up with behavioral health referrals. Of those that tested positive for PTSD symptoms, only 20% (22) followed up with referrals, the majority of which had self administered the tool. Self-referral made contact (40) more frequent that those who were researcher administered (18).

Conclusions: These results reveal that 35% of the participants tested positive for PTSD. Out of those that test positive only 20% followed up with referrals, the majority of which had self

#4541 : Femoral nerve palsy, a rare presentation of Wunderlich syndrome

Preferred format : ePoster

Authors:

James Barrowman (1), Nirmal James (1)

1. National Health Service, The Royal Gwent Hospital, Newport, UK

Keywords: Wunderlich's syndrome, dialysis, sontaneous renal haemorrhage

Abstract :

Introduction

This is a case report of a 59 year old gentleman who presented after becoming acutely unwell whilst receiving dialysis. Presenting symptoms were left abdominal pain, with left hip and knee weakness and paraesthesia. The patient recieved dialysis three times a weak for renovascular disease secondary to hypertension. Other past medical history included a failed renal transplant, splenectomy, cerebrovascular accident and atrial fibrillation for which he takes warfarin. The patient was tender in the left lumbar region but was not peritonitic. Neurological examination of the lower limbs revealed some paraesthesia to light touch over the left thigh and markedly reduced power. Power in the left hip and knee was reduced to 2/5 using the Medical Research Council scale and 4/5 in the ankle. On initial venous blood gas (VBG) the lactate was 6.2 despite a haemoglobin of 119 and an INR 1.6. The patient was haemodynamically unstable and repeat VBG showed an acute drop in haemoglobin to 102. Initial differential diagnoses included a leaking abdominal aortic aneurysm, ischaemic bowel and discitis. Contrast computed tomography (please see images) revealed Wunderlich syndrome with spontaneous left perirenal haemorrhage. The haemorrhage had extended to the left iliopsoas region, causing compression of the femoral nerve and this was the reason for his neurology. The patient underwent left renal artery embolisation with transfusion and improved on the high dependency unit. His neurology fully resolved following his procedure.

What is Wunderlich syndrome?

Wunderlich syndrome (WS) is a clinical condition defined as a spontaneous renal bleeding of non traumatic origin, contained within the subcapsular and perirenal spaces. The most common underlying cause is renal tumor (angiomyolipoma, angiosarcoma, renal cell carcinoma, oncocytoma), others include vascular causes, renal infection or calculus and secondary systemic diseases. The main risk factors are haemodialysis and anticoagulant therapy. Hemorrhagic tendency in hemodialysis patients is related to bleeding diathesis due to end stage renal disease and the use of heparin for the dialysis circuit. Classically it presents with acute flank pain, tender palpable mass and clinical hemodynamic deterioration (hypovolemic shock). These symptoms are defined as the Lenk's classic triad. However, the clinical manifestations can be varied and nonspecific.

Clincal significance

As mentioned above, spontaneous renal haemorrhage is often a difficult clinical diagnosis. This case represents an atypical presentation with quite pronounced neurology. Physicians should ensure that they do not become too distracted by these findings and concentrate their attention on the more pressing matters, in this case the development of shock. Renal haemorrhage should be considered in all patients on chronic haemodialysis receiving anticoagulation who present haemodynamically unstable or with a progressive anaemia. These patients require an abdominal CT and renal angiography to establish the method of treatment.

Management

Management options include a conservative approach (bed rest, transfusion and withdrawal of anticoagulation therapy), interventional radiology or surgery. This case illustrates the safe and successful application of interventional radiology renal artery embolisation in the management of nontraumatic renal hemorrhage in a hemodialysed patient.

#4546 : A rare case of a paratracheal mass requiring emergency interventions: An infected tracheal diverticulum

Preferred format : ePoster

Authors:

Shota Akabane (1), Jun Kawachi (1), Ryuta Fukai (1), Rai Shimoyama (1), Hiroyuki Kashiwagi (1), Hidemitsu Ogino (1), Kazunao Watanabe (1)

1. General surgery, Shonan Kamakura General Hospital, Kamakura, JAPAN

Keywords: airway management, infection, trachea, paratracheal mass, CT

Abstract :

Recently, progression of radiological imaging has revealed various asymptomatic abnormalities than ever. Tracheal diverticula are relatively rare entities and found incidentally on radiological imaging such as CT scan. We present the case of an infectious tracheal diverticulum presenting as a paratracheal mass requiring emergency interventions.

A 65-year-old male nonsmoker presented with a fever, lower neck pain and aggravation of dyspnea for a week. His enhanced CT scan demonstrated that trachea was displaced by a paratracheal mass with a well-defined thin wall. His respiratory status was so urgent that emergency intubation was performed and surgical drainage of the abscess was carried out as well. His CT scan performed 4days after admission demonstrated the shrinking abscess and he was extubated and discharged 7days after admission without any complication.

We found out two important clinical issues. First, an infectious tracheal diverticulum can present as a paratracheal abscess impairing airway. Second, CT scans is helpful for the diagnosis of this condition. Most patients of a tracheal diverticulum itself have no symptoms. When symptoms occur (sometimes with infection), neck pain, chronic cough, dysphagia, odynophagia, hoarseness or hemoptysis are common. This is the first report describing an infectious tracheal diverticulum presented as a paratracheal mass impairing airway and required emergency interventions such as intubation or surgical drainage. The CT features of an abscess are low-attenuation masses with a well-defined thin wall that usually enhances after intravascular administration of contrast materials. His CT scan performed 4 years before obtained the proof that the mass was originated from a tracheal diverticulum. This is the first report describing a tracheal diverticulum can progress to an abscess on CT scan as well.

Though there are several differential diagnoses detected as a paratracheal mass, this case is clinically important that can require emergency interventions. Also, recent progression of CT scan has revealed various asymptomatic abnormalities including tracheal diverticula. This case also suggests follow-up of such abnormalities can be a clue to obtain the diagnosis.

#4547 : Follow-up review of the impact of national jaundice guidance (NICE CG98) on inappropriate attendances to a paediatric emergency department

Preferred format : Oral presentation

Authors:

Xue-En Chuang (1), Peter Heinz (2)

1. University of Cambridge Clinical School, N/A, Cambridge, UK
2. CUHFT, Addenbrooke's Hospital, Cambridge, UK

Keywords: Neonatal jaundice, attendances, NICE

Abstract :

Background

NICE guidelines (NICE CG98) launched in May 2010 on neonatal jaundice mandate quantitative bilirubin testing in every neonate noticed to be visibly jaundiced. The guidelines were implemented locally in August 2011, and consequently, caused a significant surge in the number of attendances to our paediatric emergency department (ED) for bilirubin level assessments, straining emergency services significantly, as seen in a review done in 2012. Transcutaneous bilirubinometers were purchased for local midwifery teams to enable quantitative bilirubin testing in the community. This study was undertaken to review the impact of the NICE guidelines and the provision of trancutaneous bilirubinometers since.

Materials

Review of hospital episode statistics from November 2014 to August 2015 as recorded on EPIC and comparison of ED attendances against the local birth rates and inpatient admissions with neonatal jaundice as a diagnosis; and comparing this against a similar review of the data undertaken in 2012. Review of the proportion of admissions and bed days for feeding and observation compared to phototherapy and septic screens.

Results

From the previous review done in 2012 in the department, pre-guideline implementation saw an average of 14.5 patients per month present to the paediatric ED with jaundice, rising dramatically to an average of 49 patients per month post-guideline implementation. Local birth rates remained stable at about 490 births per month. Over the same time period, admission of neonates to a paediatric inpatient ward with jaundice did not rise significantly at approximately 15 admissions per month. Over the period of November 2014 to August 2015, with the introduction of transcutaneous bilirubinometers for community midwives, which allows for quantitative assessment of bilirubin levels in the community, the attendance of patients to the paediatric ED with jaundice has fallen back to baseline of an average of 13.5 patients per month (Fig. 1). This is assuming that the local birth rate remained stable. Of these attendances, 15.5% were recalls to ED for serial serum bilirubin readings. Of these recalls, 25% were recalled for two serial bilirubin tests, while the other 75% were recalled once. Of these patients, most of them had an initial presentation of jaundice alone with no other worrying features (e.g. lethargy, fever, loss of weight). All these patients were discharged with no further follow-up.

Conclusion

Before the implementation of national guidelines, a careful assessment and anticipation of its downstream effects is required. Simple investigations made available in the community will help mitigate attendances to the emergency department, and will help reduce healthcare costs and inconvenience to patients and families. Similarly, providing, encouraging or enabling utilisation of services in the community that prevent the initial problem will help in reducing attendances at the ED and admissions for observations and support services that are already available in the community.

#4548 : The First Use Of Pralidoxime In a Child With Rivastigmine Poisoning

Preferred format : ePoster

Authors:

EYLEM ULAŞ SAZ (1), ALI YURTSEVEN (1), MEHMET ARDA KILINÇ (2), FERHAT SARI (3), HASAN AĞIN (3)

1. Pediatric Emergency Medicine, Ege University School of Medicine, Izmir, TURKEY
2. Pediatric Intensive Care Medicine, Ege University School of Medicine, Izmir, TURKEY
3. Pediatrics, Dr.Behçet Uz Çocuk Hastalıkları Ve Cerrahisi Eğitim Ve Araştırma Hastanesi, Izmir, TURKEY

Keywords: Rivastigmine, Poisoning, Pralidoxime

Abstract :

The aim of this report is to describe the successful use of pralidoxime in pediatric patient who accidentally ingested 12 mg of rivastigmine and presented to the emergency department (ED) with weakness, drowsiness, hyporeactivity to environmental stimuli and full cholinergic syndrome. Case report The patient presented to the Emergency Department (ED) two hours after a suspected ingestion of rivastigmine. He was sleepy but oriented and cooperative, hypotonic, hyporeflexic and a Glasgow Coma Score of 13 (E3M6V4). Laboratory tests showed a low plasma cholinesterase levels of 2141U/L(normal range 5300-12.900 U/L), hyperglycemia (251 mg/dL), and leucocytosis with neutrophilia (21,900/mL, 75.2% neutrophils). Only two pediatric cases of rivastigmine poisoning have been reported in the literature and there are no prior reports of using pralidoxime in the management of this poisoning. In the present case intravenous pralidoxime (30mg/kg) was administered twice at the 5th and 6th hour of ingestion for nicotinic and central effects. There is reasonable theoretical science to suggest pralidoxime in case of acetylcholinesterase inhibitör toxicity . We conclude that observed clinical improvement in weakness temporally associated with pralidoxime administration. Increased plasma cholinesterase activity following pralidoxime administration also make it useful in these poisoning.

#4562 : Hypovolemic shock in a patient with spontaneous kidney haemathoma.

Preferred format : ePoster

Authors:

Luis Ángel Mateos Vega (1)

1. ACUTE MEDICINE AND EMERGENCY DEPARTMENT, HOSPITAL CLÍNICO UNIVERSITARIO, Valencia, SPAIN

Keywords: shock, hypovolemic, haemathoma

Abstract :

I present here the a case of a 72-year-old patient with acute onset hypovolemic shock secondary to spontaneous haemathoma in the right kidney. It is a particular one, because the patient's complain were two presyncopal episodes in the context of fever up to 39ºC, cough and sputum for the last 3 days, so the initial management was to rule out pneumonia.

After anamnesis, physical exploration and initial blood sample were performed, he suffered a sudden onset of tachypnea and reduction in conciousness level. Remarkably, in the exploration his limbs were cold and in gasometry he had a fall of 2 g/dL in haemoglobin level in 30 minutes. In order to prevent cardiac arrest, intubation was performed and vascular resuscitation both with fluids and norepinephrine through a central vein access. Bedside ultrasound revealed no significant findings, so a computed tomography scan was performed, giving the diagnosis and the cause of the shock. At laboratory results was remarkable an INR of 16 (the patient was on regular acenocumarol).

After being transferred to the ICU, embolisation of the source was made. 2 weeks later he is still recovering in the ICU.

There are some key points I find interesting about this case:

-Differential diagnosis of shock.

-Intubation to avoid cardiac arrest.

-Central vein puncture as a skill for Emergency Physicians.

#4564 : Development of a collaborative competency-based emergency nursing education program in Region Sjaelland, Denmark

Preferred format : Oral presentation

Authors:

Shelley Calder (1), Jette Jensen (2), Poul Mossin (3), Gitte Juul Hansen (3), Tove Fuglevig (4), Stive Lovise Nielsen (4), Tom Hansen (5), Christina Ørsted Rasmussen (5), Iben Riis (2), Peter Schliemann (6), Meaghan Cussen (1), Jonathan Edlow (1)

1. Department of Emergency Medicine, Beth Israel Deaconess Medical Center, Boston, USA
2. Department of Emergency Medicine, Slagelse Hospital, Slagelse, DENMARK
3. Department of Emergency Medicine, Koge Hospital, Koge, DENMARK
4. Department of Emergency Medicine, Holbaek Hospital, Holbaek, DENMARK
5. Department of Emergency Medicine, Nykobing Falster Hospital, Nykobing Falster, DENMARK
6. Regional Healthcare Authority, Region Sjaelland, Denmark, Soro, DENMARK

Keywords: Emergency nursing, competencies, skills stations, emergency medicine education, synergy model

Abstract :

Emergency nurse skills-based education in Region Sjaelland, Denmark is not standardized between its four hospitals, resulting in variability of emergency nursing practice. To address this lack of standardization and raise overall competency levels, emergency nursing leaders from Region Sjaelland partnered with nurse specialists from Harvard Medical Faculty Physicians at Beth Israel Deaconess Medical Center, forming a task force to develop a standardized approach to regional ED nurse education. 290 nurses who staff the four EDs in Region Sjaelland, which serve a population of 817,000, will participate in the regional program.

Initially, a needs assessment was conducted to assess nurse competency in 202 essential ED nurse clinical and administrative skills. Nurses and their supervisors were asked to rate skills competency on a scale of 0 to 4, with proficient being a score >=3. On average, nurses scored themselves proficient in 20.8% of skills; while leadership scored their nurses as proficient in 30% of skills. At the time of the survey, 26% of staff nurses felt they were not adequately prepared to perform their job without supervision.

The task force identified the AACN'S Synergy Model as a theoretical framework for their work. Synergy occurs when emergency nurses competencies align with the needs of the patients they care for. To address the regional competency gap, the task force decided to implement a standardized educational program, that uses skills stations, taught during "nurse competency days," to review and validate skills. In the first year, 34 competencies and assessments will be validated through 5 themed skills stations, taught during competency days scheduled at each hospital. A team of 32 nurse trainers completed a regional train-the-trainers course and will facilitate the education. Additional basic or lower risk competencies will be addressed through eLearning, simulation, and frontline education.

Through the empowerment of the task force, Region Sjaelland has developed the first standardized, competency-based emergency nursing education program in Denmark.

#4570 : Implementation of a pre-hospital intubation register. Data collection of indications, methods, success rates, and complications of pre-hospital intubations.

Preferred format : ePoster

Authors:

Steffen Herdtle (1), Sebastian Lang (2), Jens Reichel (1), Wilhelm Behringer (1), Christian Hohenstein (1)

1. Department of Emergency Medicine, University Hospital of Jena, Jena, GERMANY
2. Department of Anaesthesiology and Intensiv Care, University Hospital of Jena, Jena, GERMANY

Keywords: Intubation, pre-hospital, register, indications, methods, success rates, complications, emergency medical services

Abstract :

Background:

In pre-hospital settings there exist some data of indications, methods, success rates, and complications of pre-hospital intubations. But there exist no standard data collection in the german speaking countries. Aim is to get standard data to give evidence about pre-hospital intubations.

Methods:

A standardized web-based questionaire has been created. There is asked eg. for qualification of performer, success rate, method, indication, complication and other options in case of no success.

Results:

The data collection homepage can be found under www.intubationsregister.de. All data can be analysed by master admin. Individual logins for each emergency service base allow local admins to check there own data. Both, analysis of general and local data is anonymous.

Conclusions:

The implementaion of a pre-hospital intubation register is an easy and quick possibility to collect standardized data. This data can be used for eg quality management.

#4586 : Cerebral Oximetry monitoring during 3%HTS infusion in intubated pediatric patients with isolated Head Trauma in a PED.

Preferred format : Oral presentation

Authors:

Thomas Abramo MD (1), Lydia Washer MD (1), Gregory Albert md (2), Todd Maxson (3), Jon Orsborn MD (4), Nicholas Porter MD (4), Elizabeth Storm MD (1), Zhuopei Hu MS (5)

1. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA
2. pediatric neurosurgery, University of Arkansas School of Medicine, little rock, USA
3. pediatric trauma surgery, University of Arkansas School of Medicine, little rock, USA
4. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock, USA
5. Biostat for Division of Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA

Keywords: Cerebral Oximetry 3%HTS, Head trauma,

Abstract :

Altered cerebral physiology, pathology, and Increase ICP can be detected by cerebral oximetry in numerous pediatric ED studies. In intubated pediatric ED traumatic brain injury (TBI)patients detecting & response to treatment for the alter cerebral physiology and ICP is solely by cardiovascular monitoring and GCS which has major flaws. In pediatric TBI head trauma patients with increased ICP, 3%HTS therapy is a standard therapy for increased ICP but assessing its effect on intubated pediatric TBI patient's cerebral physiology by cerebral oximetry has never been reported.

Objective: In isolated pediatric TBI PED patients who received 3% HTS (5 ml/kg), analyze their cerebral oximetry changes in correlation to their 10 minutes before and 10, 20 minutes post 3% HTS infusion.

Methods

ED observational convenience study of intubated pediatric isolated TBI patients with positive cerebral pathology by CT-scan(epidural, subdural, TBI) , 3% HTS infusion and cerebral oximetry monitoring. Patient's left and right cerebral oximetry readings 10 minutes before 3%HTS infusion and 10 & 20 minutes after 3%HTS infusion. Patients were further sub-group by their rSO2 initial readings left, right or both rSO2 initial readings: abnormal cerebral physiology rSO2 80 & normal cerebral physiology rSO2 60-80

Results

207 patients enrolled, age 2.9(1.14,6.9), epidural 28.5%, subdural 84.5%, TBI only 7%, GCS 7(6,8), time to first 15% rSO2 change was 1.1 minute (0.5,1.8). Figure 1

Conclusions

3%HTS infusion produced significant cerebral oximetry changes in isolated pediatric intubated TBI patients with abnormal cerebral physiology, increased ICP and pathology. Changes in Cerebral Oximetry readings from the 3%HTS was rapid 1.1 minutes (0.5,1.8). In intubated isolated pediatric TBI ED patients with increased ICP from brain injury, cerebral oximetry can detect the effects of 3%HTS on these patient's increase ICP and abnormal hemispheric cerebral physiology. Further investigation is warranted.

#4587 : Cerebral oximetry monitoring in assessing Cerebral Physiology changes in non-intubated pediatric isolated TBI ED patients receiving 3% HTS

Preferred format : Oral presentation

Authors:

Thomas Abramo MD (1), Shane McKinney MD (2), Gregory Albert md (3), Todd Maxson (4), Jon Orsborn MD (5), Nicholas Porter MD (5), Elizabeth Storm MD (1), Zhuopei Hu MS (6)

1. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA
2. Pediatric Emergency Medicine, University of Arkansas School of Medicine, littler rock, USA
3. pediatric neurosurgery, University of Arkansas School of Medicine, little rock, USA
4. pediatric trauma surgery, University of Arkansas School of Medicine, little rock, USA
5. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock, USA
6. Biostat for Division of Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA

Keywords: cerebral oximetry , non-intubated pediatric TBI, TBI

Abstract :

In altered traumatic brain injury (TBI) patients, the current ED monitoring skills for detecting and assessing increased ICP and therapeutic response is inconsistent due healthcare provider's clinical assessment variability. Cerebral oximetry can detect acute changes in cerebral physiology, pathology, and ICP changes. . Pediatric Cerebral rcSO2 normal ranges 60- 80%. rcSO2 < 60%, or rcSO2 >80%, and interhemispheric side differences > 10% reflect abnormal cerebral physiology & increase ICP. 3% HTS therapy has been used in ED non-intubated TBI showing clinical benefit but no objective cerebral physiology effect change. Assessing HTS effect on intubated TBI cerebral physiology changes is done only invasively in ICU.ref 1 Assessing 3% HTS effects in altered non-intubated ED-TBI patients with cerebral pathology (epidural or subdural) or without by cerebral oximetry has never been investigated.

Objective: Assessing in altered non-intubated isolated TBI patients who received therapeutic doses of 3% HTS (5 ml/kg) with simultaneously cerebral oximetry readings (rcSO2) and GCS changes compared to their pre & post 3% HTS infusion times.

Methods: PED observational convenience study of altered (GCS < 14) non-intubated TBI patients with CT-scan and clinical decisions for 3% HTS infusion had simultaneous cerebral oximetry monitoring during their 3%HTS infusion. Patient's cerebral oximetry & GCS changes were compared at 10 min before, and 10, 20 min after 3%HTS infusions. Patients were subgroup and analyzed by their rSO2 initial readings:
1. Abnormal Cerebral Pathology: rSO2 < 60 or >80,
2. Normal Cerebral Pathology: rSO2 60-80.

Results: Age 3.96(2.3, 8.4), All TBI groups GCS changes before & after 3%HTS were 10(9,10) & 13(13,14) , GCS difference 4(3,4) $p < 0.0001$. 3%HTS infusion time from start to the first 15% change in Left & Right rSO2 was 1.5 minutes(1.1, 2.0). Table 1

Conclusions: This preliminary study has demonstrated the ability of Cerebral Oximetry to detect the real-time effects of 3%HTS on the altered non-inutbated TBI patient's cerebral physiology in an ED. In isolated non-intubated altered TBI PED patients with or without abnormal cerebral pathology (epidural and or subdural) the 3%HTS effect on their cerebral physiology as defined by cerebral oximetry changes were highly significant and correlated with GCS changes. Cerebral Oximetry monitoring has shown its capabilities as an objective neuro-assessment and monitoring tool in altered non-intubated TBI patient's cerebral physiology and response to therapy. This study along with our prior studies further substantiate cerebral oximetry’s utilization in euro-emergencies and neuroresuscitation and a standard neuro-monitoring tool in the ED.

1.Lumba-Brown.: 3%HTS as a therapy for pediatric concussive pain: a randomized controlled trial of symptom treatment in the emergency department Pediatr Emerg Care. 2014 Mar;30(3):139-45

#4588 : The Effect of Ketamine on Cerebral Physiology as detected by Cerebral Oximetry during rapid sequence intubation (RSI) of critically ill Pediatric patients.

Preferred format : Oral presentation

Authors:

Thomas Abramo MD (1), Samuel Selby MD (1), Gregory Albert md (2), Todd Maxson (3), Jon Orsborn MD (4), Nicholas Porter MD (4), Elizabeth Storm MD (1), Zhuopei Hu MS (5)

1. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA
2. pediatric neurosurgery, University of Arkansas School of Medicine, little rock, USA
3. pediatric trauma surgery, University of Arkansas School of Medicine, little rock, USA
4. Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock, USA
5. Biostat for Division of Pediatric Emergency Medicine, University of Arkansas School of Medicine, little rock , USA

Keywords: Ketamine, Pediatrics, Sepsis, RSI, Respiratory Failure

Abstract :

Ketamine is avoided in rapid sequence intubation (RSI) of trauma patients because of an assumption it causes increase intracranial pressure (ICP). However two recent studies showed that there was no increase in intraocular pressure (IOP), and it was therefore assumed there was no increase in ICP either. An IOP change has never been shown to change cerebral physiology. Cerebral oximetry studies have established it can correlate with acute alter cerebral physiology and ICP changes. The effect of ketamine on cerebral physiology in pediatric patients who have had respiratory failure or sepsis has not been studied. Cerebral oximetry studies have shown normal hemispheric cerebral physiology rSO2 is 60-80% with a 10% mean variance. Abnormal cerebral physiology has been demonstrated to be as rSO2 < 60 or > 80 and/or side differences > 10.

Objective:

To analyze ketamine's effect on cerebral physiology during RSI of patients with sepsis or respiratory failure by utilizing cerebral oximetry in the Pediatric ED (PED).

Methods:

An observational convenience study of patients intubated in the PED with sepsis or respiratory failure who had: bilateral cerebral oximetry (q 5 sec) placed and ketamine was used as an induction agent. We analyzed rSO2 10 min before & then 10 and 20 min after ketamine along with cerebral blood volume index (CBVI) and compared to < 10% & 20% variance. rSO2 side differences > 10 and patients with rSO2 80 were analyzed as this is considered abnormal cerebral physiology.

Results:

The maximum change on the left was 8.9%(SD+11.6%) and right was 8.7%(SD+9.7%). Overall, the Left, Right rSO2, CBVI and heart rate changesat all points during data collection were less than 10% (p=0.99). Figure 1

Conclusions:

Patients with sepsis or respiratory failure who underwent RSI with ketamine showed no alteration in their cerebral physiology based on cerebral oximetry. The normal and abnormal cerebral oximetry (rSO2 & CBVI) for 10 and 20-minute changes were significantly < 10% variance. Since ketamine is used in adult trauma investigating ketamine's effect on pediatric trauma cerebral physiology by cerebral oximetry is warranted.

#4591 : Termination of idiopathic sustained monomorphic ventricular tachycardia by synchronized electrical cardioversion during pregnancy

Preferred format : ePoster

Authors:

LEE SungMin (1), Kim HyunChang (2), Song Kyoung Hwan (3)

1. Department of Emergency medicine, Chonnam National University Hospital, Medical School, Gwangju, KOREA, REPUBLIC OF
2. Department of Emergency medicine, Gwangju Veterans Hospital, Gwangju, KOREA, REPUBLIC OF
3. Department of Emergency medicine, Chonnam National University Medical School, KS Hospital, Gwangju, KOREA, REPUBLIC OF

Keywords: Idiopathic ventricular tachycardia; Synchronized cardioversion; Pregnancy

Abstract :

Termination of idiopathic sustained monomorphic ventricular tachycardia by synchronized electrical cardioversion during pregnancy

Sung Min Lee, MD, Hyungchang Kim MD, Kyoung Hwan Song, MD.

Arrhythmia is one of the most common cardiac complications encountered during pregnancy. However, idiopathic sustained monomorphic ventricular tachycardia (VT) during pregnancy is rare. A-31-year-old pregnant woman at 20 weeks of gestation presented progressive with palpitations and episodes of agitation. An initial 12-lead electrocardiogram (ECG) showed normal sinus rhythm. However, 30 min after emergency room (ER) presentation, she complained of complain chest pain. The following ECG showed wide complexs monomorphic VT. We attempted administration of an antiarrhythmic drug. However, she refused any medication because of the concern regarding any adverse effect on the fetus. Therefore, we conducted synchronized electrical cardioversion 8 times. After the eighth synchronized cardioversion at 200 J, the ECG showed sinus tachycardia. The fetal condition was monitored by ultrasonography, and no adverse events were observed. We present the case of successful synchronized electrical cardioversion performed in a woman at 20 weeks of gestation because of sustained symptomatic VT.

#4628 : The comparison injection lidocaeine and morphine effect in the acute pain control due to limbs fracture in patients referred to emergency of shohadaye haftom tir hospital

Preferred format : Oral presentation

Authors:

Seyed mohammad Hosseini kasnavieh (1), Seyed hossein shaker (1), Sakineh beiki hasan (1), Mohammad reza Yasinzadeh (1), gholamreza masoumi (1), Hassan Amiri (1), saeed abbasi (1), Nader Tvakoli (1), Samana Nabi (1)

1. Iran University of Medical Sciences, Tehran, Iran, Iran University of Medical Sciences, Tehran, Iran, tehran, IRAN, ISLAMIC REPUBLIC

Keywords: lidocaeine , morphine , acute pain control , limbs fracture

Abstract :

Introduction :The first objective is to provide patient comfort and acute pain managment in the emergency department .followed to prevent the negative physiological responses so this study to comparision injection lidocain and morphine effect in the acut pain control due to limbs fracture in patent referred to emergency department of shohday haftetir hospital

Materials and Methode :In this randomised double -blind clinical traial 'all patents 18 to 65 years old Rasoul Akram hospital in 1393 with limb fractures and without a history of kidney disease 'liver and heart (ischmic heart deasese and arrhytmias) to complet A sample of the syudy will be required .Patients withe a history of sensitivity to lidocaine and morhine; illiterate patients and patients who can not speak (lack of awareness) and patient who have been excluded Prnnmaynd written consent.patient are randomly divided into two groups.For a group Aydvkayyn injection (mg/kg5/1) and another group of morphine injection (mg/kg1/0) is injected as a single dose .Vital signs'pain and other injected as a single dose .Vital signs'pain and other symptoms are at 5'10'15 and 30 and data record at the checklist then data will be analyzed 'using SPSS' VERSION 21

Resalts: The mean age of patients receiving morphine intravenously to 35/65+-12/35 years and in patients receiving intravenous lidocaeine to 35/20+- 11/77yearse Repeated Measurement test showed that differences the average severity of pain according to VAS scale significancly between the study periods respectivly in the two groups receiving morphine and lidocainseen (P=0/0001 and P=0/0001)

Conclusion:according the results can be concluded that lidocaine compared withe injection of morphine analgesic effects desirable and more efective and havr fewer side effects than morphin 'lidocaine injection .so this study suggests lidocaein as the first choice analgesia in trauma patents

Keywords: lidocaeine 'morphine ' acute pain control 'limbs fractures

#4645 : Diagnostic biomarkers for ischemic stroke: a meta-analysis

Preferred format : Oral presentation

Authors:

Thomas Monbailliu (1), Saïd Hachimi-Idrissi (2), Joline Goossens (3)

1. MD, University Ghent, Varsenare, BELGIUM
2. MD, PhD, FCCM, University Ghent, Ghent, BELGIUM
3. PhD, University Ghent, Ghent, BELGIUM

Keywords: Ischemic stroke, stroke, hemorrhagic stroke, stroke mimics, diagnosis, biomarkers, biochemical markers, blood markers, meta-analysis.

Abstract :

Objectives

The development of a diagnostic biomarker test would have a major impact on the care of stroke by facilitating earlier and more accurate identification of ischemic stroke patients, thus increasing the number of patients receiving thrombolytic treatment. Therefore the aim of this study is to perform a meta-analysis regarding the use of biomarkers that are able to distinguish ischemic stroke patients from healthy controls, stroke mimics and hemorrhagic stroke patients.

Design and methods

A comprehensive literature research was carried out to collect studies reporting the use of blood biomarkers for stroke in humans. Data was extracted from the studies that met the inclusion criteria of this meta-analysis. The meta-analysis was performed using the Review Manager 5.3 software. Differences in biomarker levels between the two comparison groups were expressed as P-value and for each meta-analysis the I^2-value was used to estimate the potential heterogeneity among studies. Results were regarded as statistically significant if the P-value was <0.05.

Results

We identified 140 studies describing biomarkers to diagnose ischemic stroke. Data could be extracted from 40 studies that met the inclusion criteria. In total 26 biomarkers were examined in this meta-analysis, however only two (BNP and S100B) were able to significantly differentiate ischemic stroke patients from healthy controls, stroke mimics and hemorrhagic stroke patients. GFAP, a biomarker reported to have high diagnostic accuracy for differentiating HS patients from IS patients, was not able to differentiate these comparison groups in this meta-analysis.

Conclusions:

Considering the many limitations interfering with the results of this meta-analysis and the questionable additional value of a blood-based biomarker test beyond clinical assessment and neuroimaging, the widespread use of biomarkers in a diagnostic test for IS seems unlikely. However, biomarkers may still have an additional role to the current clinical modalities of clinical assessment and imaging. They may be especially useful in cases of remaining diagnostic uncertainty or when less experienced health-care personnel have to diagnose IS. In this case, the use of the protein biomarkers brain natriuretic peptide and S100 calcium-binding protein B could be recommended as a result from this meta-analysis. In order to make studies more eligible for a meta-analysis in the future, this paper also proposed a study design suitable for diagnostic biomarker studies for IS.

#4706 : Which fingers should we perform two-finger chest compression technique with when performing cardiopulmonary resuscitation on an infant in cardiac arrest?

Preferred format : ePoster

Authors:

Je Hyeok Oh (1), Young Sinn Kim (1), Chan Woong Kim (1), Sung Eun Kim (1), Dong Hoon Lee (1), Jun Young Hong (1)

1. Department of Emergency Medicine, Chung-Ang University College of Medicine, Seoul, KOREA, REPUBLIC OF

Keywords: Cardiopulmonary Resuscitation, Infant, Fingers, Hand

Abstract :

This study compared the effectiveness two-finger chest compression technique (TFCC) performed using the right *vs*. left hand and the index-middle *vs*. middle-ring fingers.

Four different finger/hand combinations were tested randomly in 30 healthcare providers performing TFCC (Test 1: the right index-middle fingers; Test 2: the left index-middle fingers; Test 3: the right middle-ring fingers; Test 4: the left middle-ring fingers) using two cross-over trials. The “patient” was a 3-month-old-infant-sized manikin. Each experiment consisted of cardiopulmonary resuscitation (CPR) consisting of 2 min of 30:2 compression: ventilation performed by one rescuer on a manikin lying on the floor as if in cardiac arrest. Ventilations were performed using the mouth-to-mouth method. Compression and ventilation data were collected during the tests.

The mean compression depth (MCD) was significantly greater in TFCC performed with the index-middle fingers than with the middle-ring fingers regardless of the hand (95% confidence intervals; right hand: 37.8–40.2 *vs*. 35.2–38.6 mm, $P = 0.002$; left hand: 36.9–39.2 *vs*. 35.5–38.1 mm, $P = 0.003$). A deeper MCD was achieved with the index-middle fingers of the right versus the left hand ($P = 0.004$). The ratio of sufficiently deep compressions showed the same patterns. There were no significant differences in the other data.

The best performance of TFCC in simulated 30:2 compression: ventilation CPR performed by one rescuer on an infant in cardiac arrest lying on the floor was obtained using the index-middle fingers of the right hand.

#4707 : Effects of bed height standardisation using the rescuers' average knee height during in-hospital cardiopulmonary resuscitation

Preferred format : ePoster

Authors:

Je Hyeok Oh (1), Tae Soon Park (1), Dong Hoon Lee (1), Chan Woong Kim (1), Sung Eun Kim (1), Jun Young Hong (1)

1. Department of Emergency Medicine, Chung-Ang University College of Medicine, Seoul, KOREA, REPUBLIC OF

Keywords: Cardiopulmonary Resuscitation, Beds, Posture

Abstract :

Objective: This study evaluated whether chest compression in a standardised in-hospital cardiopulmonary resuscitation (CPR) setting can be performed as effectively by using the rescuers' average knee height as by kneeling beside a patient lying on the floor.

Materials and methods: We devised the following standardised in-hospital CPR setting. First, bed height was fixed at 70 cm. Second, the gap between the bed and a step stool was set to the average knee height of the CPR team members (45 cm). Thirty-eight medical doctors on the CPR team each performed 2 min chest compression in tests 1 (experiment setting) and 2 (kneeling on the floor) in random order (cross-over trial). A Little Anne was used as the simulated cardiac arrest patient. Chest compression parameters, such as the average depth and rate, were measured using CPRmeter.

Results: In all tests, average depths were those recommended in the recent CPR guidelines (50–60 mm), with no significant difference between tests 1 and 2 [95% confidence interval (CI), 51.7–54.5 *vs*. 51.0–54.2 mm; $p = 0.398$]. The average rate in test 2 (95% CI, 115.0–123.2) was slightly faster than the recommended rate (100–120 compressions/min) and differed significantly from that in test 1 (95% CI, 113.0–119.7; $p = 0.028$).

Conclusion: The quality of chest compression in a standardised in-hospital CPR setting using the rescuers' average knee height did not differ from that performed in the kneeling position on the floor.

#4772 : Preparing Emergency Medical Services organizations to be health literate health care organizations

Preferred format : ePoster

Authors:

Maria Shila Clarion Caraan (1)

1. Emergency medical Services, Dubai Corporation of Ambulance Services , Dubai, UNITED ARAB EMIRATES

Keywords: health, literacy, improvement, services, safety

Abstract :

Title: Preparing Emergency Medical Services organizations to be Health Literate Health Care organizations

Background/Objectives:

The action plan to improve health literacy in an organization is a set of health literacy priorities to be addressed by the Dubai Corporation of Ambulance Services (DCAS) to the Emergency Medical Services (EMS) organizations based on the two (2) of the Ten (10) attributes of health literate health care organizations; (#2) Integrate health literacy into planning, evaluation measures, patient safety, and quality improvement and (#3) prepare the work force to be health literate and monitors progress.

Methods:

As an integral part of the health care system, EMS providers and organizations must recognize the need of health care literacy training to all of its personnel from all levels of the organization though health literacy training is more focused to the clinicians or medical personnel on direct contact with clients or the sick and injured and their families.

Result:

High level of health literacy of the EMS organizations personnel will cause a high level of influence of patient care and safety that will result to a high standard quality of patient care services and consumer satisfactions.

Conclusions:

Unless we, as an Emergency Medical Service organizations, an integral part of the overall Public Health Care System are prepared to focus attention and resources on health literacy issues, our organizations will likely continue producing personnel, Paramedics/medics who lack skills and are ill-prepared to deal with the demands of the community and work place in terms of quality of patient care and safety and rapport building with the public, the community, and other organizations as well.

#4778 : Profound opiate toxicity in gastroparesis following therapeutic dose

Preferred format : ePoster

Authors:

Craven Henry (1)

1. Broomfield Hospital, Chelmsford, Mid-Essex Hospitals Trust, London, UK

Keywords: gastroparesis, opiates, overdose

Abstract :

Profound opiate toxicity in gastroparesis following therapeutic dose

Introduction:

Gastroparesis is defined by the presence of delayed gastric emptying without mechanical obstruction. Symptoms of which include abdominal pain and vomiting, nausea, bloating, fullness and early-satiety. The prevalence is estimated to be at 24 per 100,000 and women more commonly affected than men1. It is associated with a number of conditions including diabetes, Parkinson's disease, multiple sclerosis, previous abdominal surgeries and connective tissue disorders such as scleroderma and Ehlers-Dalos syndrome.

Case:

A 20-year old female was admitted to the emergency department with sudden onset central abdominal pain and vomiting at 19:30. Background – Ehlers-Danlos type 3, gastroparesis - extremely delayed gastric emptying as confirmed by C-13 breath test motility studies (transit time >150mins) and awaiting a gastric pacemaker procedure. She had a long-term nasojejunal-feed in situ for management of her condition and had multiple previous admissions with severe abdominal pain relating to her condition.

The patient received 2.5mg IV morphine at 22:10 in the emergency department, and later at 02:20 received 20mg Oramorph (administered orally, not via NJ-tube) on the surgical ward.

An arrest call was put out at 07:40. Observations: RR 0, 19% saturation on air, HR 100, BP 168/111, bilateral pinpoint pupils. Initial blood gas – pH 6.85, pO2 8.9, pCO2 16, HCO3- 21, base excess -12, lactate 4.7. She was given a bolus of IV naloxone with instant effect. The patient was transferred to the intensive care unit for further supportive management. She went on to make a full recovery and a few months later underwent a gastric pacing procedure.

Discussion:

The patient was not known to be opiate-sensitive and had previously taken similar doses and preparations of opiates without ill effect. It is further notable that the initial 2.5mg intravenous dose did not produce significant cardio-respiratory compromise. However, when taken in the oral preparation some hours later the effects of opiate toxicity were profound. The degree of hypercarbia and acidosis on the arterial blood gas also demonstrate that the patient had experienced a prolonged period of respiratory depression by that time.

Gastroparesis can be a severely debilitating and painful condition. The majority of pharmacological therapy for gastroparesis include a variety of prokinetic agents such as metoclopramide, cisapride, domperidone and erythromycin. Drugs that are known to prolong gastric transit time such as opiates are relatively contraindicated and have been shown to exacerbate symptoms2.

Conclusion:

Gastroparesis is a poorly understood, chronic condition that can be debilitating. Patients may present in extreme pain the symptoms of which can mimic an acute abdomen. Use of opiate medications may further exacerbate the symptoms and should be avoided where possible.

References

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2. Hasler WL, *et al*. Factors relating to abdominal pain in gastroparesis: contrast to patients with predominant nausea and vomiting. Neurogastroenterology and motility. 2013 May; 25(5)427-38.

#4959 : Detection of pneumothoraces in patients with multiple blunt trauma: Use and limits of eFAST

Preferred format : ePoster

Authors:

Thomas Sauter (1), Simon Hoess (2), Beat Lehmann (1), Aristomenis Exadaktylos (1), Haider Dominik (1)

1. Emergency department, Inselspital Bern, Bern, SWITZERLAND
2. Emergency Department, University Hospital, Inselspital, Bern, SWITZERLAND

Keywords: blunt trauma patients, eFAST, pneumothorax, multiple blunt trauma

Abstract :

Background:

Trauma patients are commonly evaluated in the trauma room by extended focused assessment with sonography for trauma (eFAST), but pneumothoraces (PTXs) are often missed. Little is known about the location or size of these missed PTXs in trauma patients with multiple blunt trauma and clinical predictors for successful detection are unclear.

Methods:

This cross-sectional study includes all patients with multiple blunt trauma and PTX who were admitted to the emergency department of a level 1 trauma centre in Bern, Switzerland between June 1, 2012 and September 30, 2014 (n=109). eFAST was performed in the trauma room by consultants in emergency medicine. Demographic data, imaging modalities, medical data on admission and preclinical suspicion of pneumothorax were compared in patient groups with and without PTXs detected in eFAST, compared with CT, using the Mann-Whitney U or Pearson’s chi-square tests. Univariate binary logistic regression models were used to identify predictors for detection of PTXs.

Results:

The patients with missed PTX were younger (51.6±18.5 vs. 44.3±19.8 years, p=0.049). The group of missed PTXs contained significantly fewer ventral PTXs (30 (47.6%) vs. 4 (9.3%), p<0.001), but more apical and basal PTXs (7 (11.1%) vs. 15 (34.9%), p=0.003;11 (17.5%) vs. 18 (41.9%), p=0.008, respectively) . The PTXs missed in the eFAST examination were smaller on both sides (left side: 30.7±17.4 vs. 12.1±13.9 mm; right side: 30.2±10.1 vs. 6.9±10.2mm, both p<0.001). More rib fractures were found in patients with detected PTXs (54 (84.1%) vs. 30 (69.8%), p<0.046) In univariate analysis, we found that the preclinical suspicion of PTX was associated with the detection of PTXs in eFAST in all PTXs (p<0.001, OR 7.002 (2.801; 17.507)) as well as in the subgroup analysis of patients who needed thoracic drainage (p=0.004, OR 10.487 (2.117; 51.944)).

Conclusion:

Our study demonstrates that missed PTXs are smaller and in more atypical locations than those detected in eFAST. Missed PTXs less often need treatment with thoracic drainage. There was no example of an unstable patient whose instability was linked to the missed PTX. Preclinical suspicion of PTX is strongly associated with the detection of PTX in eFAST and deserves special attention.

#4964 : Direct new oral anticoagulants in general practice: A survey of Swiss general practitioners

Preferred format : Oral presentation

Authors:

Thomas Sauter (1), Wolf Hautz (2), Meret Ricklin (3), Aristomenis Exadaktylos (1)

1. Emergency department, Inselspital Bern, Bern, SWITZERLAND
2. Emergency department, Inselspital Bern, bern, SWITZERLAND
3. Emergency Department, University Hospital, Inselspital, Bern, SWITZERLAND

Keywords: apixaban, bleeding event, dabigatran, everyday general practice, real-life, rivaroxaban

Abstract :

Purpose:

New direct oral anticoagulants (NOACs) are of increasing importance in clinical work in general practice. It is currently unknown to which extend existing guidelines regarding follow-up tests, dosing adjustments and indications are implemented. We therefore aimed to investigate the real-life handling and complications of patients treated with NOACs in general practitioners' clinical practice.

Methods:

We conducted a paper-based survey of general practitioners attending a congress at Inselspital, Bern University Hospital, Switzerland. Our questionnaire assessed preference of NOACs to vitamin-K-antagonists (VKA), prevalence and choice of NOAC, clinical follow-up including follow-up blood testing, and bleeding complications.

Results:

53 GPs participated in our survey. They treated 32.7%±19 of their patients requiring oral anticoagulation with NOACs. New patients who had started oral anticoagulation received NOACs from 49 GPs (92.5%) but most GPs would not switch patients from existing VKA therapy to NOACs. Clinical controls are scheduled by a majority of GPs (67.9%) at least every 3 months; creatinine and haemoglobin are monitored by most GPs (51 (96.2%) and 39 (73.6%), respectively). In the preceding 2 years, GPs had seen 1.9±2.87 bleeding complications in patients with NOACs. 0.5±0.95 (range 0-5) of these required hospital treatment.

Conclusion:

NOACs are broadly accepted in Swiss general practice as first choice over VKAs for patients newly requiring oral anticoagulation. Because only about two-thirds of GPs adhere to recommendations on clinical and blood test follow-ups, further efforts to implement follow-up guidelines are necessary. Bleeding complications are rare and can mostly be handled in general practice without hospital admission.

#5005 : Communication deficits lead to critical incidents in prehospital emergency medicine

Preferred format : ePoster

Authors:

Sophia Wilk (1), Peter Rupp (2), Johannes Winning (1), Thomas Fleischmann (3), Christian Hohenstein (1)

1. , none, Jena, GERMANY
2. , none, Aurich, GERMANY
3. n, none, Heide, GERMANY

Keywords: communication deficit - critical incident - prehospital

Abstract :

Background: Communication failure in prehospital emergency medicine can affect patient safety as it does in other areas of medicine as well. We analysed the database of the critical incident reporting system for prehospital emergency medicine in Germany retrospectively regarding communication errors. **Methods**: Experts of prehospital emergency medicine and risk management screened the database for verbal communication failure, non-verbal communication failure and missing communication at all. **Results**: Between 2005 and 2015 845 reports were analysed of which 247 reports were considered to be related to communication failure. An arbitrary classification resulted in six different kinds: 1) no acknowledgement of a suggestion 2) medication error 3) miscommunication with dispatcher 4) utterance heard/understood improperly 5) missing information transfer between two persons 6) other communication failure. **Conclusion**: Communication deficits can lead to critical incidents in prehospital emergency medicine and are a very important aspect in patient safety.

#5019 : Logging safeguarding concerns in paediatric emergency medicine: ticking the right boxes when going paperless

Preferred format : Oral presentation

Authors:

Basia Chmielewska (1), Peter Heinz (2)

1. University of Cambridge Clinical School, N/A, Cambridge, UK
2. CUHFT, Addenbrooke's Hospital, Cambridge, UK

Keywords: Safeguarding, children, child abuse, NICE guideline CG89, documentation, electronic patient record

Abstract :

Background

NICE CG 89 'Child maltreatment: when to suspect child maltreatment in under 16s' [(1)] suggests that health professionals should consider safeguarding issues in all encounters with children, gives guidance on when to suspect abuse, and stresses the importance of documentation. The Emergency Department is a place where this is of particular importance as children often present with injuries that could be indicative of maltreatment, such as burns or head injuries. Therefore, all attendances should have a record of a safeguarding assessment stating whether the possibility of child abuse has been considered or suspected. Previous audits [(2)] have shown that the level of documentation of safeguarding assessments in the ED was very high, with an excess of 90% of children having safeguarding considerations documented. This level was achieved following the implementation of a written prompt in the paper based patient record. Since the last audit in 2013 the hospital has introduced a new electronic system of patient records, Epic. This re-audit aims to assess whether the high levels of documentation have been maintained after the implementation of this new system the safeguarding section of which will be briefly presented.

Methods

Electronic patient records of all Paediatric ED attendances during the week 01/02/16 to 08/02/16 were reviewed and checked as to whether clinical staff completed the required documentation of safeguarding assessments and to gather information about those with absent safeguarding assessments. Sample size: 414. Results wre compared to the previous audit performed in 2013.

Results

385 (92.1%) had a safeguarding assessment completed, in 29 (7.9%) cases the assessment was missing. Re-attenders (n=14) had no safeguarding assessment documented on the second attendance in 6 cases. Split into age groups, the percentage of assessments not completed ranged from 8.33% in the 6 - 10 year olds to 5% in the 1 - 5 year olds. 15 patients (3.6%) in whom safeguarding assessments were missing presented with diagnoses like burns, head or other injury.

Conclusion

Following the implementation of a new electronic system of patient record keeping and thus the removal of the previous ED paper based system with its well established prompts, documentation of presence (or absence) of safeguarding concerns in the Paediatric Emergency Department remains in excess of 90%. This is despite the fact that safeguarding assessments on Epic are not a compulsory documentation item, reflecting a positive culture of safeguarding awareness. Children who re-attended the ED were amongst those who were lacking safeguarding assessments when attending the second time but one coud argue that this may be appropriate in the vast majority of patients that re-attend within such a short time. The current system is effective but still does not capture a proportion of patients that present with significant injuries.

#5027 : Management of a difficult airway in ED - A case study of Treacher Collins syndrome

Preferred format : ePoster

Authors:

IRFAN ULLAH (1), FREDRICA FRANCO (2), CHI NG (2)

1. , Royal Free NHS TRUST, 137 Forest Road london N17 6HF, UK
2. , Royal Free NHS TRUST, London, UK

Keywords: Difficult airway, Airway, Treacher Collins syndrome, Intubation, DAS

Abstract :

Introduction -

Treacher Collins syndrome is a genetic condition which effects the development of the development of bones and the soft tissue of the face.

Mutations in the *TCOF1*, *POLR1C*, or *POLR1D* gene can cause Treacher Collins syndrome.

The condition causes hypoplasis of certain facial structures, including the cheekbones, jaw (micrognathia) and other zygomatic structures.

Patient often are born with cleft palates leading to further risks of respiratory compromise.

Aim -

Poster Aim is to highlight learning points of what happened when our team had to intubate a patient with Treacher Collins syndrome.

Case study -

43 year old male patient was bought in by ambulance, at 3am, following status epilepticus and treated for this. Patient has a background of Treacher Collins syndrome. Patient was post ictal after treatment and was unable to maintain his airway. Patient was ok to ventilated, however after multiple attempts were not able to intubate patient.

Following this ITU Consultant was called from home whilst patient was manually ventilated.

After multiple attempts ITU consultant was unable to intubate and ENT Consultant was called to do surgical cicoidectomy. However before this could happen patient was

Learning points

1. Treacher Collins syndrome and anatomy abnormalities
2. Anticipation of difficult airway and readiness for difficult intubation
3. Difficult airway society guidelines
4. Working with ITU/ Anaesthetist early.

#5029 : The scorpion envenomations in the emergency room of béja's regional hospital (tunisia)

Preferred format : Oral presentation

Authors:

Jobrane MANSOURI (1)

1. Emergency room, University teaching hospital La Rabta, Tunis, TUNISIA

Keywords: Envenomation, sting, scorpion, Béja

Abstract :

Background : approximately 2600 deaths caused by scorpion envenomation are recorded every year in the world. In the Mediterranean regions, these envenomations are not enough reported because of their usual benignity. Our objective was to study the features of the various grades of the envenomation, the potential severity of this pathology in the region of Béja, the treatment in our emergency room and the clinical evolution of the patients.

Methods : It was a retrospective study realized from 16/01/2012 till 25/11/2012 in the emergency room of the regional hospital of Béja. We included only a part of stung patients according to the availability of the clinical data collected from them.

Résults : 40 patients were included in the study. The median of age was 44,5 years. 88,9 % of the cases took place in rural zones. 33,3 % of the stings happened inside the houses. 15 % of the cases of scorpion stings took place in the morning between 05:00 am and 07:00 am, 17,5 % between 10:00 am and noon, 17,5 % in the afternoon between 4:00 pm and 6:00 pm and 12,5 % in the evening between 7:00 pm and 9:00 pm. The scarifications and/or the application of tourniquet were noted in 76 % of the patients. 60 % of the patients consulted during the first hour after the sting, 90 % consulted during the first two hours. In 51,7 % of the cases, the sting is located in the upper limb, in 41,4 % it is located in the lower limb. Moderate systemic manifestations of scorpion envenomation of the grade II were found in 80 % of patients. The most frequently reported were the sweating (40 %) and fever (45 %). The vomiting was noted in only one patient (5 %), as well as the rhinorrhea and tearing in another one (5 %). The priapism was not reported by any male patient. Non specific polymorphous changes of the ECG were noted in 62,5 % of the patients. One patient (5 %) was classified grade III, 75 % were classified grade II and 20 % were classified grade I. Only 15 patients (37,5 %) received the scorpion antivenom. The duration of the hospitalization was between 25 minutes and 17 hours, with a median of 1 hour 55 minutes. The evolution was favorable with clinical recovery of all the patients of our sample.

Conclusion : The scorpion envenomation is still a public health problem in the region of Béja. It concerns essentially the active adults of the rural areas, with a peak of frequency during September and October. The moderate systemic manifestations are often present with a potential of severity. The irrational and dangerous practices (application of tourniquet, scarifications) are still widely used by patients. The treatment remains unfortunately non-standardized, and it is variable according to the habits and the knowledge of the doctors which take care of the stung patients in the emergency room.

#5030 : Management of acute pyelonephritis in the emergency room of the teaching hospital la rabta (tunisia)

Preferred format : Oral presentation

Authors:

Jobrane MANSOURI (1)

1. Emergency room, University teaching hospital La Rabta, Tunis, TUNISIA

Keywords: Pyelonephritis, escherichia coli, emergency room, antibiotic therapy

Abstract :

Background : The urinary tract infections and in particular the acute pyelonephritis occupy an important place in General Medicine and they generate an appreciable amount of antibiotic therapy, not always adapted as for the choice of antibiotics and for the duration of the treatment. The aim of our study was to assess the management of the acute pyelonephritis by the doctors exercising in the ER of the teaching hospital La Rabta, then to compare the results obtained with the new recommendations of La Société de pathologie infectieuse de langue française (SPILF).

Methods: It was about an analyticalcross-sectional study concerning 59 patients affected by acute pyelonephritis and consulting in the ER of the teaching hospital LaRabta during the period from February 2014 till July 2014.

Results: 59 patients were included in the study, 49 women and 10 men. The mean age of the patients was 48,9 years (19,5 to 87 years). The urinary tract dysfunctions and anomalies were noticed in 49,2% (n=29/59) of the patients. This was mainly tumors of the urinary tract (prostatic hypertrophy, renal cysts…) in 20,3% (n=12/59), a dilation of the urinary tract in 18,6% (n=11/59) and an urolithiasis in 15,3% (n=9/59). The risk factors of complication were noted in 57,6% (n=34/59) of our patients. It was especially about the diabetes noted in 37,3% (n=22/59), elderly people with comorbidity in 15,3% (n=9/59), a pregnancy in 10,2% (n=6/59) and a severe renal failure in 8,5% (n=5/59). A severe sepsis was found in 3,4% (n=2/59) of the patients of our sample. No case of toxic shock was observed. E. Coli was the bacteria isolated in 86,4% (n=51/59) of the cases. The wild type E. Coli was identified in 21,6% (n=11/51) of the patients with an E. Coli caused pyelonephritis. Extended-spectrum beta-lactamases (ESBLs) producing E. Coli was identified in 23,5% (n=12/51). The plain-film radiography was performed in 78% (n=46/59) of our sample's cases. The renal ultrasonography was realized in 62,7% (n=37/59). A contrast-enhanced CT scan was performed in only 3,4% (n=2/59) of the patients. We decided the hospitalization for 42,4% (n=25/59) of the cases. This decision interested 59,5% (n=25/42) of the patients with a pyelonephritis at risk of complication. The empiric antibiotic therapy was begun in the ER in 79,7% (n=47/59) of the patients. In 42,6% (n=20/47) of the patients who were initially treated in the ER, the empiric antibiotic therapy was incompatible with the last recommendations of the SPILF. In 46,2% (n=18/39) of the patients treated exclusively in the ER, duration of the antibiotic therapy was not in compliance with the new recommendations. The clinical evolution was favorable in all patients without any complication.

Conclusion: The management of acute pyelonephritis in the ER of the teaching hospital La Rabta presents some conflicts compared with the last recommendations of the SPILF, as regards especially the nature and the duration of the empiric antibiotic therapy. The implementation of a therapeutic protocol within the ER and the follow-up of the patient's evolution will allow the optimization of this management.

#5055 : Management of trauma patients on an observation ward in an Emergency Department: improving patient pathways and patient safety.

Preferred format : ePoster

Authors:

Ali Naqvi (1), Sergio Sawh (2), Nicola Batrick (3)

1. Core Trainee, NHS, London, UK
2. Registrar, NHS, London, UK
3. Consultant in Emergency Medicine, NHS, London, UK

Keywords: Major Trauma, Patient Safety, Patient Pathways, Guidelines, Admission Criteria

Abstract :

Background & Objectives

Analysis of major trauma admissions in to the Clinical Decision Unit over the period of one year and effect of implementing exclusion criteria with the aim of improving patient pathways and patient safety. Initial data collected compared to data collected post implementation of guidelines and departmental teaching.

Methodology

Initial data was collected by reviewing case notes of all patients admitted to the CDU for a one-year period from 1st August 2012- 31stJuly2013.

Patients triggering the major trauma pre-alert followed by a preliminarily assessment by a consultant led trauma team in the emergency department with relevant imaging who then required inpatient admission in to the CDU were included in the study.

These were patient whom did not have life threatening injuries however required a short period of observation prior to their discharge and thus the CDU was deemed the most appropriate ward. Patients with significant injuries or those involving multiple limbs and high Injury Severity Scores (ISS) and thus admitted directly to the Major Trauma Ward (MTW) were not included in this study along with those that were discharged home directly from the emergency department.

Following these results, from 1st August 2012 – 31st July 2013, exclusion criteria were devised and implemented via formal teaching and changes to the pre-existing proforma. During a six month period following the recommended changes patients presenting as major trauma had their case notes analysed with a particular focus once again on number of admissions, length of stay, discharge destination and late-identified injuries.

Results and Conclusion

Admission to St. Marys hospital remained at a high level when compared to the intital data collection period. 64.3%-(n=717) required admission in the period of December to June 2014 is in comparison to 57.9%-(n=1281), between 1st August 2012-31st July 2013. The percentage of trauma patients however transferred to the clinical decision unit however decreased and is suggestive of improvement in patient safety with patients requiring specialist admission transferred directly to the relevant team and fewer late identified injuries.

With the implementation of strict exclusion criteria and formal teaching we are able to demonstrate management of patients with low ISS can be achieved in a safe and timely manner. Due to results gathered and analysis of the data from 2012-2013 we were able to highlight 3 key sets of patients which were not safe to be managed in CDU.

1. **Stab Victims**
2. **Pelvic Injuries**
3. **Medical Causes**

With the above exclusion criteria in place along with a sign off by the trauma team leader a significant reduction in the number of missed injuries was noted from 8% to 0%. Thus, out of 142 trauma patients admitted to CDU none were taken to theatre, major trauma ward or referred to the surgical teams for management of undiagnosed/missed injuries.

In our experience having guidelines and procedures to facilitate this has led to a decrease in the length of stay of patients from an average of 1.28 days to 0.83, which is what is expected from the observation units across the United Kingdom.

#5128 : Chest pain and risk stratification in the emergency department

Preferred format : ePoster

Authors:

Craven Henry (1)

1. Broomfield Hospital, Chelmsford, Mid-Essex Hospitals Trust, London, UK

Keywords: Chest pain, cardiovascular, patient pathway

Abstract :

Introduction:

Chest pain is a commonly presenting symptom in the emergency department with multiple aetiology. The need to distinguish between life threatening conditions and the less severe is critical. In many cases history and clinical examination can provide only limited information and most patients will undergo further investigations into the cause of their symptoms. We looked at a sample of 92 patients attending the emergency department and have analysed outcome associated with individual risk-profile.

Results:

92 patients presented to the emergency department (43 male, 49 female) between June-October 2014. In total, 33 patients described symptoms of cardiac chest pain (as described by NICE 2010 guidelines) with 59 patients presenting with non-cardiac chest pain. Of all patients, 34 presented within four hours of onset - of which 18 were from the cardiac chest pain group. The majority - 25 of cardiac chest pain patients had cardiovascular risk factors and were admitted to hospital. In addition most of those deemed low risk were also admitted for further investigation. None of the patients presenting with non-cardiac chest pain had a positive troponin and the majority were discharged from the emergency department. Only a small number of patients - 3, were deemed suitable for referral to the ambulatory care day unit (ACU) to await a second assessment, and all were eventually discharged.

Discussion:

The majority of patients attending the emergency department with symptoms of cardiac chest pain presented within four hours of onset and were associated with cardiovascular risk factors. Of those admitted most had serious underlying pathology ruled out by repeat troponin and were later discharged. Most patients with non-cardiac chest pain presented later and had cardiac aetiology ruled out by negative troponin. The use of the ambulatory care unit in management of chest pain was limited as patients were often admitted to a medical bed for a repeat blood test and suitable patients for the ACU would often present out of hours.

Conclusion:

All patients admitted with chest pain should have cardiovascular risk factors clearly documented. A clear pathway for low-risk patients would be of benefit and could avoid unnecessary admission. With many patients describing cardiac-like chest pain presenting early there may also be benefit of the use of newer high-sensitivity troponin assays for early diagnosis or exclusion.

#5194 : Performance of manchester triage cystem for children with chronic cardiovascular diseases including vital parameter measurement.

Preferred format : ePoster

Authors:

Pinky Rose Espina (1), Thomas Wrba (2), Susanne Greber-Platzer (3)

1. Resident, Department of Pediatrics and Adolescent Medicine, Medical University of Vienna, Vienna, Austria, Vienna, AUSTRIA
2. Head of AKIM, Center for Medical Statistics, Informatics and Intelligent Systems, Medical University of Vienna, Vienna, Austria, Vienna, AUSTRIA
3. Head of Department, Department of Pediatrics and Adolescent Medicine, Medical University of Vienna, Vienna, Austria, Vienna, AUSTRIA

Keywords: manchester triage system, pediatric emergency department, cardiovascular diseases, vital parameters, outcome

Abstract :

Performance of Manchester Triage System (MTS) for children with chronic cardiovascular diseases (CVD) including vital parameter measurement.

PR Espina, T Wrba, S Greber-Platzer
Medical University Vienna, Austria

Background: In pediatric emergency care MTS has moderate sensitivity (63%) and a good specificity (78%) (*van Veen et al 2012*). *Seiger et al.* (*2014*) have shown that inclusion of vital parameters (VP) in MTS for pediatric emergency care did not improve triage classification. Performance of MTS for children with chronic diseases (CD), especially with CVD has barely been evaluated.

Objective: The aim of our study was to evaluate the MTS performance in children with CVD by measuring VP (HF, RR, Poxy).

Methods: Data derived from a registry of patients attending the pediatric emergency of the Dep. for Pediatrics and Adolescent Medicine from 01/2014-12/2014 were analyzed retrospectively. Inclusion criteria were children <18-y.o., children with CVD (congenital heart defect, arrhythmia, acquired heart disease and cardiomyopathy) and without known CD including data for MTS urgency level (UL), VP, therapy, diagnostic examination, diagnosis and outcome.

Results: In total 16715 patients, 8151 (49%) female, with an overall mean age of 5-y.o., were included. Of these 936 (5,6%) children presented with CVD and 15779 (94,4%) children without CD. VP were more often measured in children with CVD (59%) compared to children without known CD (41%). We further investigated the cohort of children with CVD and compared between those with measured VP and those without measured VP. In the group with VP more often acute treatment was given (28,2% vs.18,6%), diagnostic examination was performed (55,2%vs.40,8%) and lifesaving interventions were needed (0,7% vs.0%). A higher UL was more often selected in children with CVD and measured VP than without measured VP (UL-1 1,4%vs.1%, UL-2 17%vs.4,4%). Admission to an intensive care unit (0,5% with vs.0,8% no VP) did not depend on VP measurement, but a slight increased hospitalization rate (18,4% vs.15,5%) and decreased follow-up at outpatient clinic or by pediatrician (80,9% vs.83,5%) was found in children with VP measurement.
Comparing patients without CD and with or without VP measurement showed more often an acute treatment (23,2% vs.18,3%), diagnostic examination (28,1% vs.18,2%) and lifesaving interventions (0,14% vs.0%) with measured VP, also a more frequent and higher UL (UL 1 - 0,5% vs.0,2%, UL 2 - 8% vs. 3,3%) was chosen. Also admission to ICU (0,2% with VP vs.0,01% no VP) or hospitalization-rate (4,7% vs.3,5%) was slightly higher in patients with measured VP. Follow-up at outpatient clinic or by pediatrician (95,1% vs.96,44%) did not depend on VP measurement.
The most frequent diagnoses in children with measured VP were infections of the respiratory-tract (RT) (46,1% both), viral-infection or fever (15,8% for children with CVD, 15,2% for children without CD) and gastrointestinal-infections (GI) (9,5% and 11,1%). In the group of children without VP measurements GI (24% with CVD and 25% without CD) and RT (23,5% and 23%) infections were same frequent, followed by viral-infections or fever (18,3% and 18,4%).

Conclusions: Our study demonstrates that MTS performance could benefit by including VP measurement in children with CVD.

#5390 : Ward deterioration in the first 72 hours of admission via the emergency department: a retrospective matched cohort study

Preferred format : Oral presentation

Authors:

Julie Considine (1), Daryl Jones (2), David Pilcher (3), Judy Currey (1)

1. School of Nursing and Midwifery / Centre for Quality and Patient Safety Research, Deakin University , Geelong, AUSTRALIA
2. Department of Intensive Care, Austin Health, Heidelberg, AUSTRALIA
3. Intensive Care Unit, Alfred Health, Prahran, AUSTRALIA

Keywords: patient safety, clinical deterioration, rapid response team,

Abstract :

Introduction: Almost one-quarter of Rapid Response Team (medical emergency or cardiac arrest team) activations occur within 48 hour of hospital admission. The aims of this study were to examine: i) the relationship between physiological status in the emergency department (ED) and RRT call within 72 hours of emergency admission; and ii) whether RRT activation was associated with an increased risk of ICU admission and in-hospital mortality.

Methods: A retrospective matched cohort study was conducted at three hospitals in Melbourne, Australia. Exposures were adults (≥18 years), admitted via the ED to non-monitored medical or surgical wards during 2012 who had an RRT activation within 72 hours of admission. There were two matched controls (no RRT activation) for each case.

Results: Exposures were more likely to have ≥1 physiological abnormalities fulfilling their hospital's RRT activation criteria during ED care (29.1% vs 19.3%, p<0.001). The risk-adjusted odds of RRT activation within 24 hours of admission was highest in patients with tachypnoea fulfilling RRT activation criteria during ED care (OR=2.69, 95%CI: 1.78 - 4.07, p<0.001). The risk-adjusted odds of RRT activation within 72 hours of emergency admission was highest in patients with tachypnoea (OR=1.92, 95%CI: 1.38 – 2.67, p<0.001) or hypotension (OR=1.43, 95%CI: 1.00 - 2.03, p=0.047) fulfilling RRT activation criteria during ED care. Cases had more in-hospital deaths (16.5% vs 3.6%, p<0.001), ICU admissions (11.8% vs 0.7%, p<0.001) and longer hospital length of stay (Mdn = 8 days vs 5 days, p<0.001). The risk-adjusted odds ratio (OR) for in-hospital death was highest for exposures with an altered conscious state during their ED stay (OR, 4.633; 95% CI, 1.365–15.728; p=0.014).

Discussion: Factors associated with RRT activation on the wards are identifiable when patients are in the ED. RRT activations within 72 hours of emergency admission are associated with higher mortality and increased LOS. Further studies are required to validate these findings more widely and determine whether early identification and intervention in patients at risk of RRT activations can improve their eventual outcomes.

Acknowledgements: This study was generously funded by the Nurses Board of Victoria Legacy Limited Mona Menzies Postdoctoral Research Grant and an Eastern Health Research Grant.

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#5392 : Indicators of clinical deterioration during early hosptial admission present during emergency department to ward transfer

Preferred format : Oral presentation

Authors:

Julie Considine (1), Daryl Jones (2), David Pilcher (3), Judy Currey (1)

1. School of Nursing and Midwifery / Centre for Quality and Patient Safety Research, Deakin University , Geelong, AUSTRALIA
2. Department of Intensive Care, Austin Health, Heidelberg, AUSTRALIA
3. Intensive Care Unit, Alfred Health, Prahran, AUSTRALIA

Keywords: patient safety, clinical deterioration, rapid response team, transitions of care

Abstract :

Introduction: The relationship between abnormal physiological states during ED care and subsequent adverse events on the ward raises questions about the patient's clinical status during the transition from ED to the ward. The aim of this study was to examine the relationship between physiological status during transition from the emergency department to the ward and emergency calls for clinical deterioration during the first 72 hours of hospital admission.

Methods: A descriptive, exploratory design was used. The study involved 1980 patients at three hospitals in Melbourne Australia: i) 660 randomly selected adults admitted via the ED to medical or surgical wards during 2012, and who had an emergency call for clinical deterioration during the first 72 hours of admission and ii) 1320 adults without emergency calls matched for gender, triage category, usual residence, admitting unit and age.

Results: The median patient age was 78 years and 48.8% were males. The median time to the first emergency call was 18.8 hours. One or more abnormal physiological parameters were documented in 34.9% of patients during the last hour of ED care and 47.1% of patients during first hour of ward care. Emergency calls were more common in patients with heart rate (46.0% vs 31.3%, $p<0.001$) and conscious state (49.6% vs 31.2%, $p=0.002$) abnormalities during the last hour of emergency care and abnormal oxygen saturation (41.8% vs 31.6%, $p<0.001$), heart rate (45.6% vs 31.3%, $p<0.001$) or respiratory rate (43.1% vs 32.2%, $p=0.002$) during the first hour of ward care.

Discussion: Abnormal physiological parameters at the ED-ward interface were common and predicted subsequent emergency calls. The utility of physiological status at the transition between the ED and inpatient wards to guide care planning, particularly frequency of nursing and medical assessments warrants further analysis.

Acknowledgements: This study was generously funded by the Nurses Board of Victoria Legacy Limited Mona Menzies Postdoctoral Research Grant and an Eastern Health Research Grant.

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#5793 : Hypothermia inhibits the propagation of acute ischemic injury by inhibiting HMGB1

Preferred format : ePoster

Authors:

Je Sung You (1), Jung Ho Lee (2), Chul Hoon Kim (2), Sung Phil Chung (1)

1. Department of Emergency Medicine, Yonsei University College of Medicine, Seoul, KOREA, REPUBLIC OF
2. Department of Pharmacology,BK21 PLUS Project for Medical Science, Brain Research Institute, Yonsei University College of Medicine, Seoul, KOREA, REPUBLIC OF

Keywords: acute ischemic stroke; high mobility group box 1 (HMGB1); inflammatory cytokines; penumbra; hypothermia; glycyrrhizin

Abstract :

Aims: Acute ischemic stroke causes significant chronic disability worldwide. We designed this study to clarify the mechanism by which hypothermia helps alleviate acute ischemic stroke.

Methods: Beginning 15 min after inducing a middle cerebral artery occlusion (MCAO), we kept groups of rats under either hypothermic (33°C) or normothermic (37°C) conditions. We then harvested brains and sera 4 h after the onset of MCAO. Thirty min prior to MCAO onset, we inhibited high mobility group box 1 (HMGB1) in two ways: intraperitoneal administration of glycyrrhizin (100 mg/kg) and intracerebroventricular injection of an anti-HMGB1 neutralizing antibody.

Results: Hypothermia effectively reduces mean infarct volume. Hypothermia also prevents neurons in the infarct area from releasing HMGB1. By preventing its release, hypothermia also prevents the MCAO-induced increase in serum HMGB1. We also found that both glycyrrhizin-mediated inhibition of HMGB1 and intracerebroventricular neutralizing antibody treatments diminish infarct volume. We next used RT-PCR to measure the levels of pro-inflammatory cytokines in peri-infarct regions. Although MCAO increases the expression of interleukin-1β (IL-1β) and tissue necrosis factor-α (TNF-α), this elevation is suppressed by both hypothermia and glycyrrhizin treatment.

Conclusion: We show that hypothermia reduces the production of inflammatory cytokines and helps salvage peri-infarct regions from the propagation of ischemic injury via HMGB1 blockade. In addition to suggesting a potential mechanism for hypothermia’s therapeutic effects, our results suggest HMGB1 modulation may lengthen the therapeutic window for stroke treatments.

#5797 : Urgent endoscopy versus early endoscopy in patients with upper gastrointestinal bleeding

Preferred format : ePoster

Authors:

Mihaela Dumea (1), Diana Carmen Cimpoesu (2), Anca Haisan (3), Paul Nedelea (3), Andrei Constantin (4), Andrei Hancu (4), Gabriela Grigorasi (4), Claudia Rascanu (4), Giorgiana Loredana Matei (4)

1. Emergency Department , St. Spiridon Hospital, iasi, ROMANIA
2. Emergency Department , St. Spiridon Hospital, University of Medicine and Pharmacy Gr.T.Popa, Iasi, ROMANIA
3. Emergency Department, St. Spiridon Hospital, University of Medicine and Pharmacy Gr.T.Popa, Iasi, ROMANIA
4. Emergency Department, St. Spiridon Hospital, Iasi, ROMANIA

Keywords: upper gastrointestinal bleeding, urgent endoscopy, early endoscopy, peptic ulcer

Abstract :

Background: Acute upper gastrointestinal bleeding (UGIB) is one of the commonest medical emergencies. The initial evaluation of patients with UGIB involves an assessment of hemodynamic stability and resuscitation if necessary. Endoscopy is the primary diagnostic investigation in patients with acute UGIB but it has not always been clear whether urgent endoscopy is cost effective as well as clinically valuable. Endoscopy aids diagnosis, predict outcome and most importantly allows treatments to be delivered that can stop bleeding and reduce the risk of re-bleeding.

Aim: To compare urgent *versus* early endoscopy in patients presented to the emergency department with acute upper gastrointestinal bleeding.

Methods: Retrospective study in design, with a target population of adult patients diagnosed with upper gastrointestinal bleeding, who presented to the emergency department of the Emergency Hospital "St. Spiridon " Iasi Northeast Romania, during January to December 2014. Were included patients aged over 18 years who acute UGIB manifested by haematemesis and melena. Early and urgent endoscopy was defined according to the new guidelines. Data was collected from hospital charts and statistical analyses were performed using SPSS 20.0.

Results: Of 372 patients with acute UGIB were included in the study 323 patients. Characteristics of the study group are: mean age 60,48 years ± 14,628 (95% CI 58,83 to 62,02), 124 women (38.4%), 199 men (61.6%) with preponderance of patients in urban areas 180 (55.7%). 235 patients (72,75%) received urgent endoscopy (within 6 hours) versus 88 (27,24%) who received early endoscopy (within 24 hours). Among patients who received urgent endoscopy, 73 (31.1%) was in the first hour of presentation in emergency department and 68 (28.9%) in the first 2 hours. The main etiology was variceal bleeding 148 (46%) followed by peptic ulcer 121 (37,5%).

Conclusions: The decision to admit patients depended on the result obtained at urgent endoscopy. The need to start treatment also depended on the outcome of endoscopy.

#5845 : Analysis correlation between different scales of severity assessment in acute pancreatitis: study in emergency department

Preferred format : ePoster

Authors:

Maria Gil Lopez (1), Elena Prado Mel (2), Florentina Moreno Calatrava (1), Antonio Bernabé Rojas Ramirez (1)

1. Emergency Service, Andalusian Health System, Seville, SPAIN
2. Hospital Pharmacy Service, Andalusian Health System, Seville, SPAIN

Keywords: Acute pancreatitis, prognosis, correlation, scoring systems

Abstract :

Introduction: Acute pancreatitis is a disease characterized by severe form in 20% of cases, presenting a high mortality which is vital to predict its severity. At present there are different clinical and biochemical severity scales as Ranson, Apache II, Marshall and Bisap, which carry discrepancies when being compared to tomographic scales like Balthazar.

Objetive: Description of degree severity in acute pancreatitis according to Ranson, Apache II, Marshall and Bisap scales applied in patients at the moment of admission and correlate these outcomes with the results by Balthazar scale.

Methodology: Descriptive, observational and retrospective study. Population study were all patients admitted to the emergency department with acute pancreatitis between July to December 2014. The diagnosis of acute pancreatitis was established with the following criteria: severe abdominal pain and elevated amylase and/ or lipase more than three times the upper limit of normal. Patients who were not performed abdominal CT scan within 72 hours of onset of symptoms were excluded. A correlation between clinical scales (Ranson, Apache II, Marshall and Bisap) and Balthazar scale was performed based on the Pearson Correlation coefficient. Sensitivity, specificity, positive and negative predictive value of each clinical scales were calculated with respect Balthazar scale. The predictive capacity of every scale was measured by the area under the receiver-operating curve (AUC). Data were analyzed by SPSS v.10.

Results: The study included 90 patients with a mean age of 62,5 years (SD 17.5 years). 46,7% were women. The alcohol induced pancreatitis ocurred in 95 % of men and a only case in women. Most patients were hospitalized an average of 11 days (SD 6,029). The Ranson scale classified as severe 37,7% of patients compared to the Apache II scale that rises to 72,2%. Marshall and Bisap scales classified to the patients similarly as mild approximately 80% and 20% severe. Balthazar classified as severe acute pancreatitis almost 70% of cases. BISAP is the scale with the best Area Under the Curve (AUC) (0,609). BISAP presented the best Pearson´s corrrelation with respect Balthazar: 0,244 (p=0,010).

Conclusions: Acute pancreatitis is distributed equally in both sexes; alcoholic etiology is clearly more common in men. Ranson scale applied only one time to the admission of patients is not valid as predicted scale. Acute pancreatitis may have pancreatic and extrapancreatic complications so the scale of Balthazar CT should not be used as a benchmark, but as a complementary tool in risk stratification and prognosis of acute pancreatitis. Bisap is postulated as the most appropriate scale in our study showing high specificity and good Pearson´s correlation with Balthazar scale.

#6058 : Middle East Respiratory Syndrome trends influence emergency department utilization patterns

Preferred format : ePoster

Authors:

PAEK SO HYUN (1), Kim Do Kyun (1), JUNG JIN HEE (1), Lee Jin Hee (1), Kwon Hyuksool (1), Chang Ik Wan (1), PARK JUNGWAN (1)

1. , NO, seoul, KOREA, REPUBLIC OF

Keywords: Emergency department, MERS, Pediatric, Adult

Abstract :

An outbreak of Middle East Respiratory Syndrome (MERS) occurred in May of 2015 in South Korea. All cases were associated with healthcare facilities. Since emergency departments(ED) were suggested as the primary way that the virus spreads, the change of visits patterns to the ED were observed. The purpose of this study was to analyze the patterns of adult and pediatric patients visiting the emergency department (ED) during the MERS period. This study was carried out from June 1, 2015 to July 31, 2015 during the MERS epidemic in South Korea. We performed a retrospective study on all ED patients at Seoul National University Hospital. We compared and analyzed the characteristics of patients, emergency severity index (ESI) level at visits, cause of visit, diagnosis, emergency room treatment results, injury/non-injury, length of ED stay (EDLOS) and hospitalization rate. A total of 9,107 patients visited the ED during this period, 2,571 pediatric patients (28.2%) and 6,536 adult patients (71.8%). The most common cause of ED visit was fever (adults 21.62%, pediatric 56.2%). The proportion non-urgent visits of ESI 4-5, non-injury patient rate, and the EDLOS all decreased significantly in pediatric patients. During the MERS period, pediatric ED visits for non-urgent cases decreased compared to the previous two years while the rate of injured patients increased compared to the previous two years. There were more pronounced differences in emergency department utilization patterns for adult patients than in pediatric patients.

#6067 : The recovery of serum pseudocholinesterase and clinical characteristics of patients by organophosphate poisoning route

Preferred format : ePoster

Authors:

Jin Su Ju (1), Tae Hoon Kim (1), Kyung Hoon Sun (1)

1. Department of Emergency Medicine, Busan Baik Hospital, College of Medicine, Inje University, Busan, KOREA, REPUBLIC OF

Keywords: Organophosphate, Pseudocholinesterase

Abstract :

Background and objectives: Organophosphates are commonly used pesticides that are associated with a high risk of poisoning. A serum pseudocholinesterase level s used for diagnosis of organophosphate poisoning and estimation of severity. This study was performed to compare serial change of serum pseudocholinesterase level and severity in the setting of organophosphate poisoning.

Methods: We compared and analyzed serum pseudocholinesterase level change and clinical characteristics with oral route poisoned group and non-oral route poisoned group in patients who visited the emergency department due to organophosphorus intoxication from January 2009 to May 2015.

Results: A total 199 patients were enrolled that 168 were oral route poisoned group and 31 were non-oral route poisoned group. A serum pseudocholinesterase level was lower in oral route poisoned group than non-oral route poisoned group at the early stage within 5 days after poisoning. A hundred and twelve patients in oral route group and 11 patients in non-oral group suffered from respiratory distress ($P = 0.001$). In oral route poisoning group, 128 patients required mechanical ventilation with endotracheal intubation and 61 patients developped aspiration pneumonia. On the other hand, 12 patients needed a mechanical ventilation with endotracheal intubation and 5 patients developped aspiration pneumonia in the non-oral route poisoning group. The rate of admission and intensive care in oral route poisoned group was higher than non-oral route poisoned group.

Conclusions: Serum pseudocholinesterase level in the oral route group was lower than non-oral route group at the early stage. A frequency of respiratory complications rate was higher in oral route poisoned group than non-oral route poisoned group.

#6068 : Clinical outcomes of three-years-of-experience, targeting temperature management (TTM) in patients with out-of-hospital cardiac arrest (OHCA) in Songklanagarind Hospital, Southern Thailand: the analysis of MICU-TTM registry.

Preferred format : ePoster

Authors:

Veerapong Vattanavanit (1), Rungsun Bhurayanontachai (1)

1. Division of Critical Care Medicine, Department of Internal Medicine, Prince of Songkla University, Hat Yai, THAILAND

Keywords: out-of-hospital cardiac arrest, targeted temperature management

Abstract :

Background:

Out-of-hospital cardiac arrest (OHCA) is one of the leading causes for ICU admission, which causes a high in-hospital mortality. From our recent records, the survival to hospital discharge rate, after cardiopulmonary resuscitation, (CPR) was only 8.2%. Fortunately, TTM has been introduced over many years to improve neurological and mortality outcomes, particularly in cardiac arrest patients from cardiogenic causes with shockable rhythms. TTM has been implied to our hospital since the year 2012 which, expectedly improved the standard of care in OHCA patients. This is a report of the clinical and mortality outcomes after TTM was introduced to our hospital over the past 3 years.

Method:

A retrospective study was performed using MICU-TTM registry in 2012-2015. Standard CPR was performed. TTM had been performed on every OHCA patient, either due to cardiac or non-cardiac causes, if no contraindication. After the return of spontaneous circulation (ROSC), an Arctic Sun®surface cooling machine was connected to rapidly controll body temperature to a target of 33 degree Celsius for 24 hours. Afterwards, the re-warming process was started to slowly return the body temperature to 37 degree Celsius. The Cerebral Performance Category (CPC) scale along with the clinical outcomes were recorded into the MICU-TTM registry.

Results:

From 23 cases, those of male gender were the majority of patients (20/23, 87%) with the mean age of 54.48+/- 18.1 years. The OHCA from cardiac causes was only 52.2%. The initial ECG rhythms were ventricular fibrillation (47.8%), asystole (39.1%), and pulseless electrical activity (13.0%), respectively. The mean time from arrest to ROSC was 40.3 +/- 2.0 minutes. Survival rate to hospital discharge was 47.8% (11/23), but neurological outcomes were in a persistent vegetative state (8/11, 72.7%). Ventilator associated pneumonia (VAP) occurred in 43.5% of the total TTM-treated patients. In multivariate analysis, initial shockable rhythm was positively associated with survival at hospital discharge (OR 10.1, 95% CI 1.1-94.3, p 0.04). The group of poor neurological outcomes had a significantly higher APACHE II score than another group (22.9 +/- 4.2 vs 16.0 +/- 3.6, p 0.01).

Conclusion:

In our practice, TTM in OHCA patients demonstrated better mortality benefits compared to our previous recordings, despite the poor neurological outcome. VAP was the major complication of TTM. Nevertheless, TTM should be considered in every cases of OHCA, regardless of causes, after obtained ROSC.

#6184 : Do refugees pose a serious national public health threat? Incidence of communicable diseases amongst a representative cohort of 8.678 refugees in Germany.

Preferred format : Oral presentation

Authors:

Patrick Dissmann (1), Felix Koehring (1), Florian Fischer (2)

1. Emergency Department / Centre for Refugee Medicine, Klinikum Lippe GmbH, Detmold, GERMANY
2. School of Public Health, University of Bielefeld, Bielefeld, GERMANY

Keywords: Refugees, public health, infection, communicable disease, screening, national threat, incidence

Abstract :

Introduction:

German immigration laws require refugees to undergo medical screening as part of the asylum application process. This consists of a self-reporting questionnaire, a physical examination and a tuberculosis screening. There appears to be some anxiety whether refugees pose a public health threat to the German population through higher than usual rates of communicable diseases. This study aims to assess the incidence of communicable diseases, i.e. head lice, scabies, hepatitis, HIV or tuberculosis amongst refugees.

Methods:

We collected data on communicable diseases of refugees living in holding camps in the County of Lippe, Germany. All refugees not having undergone a medical screening examination or parts thereof underwent a medical screening examination as part of the weekly refugee medicine clinics run by the emergency department. Demographical data including age, gender and country/region of origin as well as any notable findings during the self-reporting questionnaire, physical examination and tuberculosis screening were recorded. Tuberculosis screening consisted of either chest radiographs, interferon-gamma immuno-assay or a Mendel-Mantoux skin prick-test, or a combination of these, depending on age and/or pregnancy status.

Results:

The County of Lippe operates 6 refugee camps with a capacity of 70-700 refugees each. From October 2014 until March 2016 altogether 9,992 refugees were registered for medical examination with 8,678 actually attending (86.8%). Of these, 69.3% were male and 30.7% female. The mean age was 24 years. Most refugees originated from Western Asia (41.8%), followed by those coming from Balkan states (21.7%), Africa (8.3%) and former Soviet states (6.9%).

As part of tuberculosis screening 3,327 refugees underwent chest x-ray in our clinic, whereas 3,096 were x-rayed elsewhere. 1,192 refugees received interferon-gamma immuno-assay and 769 children under the age of 6 years received a Mendel-Mantoux skin prick-test. Due to a lack of supply of Mendel-Mantoux serum from December 2015 onwards in whole Europe, 123 children did not receive any tuberculosis screening at all.

Overall, only 66 refugees were found to have scabies (0.76%) and 49 (0.56%) were tested positive for head-lice (0.56%). In contrast, 676 refugees had a non-communicable yet relevant medical condition (7.78%) requiring follow-up. We found 50 of 8,524 screened refugees to have an abnormal tuberculosis screening result (0.59%). Of these, only 7 were confirmed to have active tuberculosis requiring standard combination therapy (0.08%) and 3 refugees required isolation due to open tuberculosis (0.04%). Interestingly 27 refugees were known to suffer from viral hepatitis (0.31%) and 7 reported to be HIV-positive (0.08%).

Discussion:

This study is the first to describe the incidence of notifiable/communicable diseases and tuberculosis amongst a representative sample of refugees coming to Germany. Although only 0.8% of the total refugees entering Germany were included, the results appear to be fairly comparable to the overall refugee population. The incidence of tuberculosis amongst refugees appears to be 11 times higher than for the resident German population. Nevertheless, the projected overall number of approximately 500 new tuberculosis cases amongst refugees compared to an overall national incidence of 5,895 new cases in 2015 does not seem to pose any serious public health threat.

#6185 : Efficacy and Safety of Sufentanil Sublingual 30mcg Tablet for Management of Acute Traumatic Pain in the Emergency Department

Preferred format : Oral presentation

Authors:

James Miner (1), Harold Minkowitz (2), Zubaid Rafique (3), Karen DiDonato (4)

1. Emergency Medicine - Principal Investigator, Hennepin County Medical Center, Minneapolis, USA
2. Anesthesia, , Houston, USA
3. Emergency Medicine - Principal Investigator, Baylor College of Medicine, Houston, USA
4. Medical Affairs, AcelRx Pharmaceuticals, Burlingame, USA

Keywords: sufentanil, sublingual, pain management, analgesia

Abstract :

Introduction: Pain is the most common reason people visit the emergency room. A review of emergency department (ED) pain management practices however demonstrates treatment inconsistency and inadequacy that extends across all demographic groups. This discrepancy appears to stem from a multitude of barriers including lack of educational emphasis on pain management in nursing and medical school, failure to implement ED-specific pain management guidelines, clinicians' inappropriate attitudes toward opioid analgesics and a paucity of rigorous studies of populations with special pain management needs (ie pediatrics and the elderly). Specifically, many patients still suffer from acute pain while waiting to be evaluated, waiting for intravenous (IV) access to be established and/or waiting for treatment or procedures. There remains a clinical need for rapid-acting, potent analgesics that do not require an invasive route of delivery. A sublingual sufentanil 30mcg tablet is in development for treatment of acute pain in emergency medicine or field trauma settings.The primary objective of this study was to evaluate the safety and efficacy of the sufentanil sublingual 30mcg tablet for the management of moderate-to-severe acute pain in patients in an ED setting.

Methods: This is a phase 3, multi-center and open label study for up to 5 hours in adult patients presenting to the ED with acute pain brought on by recent trauma or injury. Following IRB approval and patient informed consent, approximately 120 patients who met all inclusion and none of the exclusion criteria were administered up to four individual doses of the sufentanil sublingual 30mcg tablet, given at least 60 minutes apart. Efficacy was assessed by patient reports of pain intensity on an 11-point numerical rating scale, (0 = no pain, and 10 = worst possible pain) and a five-point pain relief scale (0 = no relief, 4 = complete relief) as well as patient and healthcare professional global assessments (PGA and HPGA). Primary efficacy variable was the summed pain intensity difference to baseline over the first hour (SPID1). Safety was assessed via vital signs, oxygen saturation monitoring and adverse event reporting (AEs).

Results: Enrollment is on-going with approximately 43 of the 120 patients enrolled to date. An interim analysis was performed following patient #40, indicating statistically significant and clinically meaningful reductions in pain intensity following a single dose of sublingual sufentanil 30mcg. A low number of adverse events have been reported, most of which are mild in severity. Nausea and somnolence are the only events reported by more than one patient. If selected for presentation, complete top line results will be presented in Vienna at the EuSEM meeting, including a detailed breakdown of the demographics and type of trauma (ie broken bone, laceration, burn, etc).

Conclusions: Sufentanil 30mcg tablets are in phase 3 development for treatment of moderate-to-severe acute pain in an adult ED population. Early efficacy and tolerability results from this study suggest that when dispensed sublingually, sufentanil 30mcg may offer a viable alternative to IM or IV dosing.

#6212 : Reversible Cerebral Vasoconstriction Syndrome at Emergency Department

Preferred format : ePoster

Authors:

KIM TAERIM (1)

1. emergency medicine, ASAN medical center, Seoul, KOREA, REPUBLIC OF

Keywords: Headache; Thunderclap; Subarachnoid hemorrhage

Abstract :

Object: Reversible cerebral vasospasm syndrome (RCVS) remains an underrated cause of thunderclap headache which shares similar history of the ‘worst-ever’ headache with subarachnoid hemorrhage (SAH) to the emergency physicians. This study evaluated the clinical manifestations, radiological features, and outcomes of patients with RCVS so that the physicians could raise the high index of suspicion to detect RCVS in more patients with thunderclap headache before having life-threatening complications.

Methods: The electric medical records of 18 patients with diagnostic criteria of RCVS at the emergency department (ED) between January 2013 and December 2014 were retrospective reviewed.

Results: The mean age was 50.7 years, and 80% were women. Patients with RCVS visit an average of 4.7 physicians before receiving an accurate diagnosis and mean duration of symptom until diagnosis is 9.3 days. All patients except one experienced severe headache, from 8 to 10 pain intensity on a numerical rating scale (NRS). 44% of patients had nausea as an associated symptom, 66% of patients experienced worsening of headache while gagging, leaning forward, defecating, urinating or having sex. The most frequently affected vessels are middle cerebral arteries demonstrating the characteristic diffuse “string of beads” appearance. 4 patients had SAH as a complication.

Conclusion: Patients with RCVS have a unique set of clinical and imaging features. Emergency physicians should raise the high index of suspicion to detect RCVS in more patients with thunderclap headache before life-threatening complications

PAIN MANAGEMENT / ANALGESIA / ANESTHESIA

Emily Hignell

#6223 : A history to make history?

Preferred format : ePoster

Authors:

Emily Hignell (1), Jonathan Lewin (2)

1. Emergency Department, Frimley Park Foundation Trust, Oxford, UK
2. Emergency Department, Frimley Park Foundation Trust, Wexham, UK

Keywords: documentation, safe-guarding, paediatric pain management

Abstract :

Background:

National audits of the Paediatric Emergency Department have highlighted recurrent pitfalls in some areas during initial clerking. These include recognition and management of children in pain, response to abnormal vital signs and consideration of non-accidental injury.

In the local Emergency Department of Wexham Park Hospital it was identified that College of Emergency Medicine standards were not being met when it came to managing moderate pain in a timely fashion and re-evaluating pain. An initial audit examining management of children in pain looked at 50 children presenting to the Emergency Department, Wexham Park Hospital, with moderate to severe pain scores. It demonstrated pain management was below agreed standards from the College of Emergency Medicine. A pain pathway was designed to guide clinicians through appropriate pain assessment and prescribing of analgesia. After creation of the pain pathway a further 50 cases were identified and their management reviewed. This demonstrated an improvement in management of severe pain, but re-evaluation of pain and management of moderate pain remained poor. The repeat audit had failed to demonstrate significant improvement in practice, and highlighted that the pathway was not being utilised.

Non-accidental injury consideration is well documented electronically in Wexham Park Hospital Emergency Department because of a coded link which prevents discharging the patient from the system without completion. Written documentation in patient notes however is not often recorded.

Method:

A reconsideration of the clerking documents was commenced in order to improve the quality of the service provided. It was decided that the clerking document should be significantly changed from two blank sheets of headed paper. The new document would aim to encourage clinicians to use appropriate pathways and trigger appropriate responses to areas of previous poor performance. To reform the clerking documents it was decided to use signposting tools, check-points and diagrammatic aids to improve the quality of clerkings and management of patients.

Discussion:

At the top of the clerking document a signposting tool reminds clinicians to use the relevant pathway if one is available for the presenting complaint. Having to check a box of confirmation next to the signpost aims to encourage clinicians clerking the patients to take responsibility for this.

Check-points have been compiled for targets considered most important to patient safety and optimum care, based on audits highly recommended by the Department of Health. These include response to abnormal vital signs and management of children in moderate or severe pain.

Artwork was created specifically for the clerking documents by a doctor working in Ear, Nose and Throat surgical speciality. Diagrammatic representations of the mouth and tympanic membrane were included to encourage documentation of tonsillar and aural pathologies. The diagrams are designed to be anatomical aide memoirs and selected to serve as reminders to examine common sources of infection in the paediatric population.

The designed Paediatric Emergency Department clerking document introduced has been specifically designed to encourage optimum and safe care for patients. It is authorised by clinical governance and has been well received by clinicians.

#6228 : Pivotal role of revisiting personal social history: another case of dyspnoea

Preferred format : ePoster

Authors:

Nikhil Prasad (1), Vanessa King (1), Deepwant Singh (1)

1. , Saint Mary's Hospital Isle of Wight NHS Trust, Newport, UK

Keywords: Aerosol Spray, Hypersensitivity pneumonitis

Abstract :

Introduction: Hypersensitivity pneumonitis (HP) represents a spectrum of respiratory disorders associated with type III and type IV immune responses. The non-specific and often insidious course of sub-acute forms of HP can lead to misclassification or misdiagnosis. We present a case of 57 year old man presenting with dyspnoea where on revisiting his personal/social history, further pivotal information was obtained which led to the correct diagnosis and appropriate management.

Case: A 57 year old male attended the emergency-department with sub-acute onset breathlessness on exertion with fatigue and flu-like symptoms. He was non-atopic, otherwise healthy and was not on taking any regular medications. He had no pets and there was no significant travel-history/occupational-exposure/high-risk behaviour. He denied any other systemic symptoms. He smokes 15grams of tobacco weekly and drinks under 10 units of alcohol weekly.

Respiratory examination revealed multiple rhonchi and high-frequency inspiratory crackles on auscultation of both lung-fields. The rest of the systemic examination was unremarkable. Laboratory-investigations revealed neutrophilic-leucocytosis with raised inflammatory-markers. His chest-radiograph revealed several ill-defined irregular foci of parenchymal opacification in both lungs. He was treated empirically for a chest infection and possible presumed underlying chronic-obstructive-pulmonary-disorder (COPD). Despite oral antibiotics, oxygen, nebulisers and low-dose steroids, his symptoms gradually progressed over the next 24 hours. His pulmonary function testing showed a normal pattern. In view of his smoking history and peculiar chest-radiographic-findings, the radiologist proceeded with a computerised-tomography (CT) scan of his chest with contrast which demonstrated numerous irregular centrilobular opacities < 5mm in diameter with areas of patchy oedema affecting both lungs, concentrated in the middle part and base of the lungs but predominantly on the right lung fields without any pulmonary-mass lesion or COPD changes; however, the possibility of allergic/hypersensitivity pneumonitis was suggested.

Subsequently on revisiting his personal/social history and on further direct-questioning; he recalled that just prior to the onset of his symptoms; he bought a new-brand of an aerosol-spray paint online for "modding" his motor-bike which he used without using any personal protective equipment on relatively warm metal-work (after a long-drive) on his bike in an indoor-garage setting. The aerosol spray paint was confirmed to contain isocyanayte.

He refused to have both broncho-alveolar-lavage (BAL) and further high-resolution CT scan.

HP was diagnosed in view of the clinical symptoms, the history suggestive of exposure to aerosol-spray paint with further possibility of haptenation with isocyanate-component and compatible radio-imaging findings. He received high-dose prednisolone (1 mg/kg) in a tapering regimen, which lead to remarkable improvement of his symptoms and he made a recovery within one week without any recurrence of symptoms at one month’s follow up.

Discussion: HP is a form of interstitial lung disease that is preventable and "curable" by early recognition of antigen-exposure and subsequent avoidance that could improve the overall prognosis and lead to a clinically favourable outcome. Our case report re-emphasizes the pivotal role of revisiting patient’s personal/social history while performing the crucial exceedingly thorough search for an obvious antigen-exposure in a case of HP which had consequences both for diagnosis, prevention and prognosis.

#6277 : “Hygiene in the prehospital setting - A study of bacterial contamination, personnel compliance and impact of various hygiene interventions in the emergency medical service”

Preferred format : Oral presentation

Authors:

Heidi Storm Vikke (1), Matthias Giebner (2)

1. Head of Department (research), Falck Danmark, Medical Department, Kolding, DENMARK
2. Medical director, Falck Danmark, Medical Department, Kolding, DENMARK

Keywords: Keywords: Hygiene, infection control, contamination, cleaning, prehospital, emergency medical service

Abstract :

Introduction: Patients are at risk of contracting a healthcare associated infection (HAI) straining on society due to prolonged hospitalization, morbidity and mortality. Prior research, although limited, indicates that ambulance environment and personnel uniforms may constitute a reservoir for potential pathogenic bacteria and that hygiene compliance among ambulance personnel could be improved. Treatment in the emergency medical service under non-clinical conditions, sometimes under severe time pressure, and not always with unlimited quantities of cleaning equipment hand rubbing and examination gloves are challenging, and despite that patients receive advanced treatment during the prehospital course, hygiene have not yet received the amount of focus as seen in primary settings. This PhD project consists of five different studies, valuable to anyone in contact with the emergency medical service, both nationally and internationally. The results will allow concise hygiene efforts and thereby enhance prevention of HAIs during the prehospital course.

Method:

1. Current hygiene guidelines appear without evidence, hence calling for a systematic review in order to evaluate existing evidence and future research requirements. The aim is to characterize environmental contamination and to illuminate hygiene interventions, compliance and challenges in a prehospital context.
2. Deficient evidence of current extent of bacterial contamination motivates to a cross-sectional demonstration of contamination by environmental sampling, using a combined swabbing and agar imprint method: Primary outcome: total *colony forming units* (CFU). Secondary outcomes: *Staphylococcus aureus* (MRSA), *Enterococcus* (VRE) and *Enterobacteriaceae* (ESBL), *time since last cleaning, area of service* and *total no. of patients*.
3. Hygiene compliance is crucial but appears undocumented in a prehospital context, hence incentivizing an observational study to illuminate quality and eventual challenges. 96 hours of semi-blinded observation. With focus on conventional hand rub/glove occasions, answered by YES/NO: *Before touching a patient, before clean/aseptic procedure, after body fluid exposure risk, after touching a patient* and *after touching patient surroundings.* Additional parameters: *Short hair/done up, short nails and Rings/watches.*
4. The effect of cleaning is undocumented, hence motivating a controlled *before and after* study of bacterial reduction when cleaning environment and medical equipment. The aim is to document the effect of current cleaning interventions when using sampling methods described in sub study two. Primary outcome: total *colony forming units* (CFU). Secondary outcomes: *Staphylococcus aureus* (MRSA) and *time spend on cleaning*.
5. Uniforms may constitute a reservoir for potential pathogenic bacteria. However, evidence of domestic washing is limited, hence motivating to a cross regional before and after study. The aim is to document the effect when sampling as described in sub study two and four. Primary outcome: total *colony forming units* (CFU). Secondary outcomes: *Staphylococcus aureus* (MRSA) and e*nvironmental contamination in the washing area*.

Results: No results in time of writing, we expect to present them simultaneously within the following three years.

#6279 : Analysis of Patient with Burn

Preferred format : Oral presentation

Authors:

Tolga Eser (1), cemil Kavalci (1), afsin kayipmaz (1)

1. emergency, baskent university faculty of medicine, ankara, TURKEY

Keywords: Burn, emergency department, cost

Abstract :

Burn has been an important cause of trauma trough human history. Most of the burn causes can be prevented by informing people and simple precautions but there is no decline in the number of burn cases with tecnological advancements. Treatment of burn trauma is a long and costly process. All around the world there are many researchs done about burn treatment but there are limited researches about the cost of burn treatment. The decrease in life quality after burn trauma effects patients'psychological health and financial status. It has been shown because of these reasons, not only major burn trauma patients but also simple burn patients should receive high quality healthcare service and this service should be given by experienced helthcare providers. Because of this reason all the patients that has come to emergency department with burn should be treated efficiently and with low costs.

All admitted we aimed to analyze age, gender, admittance time, type of burn, clinical prognosis, mortality, and percentage of burnsite, and total cost of treatment of the patients presented with burn injury to the emergency department.

According to this purpose we have acquired the data of 264 patients who have been admitted to Baskent University Emergency Department with burn injury between 2012 to 2014. We analysed age, gender, time, months and year of admitance, causes of burn, whether it is work related or not, self induced or not, if the treatment consists surgery or admittance for follow up, burnsite, thickness of burn and the total cost of treatment. The data has been collected from hospital patient registiration system.

In conclusion, it is shown that patients'condition, gender, admittance year, surgery, burn cause, age does not effect cost of the treatment. On the other hand the main factors that changes the cost are degree of burn and burn site.

#6290 : Not for the faint-hearted: towards better management of syncopal patients presenting to the emergency department

Preferred format : ePoster

Authors:

Chieun Han (1), Sarah Shaw (1), Roshan Saleh (2)

1. , NHS, Manchester, UK
2. , NHS, Banbury, UK

Keywords: syncope, collapse, TLoC

Abstract :

Background/Introduction:

Syncope is a common Emergency Department (ED) presentation, and often misdiagnosed (1). Initial assessment seeks to discern episodes with an underlying cardiac cause from those that are vasovagal/postural. The former are more dangerous, carrying greater mortality, and often require admission for early cardiac follow-up, monitoring, or other investigation/treatment (2). We audited the ED assessment of syncope against National Institute of Clinical Excellence (NICE) guidance to assess whether we were extracting the proper information that would raise the alarm for cardiac syncope (1). The eventual aim is to establish a guidance document that has some key points to remember when dealing with a syncopal patient.

Participants/Methods:

This was a retrospective study in patients presenting with syncope to the ED of Royal Preston Hospital in January 2016. The search terms from triage included: ‘fall, collapse, faint, transient loss of consciousness (TLoC), blackouts and vasovagal’. The age range was between 15 and 65. Of 178 sets of casenotes, 45 were included on closer review as they were truly syncopal. The documentation was searched for evidence of 11 key variables we deemed of key importance in the syncope assessment:

1. Evidence of a coherent history
2. Observations [pulse, respiratory rate, temperature, blood sugar (BM)]
3. Lying/standing blood pressure (BP)
4. Past medical history (PMH) of cardiac disease
5. Drug history (DH)
6. Electrocardiogram (ECG)
7. Evidence of congestive cardiac failure (CCF)
8. Exertional syncope
9. Shortness of breath (SOB)
10. Murmur
11. Family history of sudden cardiac death (FHx)

Results:

No single variable had evidence of documentation/consideration in more than 80% of the sample. Of the 11 variables, the following had evidence of documentation/consideration in more than 50% of the 45-patient sample: ECG (80%), coherent history (78%), history of cardiac disease (76%), murmur (76%), observations including BM (69%), DH (58%). The remaining variables had been documented/considered in fewer than 50% of the sample: SOB (29%), lying/standing BP (18%), CCF (9%), exertional syncope (7%), FHx (4%).

Discussion/Conclusion:

The variables we audited represent either ‘red flags’ or essential data for the management of syncopal patients. Documentation of these were poor and inconsistent, perhaps representing: a lack of education among clinicians about best management of syncope; appropriate consideration of factors but incomplete documentation; illegible handwriting (noted in our data collection); or clinicians’ presumption (younger patients had less complete drug histories perhaps because they were presumed not to take any).

We have implemented a guidance document that will help consider all these variables when dealing with a syncopal patient, which we are re-auditing. The key benefit is improvement in patient safety by not missing key points that suggest a dangerous cause of the syncopal episode. Furthermore, ‘low-risk’ patients suffering a clear vasovagal can be safely discharged with advice after minimal investigation if all the red-flag issues are addressed.

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#6292 : The effects of blood transfusion and crystallid infusion on outcome of endovascular aortic repair performed for ruptured abdominal aortic aneurysm. The evaluation of the amount and composition of blood transfusion.

Preferred format : ePoster

Authors:

Yohei Kawatani (1), Kurobe Hirotsugu (2), Hayashi Yujiro (1), Taneichi Tetsuyoshi (1), Ito Yujiro (1), Nakamura Yoshitsugu (1), Suda Yuji (1), Tetsuya Kitagawa (2), Hori Takaki (1)

1. Cardiovascular surgery, Chiba-Nishi General Hospital, Matsudo, JAPAN
2. Cardiovascular surgery, Tokushima University Hospital, Tokushima, JAPAN

Keywords: ruptured abdominal aortic aneurysm, endovascular aortic repair, blood transfusion

Abstract :

Endovascular aortic repair (EVAR) is reported to be an effective treatment for ruptured abdominal aortic aneurysm (rAAA). However, the mortality associated with rAAA remains high. The factors that might affect survival in patients with rAAA who undergo EVAR are not well known. In studies about patients with trauma, blood transfusion and crystalloid infusion is reported to be associated with survival. The aim of this study was to evaluate the effects of blood transfusion and crystalloid infusion on survival in patients with rAAA following emergency EVAR.

In this retrospective study, we reviewed patients who were admitted to our hospital with enhanced computed tomography (CT)-confirmed rAAA between October 2013 and December 2015. Patients with symptomatic abdominal aneurysm without evidence of hemorrhage in CT images were excluded. In our facility, EVAR is considered as the first-line surgical treatment for rAAA. However, if EVAR was contraindicated, open repair was performed. We assessed blood transfusion and crystalloid infusion performed in the period between admission to the emergency room and admission to ICU after surgery.

Twenty-five patients who underwent EVAR were enrolled. (No patients died in the ER, 1 was considered not fit for surgery and 46 went to theatre. Of 46 cases, 25 underwent EVAR.) The mean patient age was 76.4 ± 9.92 years. The male:female ratio was 18:7. Eighteen patients experienced preoperative shock. The mean operation time was 115 ± 32.5 minutes. Blood transfusion: red cell concentrates, 10.0 ± 5.70 units; fresh-frozen plasma, 4.4 ± 3.3 units; and platelet concentrate, 5.5 ± 13 units. Three patients died of abdominal compartment syndrome within 24 postsurgical hours. An additional 2 patients died between 24 hours and 30 days postsurgically; 1 patient died due to respiratory failure and 1 due to cancer. Twenty patients (80%) survived.

RCC/FFP ratio were significantly larger in both the 24-hour (survived:non-survived=1.3+/-0.6: 1.6+/-0.8, p=0.014) and 30-day(survived:non-survived=1.1+/-0.6: 1.8+/-0.8, p=0.001) non-survival groups compared with the respective survival groups. Patients with RCC/FFP ratios greater than 1.5 were observed significantly more in non-survival groups in both 24-hour(survived:non-survived=2(9%): 3(100%), p=0.018) and 30-days(survived:non-survived=1(5%): 4(70%), p=0.030). Larger amounts of crystalloids were used in the both the 24-hour (survived:non-survived=2386+/-912:5083+/-803, p=0.028)and 30-day(survived:non-survived=2341+/-9.6: 4550+/-1252, p=0.012) non-survival groups compared with the respective survival groups. Patients who were given crystalloid more than 1.5L were observed significantly more in non-survival group both in 24-hour(survived:non-survived=5(23%): 3(100%), p=0.037) and 30-days(survived:non-survived=5(25%):4(80%), p=0.010).

In a study of trauma patients, large amounts of crystalloids has adverse effects on survival and those who infused large amounts of crystalloids needed larger blood transfusions. A retrospective investigation of RCC/FFP ratio in trauma patients reported a link between a 1:1 RCC/FFP ratio and positive prognosis. The PROPPR randomized clinical trial divided trauma patients by blood transfusion type into an RCC:FFP:PC=1:1:1 group and an RCC:FFP:PC=2:1:1 group. Better prognoses were observed in the former. We suggest that also in rAAA patients treated with EVAR, early FFP trans fusion and limitation of crystalloids can improve prognosis of the patients.

#6301 : Dispatcher-Assisted CPR Time-To-First-Compression Using the MPDS v13.0 Obviously Not Breathing Fast Track Feature

Preferred format : ePoster

Authors:

Greg Scott (1), Clawson Jeff (1), Olola Chris (2), Barron Tracey (3)

1. EMS, International Academies of Emergency Dispatch, Utah, USA
2. , IAED, Salt Lake Ciy, USA
3. EMS, International Academies of Emergency Dispatch, Bristol, UK

Keywords: CPR, compressions, Dispatcher assisted CPR, Time to first compression

Abstract :

Introduction: Rapid identification of out-of-hospital cardiac arrest (OHCA) and delivery of bystander chest compressions in patients with ventricular fibrillation are key elements in the chain of survival. The timeliness of dispatcher-assisted CPR may improve survival in such patients. The Medical Priority Dispatch System (MPDS®) has recently introduced a streamlined process for emergency medical dispatchers (EMDs) that provides early identification of OHCA and rapid delivery of chest compression instructions in version 13.0, known as the *Obviously Not Breathing Fast Track* feature.

Objective: The primary objective was to determine elapsed time to start of instructions and time to initiate chest compression by bystanders where EMDs used the MPDS v13 *Obviously Not Breathing Fast Track* feature. A secondary objective was to identify barriers encountered by bystanders in completing the delivery of prompt chest compressions.

Methods: A retrospective, observational study of 30 cases of (adult cardiac arrest) dispatcher-assisted cardiopulmonary resuscitation (CPR) using the MPDS v13 Fast Track feature was performed. Case audio was downloaded from the emergency medical dispatch system. Elapsed time was recorded for 7 key steps in the call. Barriers that impeded progress of bystander to deliver prompt chest compressions were identified.

Results: 60% (18/30) had barriers that impeded the time to chest compression instructions and bystander delivery of chest compressions. The most frequent barrier 36.7% (11/30) was difficulty getting the patient from a bed to the floor. Overall elapsed time from call pickup to address/phone verification was 28 seconds (26 seconds without barriers, 29 seconds with barriers, $p=0.456$). Elapsed time from address verification to completion of patient description was 23 seconds (15 seconds without barriers, 26 seconds with barriers, $p=0.007$). The median elapsed time from address verification to identification/entry of cardiac arrest (CA) chief complaint was 65 seconds (with or without barriers). The median time to start chest compression instructions was 140 seconds overall (89 seconds without barriers, 182 seconds with barriers, $p<0.001$). The median time for bystander to initiate first compression as instructed was 177 seconds overall (120 seconds without barriers, 218 seconds with barriers, $p<0.001$). Elapsed time to complete address verification, to CA identification, to start CPR instruction, and to responders arrival by patient side were significantly different ($p=0.046$ each) statistically where there was 1 barrier vs. >1 barrier.

Conclusion: Use of the MPDS v13 Fast Track feature improves time to first compression, when compared to previous MPDS versions. Many cases had barriers that impeded time to chest compression instructions and bystander delivery of chest compressions. A significant difference exists in both time to compression instructions and time to compression delivered between cases with no barriers and those with barriers. Getting the patient from a bed to the floor was the most common barrier. Future studies that evaluate dispatcher-assisted CPR should identify these barriers and report on how they impacted elapsed times. Address and phone number verification is a requirement for dispatch, and time to complete this step varies from case to case. Therefore this time must be considered when evaluating time to first chest compression. dFragment--> ssion.

#6313 : Return of spontaneous circulation (ROSC) from release of auto-PEEP

Preferred format : ePoster

Authors:

Ann Youn (1)

1. Anesthesiology, Chungnam National University Hospital, Daejon, KOREA, REPUBLIC OF

Keywords: Auto-PEEP, Sudden cardiac arrest, ventilation

Abstract :

The Lazarus phenomenon is defined as the delayed return of spontaneous circulation (ROSC) after cessation of cardiopulmonary resuscitation (CPR). Because factors such as auto-PEEP play a role and cause of death is usually found postmortem, it is difficult to make an exact diagnosis at the time of arrest. A simple, non-invasive method such as discontinuing manual ventilation can correct hypotension or electromechanical dissociation (EMD) associated with hyperinflation of lungs from discrepancy between exhalation and inspiration. We report a 77 year old woman who suffered from cardiac arrest suspected of auto-PEEP (positive end expiratory pressure) from improper manual ventilation during transfer from the ICU to the OR but was resuscitated when ventilation was ceased by releasing intrathoracic pressure. Education for understanding the physiology of this phenomenon and recognizing it when it occurs is needed.

#6325 : Sternal fracture- rare but possible in children

Preferred format : ePoster

Authors:

Bimal Mehta (1), Sarah Fissler (1), Balakrishna Valluru (1)

1. , none, Liverpool, UK

Abstract :

A nine year old boy presented to a district general emergency department after he toppled off a swing and landed onto his anterior chest wall.

He was initially managed as a chest wall contusion and was discharged home with oral analgesia. Despite adequate oral analgesia, his pain persisted and he re-attended the emergency department a week later.

On examination his cardio-respiratory status was stable. There was tenderness and a step over the sternal area with no associated injuries.

On clinical suspicion plain radiographs of the chest and a lateral view of the sternum were done which showed a fracture of the body of the sternum with posterior displacement.

He was then transferred to our hospital for further management. In our emergency department his clinical examination did not change from previously described. A 12 lead electrocardiogram and a bedside echocardiogram did not reveal any abnormality.

He was admitted under cardiothoracic surgeons for overnight observation. He subsequently developed neck pain without neurological deficit. Plain films and MRI of the thoracic spine were normal.

The sternal fracture was managed conservatively and he was followed up appropriately.

On reviewing the literature chest wall injuries causing fractures are uncommon in children. The increased pliability and elasticity of the child’s chest wall reduces the susceptibility to fracture. Though rare, sternal fracture does occur with direct injury (blunt trauma) to the chest wall and indirect injury following flexion-compression to the upper thorax. Hence careful examination of the thoracic spine in the presence of a sternal injury and vice-versa is emphasized for indirect injuries. The associated intra-thoracic injuries is high in children as a result of severe blunt trauma like motor vehicle crashes. A lateral x-ray of the chest is the easily available investigation but a bed side ultrasound has higher sensitivity and specificity in diagnosing sternal fractures. Ultrasound expertise in emergency department is highly variable.

Sternal fractures in children are generally managed conservatively. In adults who are otherwise fit and well and have normal electrocardiogram & chest x-ray on presentation can be safely discharged from the emergency department with oral analgesics. However the point at which we can safely discharge children with sternal fracture from the emergency department is not clear.

There are no set guidelines regarding managing sternal fractures in children, but each presentation is managed based on the clinical situation. This case report highlights the need for further studies to make and validate decision rules regarding managing sternal fractures in children.

#6329 : International smuggling of cocaine by body concealment

Preferred format : Oral presentation

Authors:

Onur Kaplan (1), Ozgur Sogut (1), Mehmet Yigit (1)

1. Department of Emergency Medicine, Haseki Training and Research Hospital, Istanbul, Turkey, Istanbul, TURKEY

Keywords: Body packer, cocaine-filled packages, abdominal radiography, computed tomography, conservative management

Abstract :

Background: Drug smuggling by internal bodily concealment, called ‘body packing’, is a widespread method of transporting narcotics. People using this method are known as ‘body packers’, ‘mules’, ‘internal carriers’, or ‘couriers’. The three main drugs smuggled in this manner are cocaine, heroin, and cannabis products. Cocaine is the drug most commonly smuggled by body concealment, followed by heroin. We present a case report of a healthy man who ingested a large number of well-manufactured cocaine packages to smuggle them across international borders.

Case: A 36-year-old man ingested cocaine packages worth approximately US $900,000 to transport it from Dubai to Madrid. He was arrested by police at Istanbul Ataturk Airport for suspected body packing of drugs. He confessed that he had attempted to smuggle 76 packages of cocaine in his gastrointestinal tract. The patient had nausea, but no abdominal pain. He appeared well and was conscious and oriented. Cardiopulmonary, abdominal, and rectal examinations were normal, and there were no signs of drug overdose or intoxication. A plain abdominal radiograph revealed multiple opaque foreign bodies in the gastrointestinal tract . Non-contrast-enhanced three-dimensional (3D) abdominal and pelvic computed tomography (CT) showed multiple spherical capsules in the small intestine, colon, and rectum. After detecting the capsules radiologically, he confessed to carrying about 1.35 kg of cocaine, pressed and wrapped into packages weighing 18 g each. He had swallowed the packages of cocaine in Dubai two days before admission to our hospital.

The patient was managed successfully with conservative measures, including enemas and laxatives. All of the ingested packages were evacuated spontaneously and the police secured and collected 76 intact swallowed packages of cocaine. CT 4 hours later showed that the abdomen was clear of cocaine packages. The patient was observed in the ED for six hours post-arrest. No symptoms of cocaine toxidrome or other complications such as obstruction or ileus were observed. He was discharged into police custody. Analysis subsequently indicated that the cocaine was 75% pure and type III packages had been used.

Conclusion: Abdominal radiography and CT are useful tools for screening patients suspected of body packing cocaine. Although our patient had swallowed a large number of cocaine capsules, he was managed conservatively and all of the capsules were evacuated uneventfully. This may be because of the sophisticated capsule material and packing technique, and the health of our patient.

#6343 : Emergency Department blood-borne Virus Screening Study (EDVS STUDY). Feasibility and results in an urban inner city Emergency Department.

Preferred format : Oral presentation

Authors:

Darren Lillis (1), S O'Connell (2), A Cotter (2), S O'Dea (2), H Tuite (3), Darragh Shields (1), S Norris (4), B Crowley (5), PK Plunkett (1), C Bergin (2)

1. , Department of Emergency Medicine, St James's Hospital, Dublin, Ireland, Dublin, IRELAND
2. , Department of Genito-Urinary and Infectious Diseases, St James's Hospital, Dublin, Ireland, Dublin, IRELAND
3. , Infectious Diseases Department, University College Hospital Galway, Ireland., Galway, IRELAND
4. , Hepatology Department, St James's Hospital, Dublin, Ireland, Dublin, IRELAND
5. , Microbiology Department, St James's Hospital, Dublin, Ireland, Dublin, IRELAND

Keywords: Emergency Department, HIV, Hepatitis B, Hepatitis C, Screening

Abstract :

Introduction

Recent data suggests >2/1000 people live with HIV in the Dublin area. British HIV Association guidelines advise universal HIV testing at this threshold. Reported prevalence of Hepatitis C (HCV) in Ireland is 0.5- 1.2%. Hepatitis B (HBV) prevalence is unknown. The aim of this study was to assess the feasibility of a HIV, HBV and HCV panel screening programme in an urban Emergency Department (ED).

Methods

With ethical approval, opt-out serum screening was piloted from March 2014 to January 2015. Patients who underwent venepuncture in ED were offered an additional panel viral screen of HIV, HBV and HCV testing. An extensive staff education programme was conducted before the study commenced. Visual and verbal reminders were instituted at daily staff handovers. The study organisers provided regular study updates.

Results

Of 10,000 samples, 8839 were analysed following removal of duplicates. A sustained uptake of >50% of samples was attained by Week 3.

97, 44 and 447 patients tested positive for HIV, HBV and HCV respectively. Of these, 7, 20 and 58 were new diagnoses of HIV, HBV and HCV respectively. The incidence and prevalence of all three viruses are outlined below

HIV- incidence 0.8 per 1000, prevalence 11 per 1000

HBV- incidence 2.26 per 1000, prevalence 5.05 per 1000

HCV- incidence 6.5 per 1000, prevalence 50.5 per 1000

Conclusions

The results demonstrate a high prevalence of blood borne viruses in our population. Opt-out serum screening for blood borne viruses is feasible and acceptable in a busy urban ED for both staff and patients. It has now become standard of care in our Emergency Department.

#6398 : Impaired cognition is associated with adverse outcomes in older patients presenting to the emergency department; the APOP study

Preferred format : Oral presentation

Authors:

Jacinta Lucke (1), Jelle de Gelder (2), Bas de Groot (1), Christian Heringhaus (1), Jaap Fogteloo (3), Sander Anten (4), Gerard-Jan Blauw (2), Simon Mooijaart (2)

1. Emergency Medicine, Leiden University Medical Centre, Leiden, THE NETHERLANDS
2. Gerontology and Geriatrics, Leiden University Medical Centre, Leiden, THE NETHERLANDS
3. Internal Medicine - Section of Acute Care, Leiden University Medical Centre, Leiden, THE NETHERLANDS
4. Internal Medicine, Alrijne Hospital, Leiderdorp, THE NETHERLANDS

Keywords: geriatrics, cognition, cognitive function, functional decline, mortality

Abstract :

Background: The number of emergency department (ED) visits by the elderly is increasing. Cognitive impairment is a risk factor for functional decline and mortality but its assessment takes too much time in older patients in the Emergency Department. Information about cognition at arrival might be of great value to assist clinicians in making treatment decisions, to detect risk of delirium in an early phase and to reduce the risk of adverse health outcomes by implementing targeted interventions. Therefore, the aim was to investigate if the relatively brief Six-Item-Cognitive-Impairment-Test (6-CIT) is an independent predictor of functional decline and mortality, a pre-requisite to be used as a screening-tool in the acute setting.

Methods: A multicentre prospective observational follow-up study was conducted in patients aged 70-years or older, visiting the ED of the Leiden University Medical Center (LUMC) and Alrijne Hospital in the Netherlands. At baseline, the Six Item-Cognitive-Impairment-Test (6CIT) and functional status, as assessed with the Katz-ADL, was assessed. Cognitive impairment was defined as a 6CIT score ≥11. Multivariable logistic regression analysis with the primary outcomes mortality and functional decline (composite endpoint adverse outcome), at three and twelve months (LUMC only) after the ED visit was used.

Results: 1632 patients were included (LUMC n=751, Alrijne n=881). 326 patients (21.4%) had cognitive impairment. Compared to normal cognition, cognitive impairment is associated with increased risk of adverse health outcomes, independent of age, sex, education and triage urgency, with corrected odds ratios of 1.87 (95%CI:1.42-2.46) at three months. Patients with impaired cognition had increased risk of mortality after three and twelve months (HR 2.27(95%CI1.54-3.34)).

Conclusion Cognitive impairment, measured with the 2-3 minute 6CIT, is independently associated with adverse health outcomes in older ED patients.

#6402 : Emergency Department Management of NSTEMI

Preferred format : Oral presentation

Authors:

Austin Keziah (1), Dan Ghiurluc (2), Umar Chaudhry (1)

1. FY2 Emergency Medicine, London Northwest Hospitals, London, UK
2. Accident and Emergency, Northwick Park Hospital NHS Trust, London, UK

Keywords: NSTEMI, dual-antiplatelet, risk stratification, management

Abstract :

Emergency Department Management of NSTEMI

Austin K[1], Chaudhry U[1], Ghiurluc D[2]

1 – FY2 doctor in Emergency Medicine, Northwick Park Hospital

2 – Consultant Physician in Emergency Medicine, Northwick Park Hospital

Introduction

Non-ST Elevation Myocardial Infarction (NSTEMI) is a common and serious acute medical presentation. Diagnostic difficulties and frequent changes to guidelines mean patients presenting to the Emergency Department (ED) are vulnerable to mismanagement. There are clear guidelines at Northwick Park Hospital (NICE and Trust) outlining optimal management of NSTEMI, but we noticed these were not being followed, to the likely detriment of patient care. We aimed to evaluate our ED practice against predetermined standards, teach the department regarding protocols, and subsequently reassess quality of care.

Methods

The electronic ED database demonstrated whether: 1) patients with a ‘provisional diagnosis’ of NSTEMI in April had been appropriately risk-stratified; 2) appropriate analgesia was given; 3) dual anti-platelets were prescribed; 4) the choice of the second agent was appropriate to their degree of risk. We then used multiple methods to educate the department on NSTEMI management, and then recollected data to assess for a change in practice.

Results

All aspects of management improved, most notably the prescription of aspirin (71% patients in the first round, 100% in the second) and a second antiplatelet (65% patients in the first round, 95% in the second). The frequency of correct choice of second agent improved, as did risk stratification and analgesia prescription.

Conclusions

Important acute problems such as NSTEMI, which initially present to ED doctors, require not only thorough guidelines from specialty departments, but full awareness and understanding by front-line staff responsible for initial management. In this case, simple education via multiple media and raising awareness has significantly improved patient outcomes.

#6403 : Upper Gastrointestinal Bleeding PPI guidance

Preferred format : ePoster

Authors:

James Lok (1), Dan Ghiurluc (2)

1. FY2 Emergency Medicine, London Northwest Hospitals, London, UK
2. Accident and Emergency, Northwick Park Hospital NHS Trust, London, UK

Keywords: anti-acids, management, upper G-I bleed

Abstract :

Management of acute upper GI bleeds in A&E and PPI guidance

Acute upper gastrointestinal hemorrhage is a common medical emergency and is responsible for approximately 50 000 hospital admissions every year in the UK. Despite advances in its management over the past few years, the hospital mortality rate for an acute upper GI bleed remains 10%[1]. Appropriate management of these patients involves prompt resuscitation with fluids and blood products, early risk stratification, appropriate use of pharmacological agents and prompt endoscopy to identify the bleeding point and apply luminal therapy.

In this retrospective study, all of the patients who presented to Northwick Park emergency department between 1st December 2015 and 31st January 2016 with an acute upper GI bleed were identified and our management of these patients was compared with the latest NICE guidelines published on this topic in 2012[2]and our local Trust policies. In total, 50 patients met the inclusion criteria for this study with 5 patients presenting with a suspected variceal bleed and 45 patients presenting with a suspected non-variceal bleed.

Results obtained from this study have highlighted a number of areas that can be improved. Firstly, appropriate risk stratification and calculation of the Blatchford score was calculated in only 22% of cases. In addition, 16% of patients did not have a group & save or cross match performed. Mortality is particularly high amongst those patients presenting with a variceal bleed and amongst this group of patients, 0% had a blood culture performed and only 40% of patients received broad spectrum antibiotics and terlipressin therapy. Furthermore, in accordance with NICE guidelines, acid suppression therapy should not be given to patients with a suspected non-variceal bleed before endoscopy and should only be offered after endoscopy if there is evidence of recent haemorrhage. This study showed that 25 patients received inappropriate acid suppression therapy whilst in the A&E department. Finally, low-risk patients who have a Blatchford score of 0 can be considered for early discharge and referral to ambulatory care for urgent outpatient endoscopy.

It is important that this pathway is used correctly and is not appropriate for high-risk patients, including those with a Blatchford score of 1 or more, or a history of a chronic liver disease. Over a two month period, five patients presenting with an upper GI bleed were discharged from A&E and referred to ambulatory care. However, three of these patients were inappropriately discharged home from A&E, including a gentleman who had a Blatchford score of 6 with known oesophageal varices.

The results of this audit were presented at a local clinical governance meeting with strong emphasis on education of the health care professionals who work in our Accident and Emergency Department. In addition, they were encouraged to use the upper GI pro forma that is readily available on the intranet and can act as a prompt for clinicians.

[2] **Acute upper gastrointestinal haemorrhage in over 16s: management (NICE guidelines 2012)**hbhshshs
nvjhbnvnvbbvbbvbffhjfhfjames.lok@nhs.net

#6404 : Predicting the 28-day mortality rate in elderly patients with community-acquired pneumonia: Evaluation of 11 risk prediction scores

Preferred format : Oral presentation

Authors:

Huseyin Elbi (1), Adnan Bilge (2), Murat Ozsarac (2), Burcu Golcuk (3), Halil Ibrahim Dayangac (2), Onur Dikmen (2), Yalcin Golcuk (2)

1. department of family medicine, celal bayar university, school of medicine, manisa, TURKEY
2. department of emergency medicine, celal bayar university, school of medicine, Manisa, TURKEY
3. Department of Medical Biochemistry, Merkez Efendi State Hospital, manisa, TURKEY

Keywords: elderly, community-acquired pneumonia, severity, emergency medicine

Abstract :

Abstract

Objective: This study aimed to evaluate the performance of existing risk scores for predicting the 28-day mortality rate in patients presenting with community-acquiring pneumonia (CAP) in an emergency department.

Methods: We conducted a cross-sectional study at the Celal Bayar University Hospital in Manisa, Turkey. The records of consecutive elderly patients with CAP were reviewed for this retrospective study. All patients were followed-up to assess their outcome within 28 days of the admission. The discriminative performance of the 11 risk prediction scores for patients with CAP was assessed using the area under the receiver operating characteristic curve (AUC).

Results: A total of 151 elderly patients [mean age, 76.6 ± 7.8 years (range, 65-94 years); 65.6% men] with CAP were evaluated. There were 30 deaths by 28-day, an all-cause mortality rate of 19.9%. The CURB-age had the best performance with an AUC of 0.836. Three other scores that performed well were SCAP, IDSA-ATS, and CURXO-80 (AUC 0.833, 0.822, 0.805, respectively).

Conclusion: Four of the existing scores had good discriminatory power (AUC > 0.800) to predict the 28-day mortality rate. The best discrimination was demonstrated by CURB-age, a score designed for the elderly patients with CAP. Only one score was under the level that is considered to indicate fair discriminative power (AUC < 0.700). Additional research is needed to determine the best risk score for predicting early mortality rates of elderly patients following CAP.

Keywords: elderly, CAP, severity

#6406 : Early identification of septic patients in the Emergency Department: role of lactates at Triage

Preferred format : Oral presentation

Authors:

Germana Ruggiano (1), Luca Naldi (2), Alessio bertini (3), Renzo Camajori Tedeschini (4), Andrea Camarri (5), Aurelia Guzzo (6)

1. U.O. Medicina d'Urgenza, Ospedale S. Maria Annunziata Firenze, Azienda Sanitaria Firenze, Italy, Firenze, ITALY
2. Specializzazione in medicina Interna, Universita' di Firenze, Universita' di Firenze, Italy, Firenze, ITALY
3. Emergency department, Ospdeale di Livorno, Azienda Sanitaria Nordovest Toscana, Livorno, ITALY
4. Emergency medicine, ospedale S. Giovanni di Dio, Azienda Sanitaria Toscana Centro, Florence, ITALY
5. Emergency Medicine, Ospedale Le Scotte , Azienda Sanitaria Sudest Toscana, Siena, ITALY
6. Emergency department Ospedale di S. Maria Annunziata, Azienda Sanitaria Toscana Centro, Florence, ITALY

Keywords: Sepsis, lactates, Triage

Abstract :

Early indetification of patients with severe infection tha can rapidly evolve to sepsis (formerly called severe sepsis) is crucial as it has been proven that "aggressive" treatment of these patients reduces mortality.

In 2013 we conducted a retrospective study in our Emergency department with these goals: 1) analysis of correlation between: -symptoms at admission (fever, tachycardia, arterial hypotension), - vital signs at traige (SBP, MBP, HR), - presence of Sistemic Inflammatory Response Syndrome (SIRS), - Shock Index at triage, with a) hyperlactatemia (>4 mmol/l)-primary outocome; b) 28-day mortality-secondary outome.

In that study we found that non anamnestic or clinical element was individually associated neither with hyperlactacidemia nor with mortality, except pronounced arterial hypotension. SIRS criteria weren't associated neither with lactate>4 mmol/l nor with 28 day mortality. We suggested that Shock Index could be used as an early warning at triage. In our retrospective study SI>0,7 was predictor of lactate>4 mmol/l ans SI>1 was predictor of both lactate>4 mmol/l adnd 28 day mortality, both with an elevated Ngative Predictive Value.

In 2016 we started a multicentric observational study using Shock Index at triage in patients presenting to our Emergency Departments with suspicion of infection. With a SI>0,7 lactates are measured immediately and if the value is >4 mmol/l the patient is immediately monitored and seen by an Expert Emergency Physician. Iflactates are >2 mmol/l the patient is seen within 15-30' by an expert team.

The objects of our study are: 1) to reduce the delay between triage and treatment (door-to-antibiotic/fluids time) of patients with sepsis; 2) to increase the capacity of recognizing sepsis in the Emergency Department and allow the admission to the adequate setting.

Our preliminary data show thata Shock Index at triage correlates with lactates and that the rapid lactates assessement gives a rapid awarenessot the clinical situation of the patient with consequent early aggressive treatment.

#6419 : Clinical characteristics and outcome of nonagenarians and centenarians in a medical ICU

Preferred format : Oral presentation

Authors:

Pierrick Le Borgne (1), Sophie Couraud (1), Charles-Eric Lavoignet (1), Jean-Etienne Herbrecht (2), Alexandra Boivin (2), Quentin Maestraggi (2), Pascal Bilbault (1), Francis Schneider (2)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. Réanimation médicale, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE

Keywords: ICU, Elderly, Outcome

Abstract :

Background:

As a result of demographic transition, the proportion of « very elderly » (≥ 90 years) patients is increasing worldwide and more of these patients are nowadays admitted to intensive care units (ICU). Among physicians the discussion about appropriateness of these ICU admissions still remains controversial. mostly due to questionable outcome, limited ressources and costs. The aim of the study was to determine and evaluate the clinical characteristics and outcome in a very old population admitted to a medical ICU in an urban hospital.

Methods:

We present here a retrospective and monocentric study. We reviewed the charts of all patients (≥ 90 years) admitted to a medical ICU between 2005 and 2015. We collected epidemiological, clinical and biological parameters and all therapeutic measures during the ICU stay. A long-term survival follow-up was also performed. 185 patients were included for statistical analysis.

Results:

A total of 185 patients were included, which represented 1.8% of admissions to the ICU during this 10 year period. The mean age was 92.7 +/- 2.2 years, the sex ratio was 0.34. Most of patients (39%) were admitted from the emergency department (ED) and 34% directly from pre-hospital care (EMS). The mean Charlson comorbidity score was 7.6 (95% CI: [7.3-7.8]) and the mean McCabe score was 1.36 (95% CI: [1.28-1.43]). The admission diagnosis in the ICU was mainly respiratory distress (48%), septic shock (13%), coma (11%) and cardiac arrest (10%). The average SAPS-II score within 24 hours of ICU admission was 58.1+/-23.2. 20% of these patients suffered of previous dementia. 50% of patients required support by mechanical ventilation (mean duration 7.1 days) and 6% of patients received renal replacement therapy. ICU and hospital mortality rates were 40% and 46% respectively. Overall survival at three months after hospital discharge was 48%. For 34% of these patients, a limitation of active treatment was decided (on average after two days of stay). For 66% there was no justification for limiting care because of a well-established treatment plan (with family, GP, ICU team).

Conclusion:

The proportion of elderly patients remains low, but they are increasingly being treated in intensive care units. The in-hospital mortality is high (40%) compared to the average mortality in our ICU over the same period (20%). The prognosis is often not as poor as perceived by physicians. The indication for ICU treatment in our study was mostly justified ; in the setting of consistent patient care and good clinical practice. It remains therefore appropriate to discuss every ICU admission of elderly patients without any restriction related to age.

#6430 : Management of epistaxis in the Emergency Department: a retrospective study

Preferred format : ePoster

Authors:

Carmen Hammann (1), Pierrick Le Borgne (1), Fanny Schweitzer (1), Charles-Eric Lavoignet (1), Claire Kam (1), François Lefebvre (2), Christian Debry (3), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. Département de santé publique, CHU de Strasbourg, Strasbourg, FRANCE
3. ORL, Hôpital de Hautepierre, CHU de Strasbourg, Strasbourg, FRANCE

Keywords: epistaxis, ENT

Abstract :

Introduction: Epistaxis has been reported to occur in up to 60% in the general population and accounts for 1% in the Emergency Departments (ED). Sometimes it can be quite a severe condition necessitating a medical intervention, but it is mostly benign. Nowadays, there are no existing guidelines for management of epistaxis and the practices are highly variable among physicians. The aim of the study was to evaluate the management of epistaxis in an urban ED.

Methods: We present here a retrospective and monocentric study. We included all adult patients with an epistaxis who presented to the ED of an urban teaching hospital in 2014. 41 parameters were analyzed in the following categories: epidemiology, hemodynamics, biology, treatments.

Results: 264 patients were included for statistical analysis. This represents 0.4% of annual admissions in the ED. The sex-ratio was 0.6. The median age was 71 years (IQ : [56-82]). 34% of the patients presenting to the ED had an hypertension (systolic blood pressure ≥ 140 mmHg) at admission but only 6% of them were on antihypertensive medication. A blood tests were conducted in 62 % (95% CI: [56-68]) of patients and showed: 6% of thrombopenia, 9% of anemia and 8% of patients had an international normalized ratio (INR) outside their disease specific range. Almost three quarters of epistaxis had not been directly treated by the ER physician (stopped spontaneously / ENT specialist first called). The ENT specialist was contacted in 61% (95% CI : 48-73) of the cases, but came to the ED only for half of them. Prophylactic systemic antibiotics in spontaneous epistaxis were prescribed for 11% of the patients. A control visit was organized only for 19% of the patients. More than half of the population had anticoagulant or antiplatelet medication, however there was no link between these treatments and the probability to be admitted to the hospital (p=0.24). There was no significant association between anticoagulant medication and the risk of rebleeding 7 days later (p=0.66). 16% of patients were hospitalized (mean duration of stay: 3 days).

Conclusion: Our study shows that ER physicians manage epistaxis in a low percentage of cases in our ED. The use of antihypertensive medications, prophylactic antibiotics and blood tests is highly variable among practioners. Some guidelines and complementary training may be appropriate in order to optimaze management of this frequent condition.

#6436 : Adherence to guidelines for the diagnosis and management of acute prostatitis in the ED

Preferred format : ePoster

Authors:

Pierrick Le Borgne (1), Sébastien Kirsch (1), Mihaela Mihalcea-Danciu (1), Hakim Slimani (1), Claude Geronimus (1), Claire Kam (1), Philippe Kauffmann (1), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE

Keywords: prostatis, guidelines

Abstract :

Introduction: Urinary tract infections (UTI) are common in the Emergency Department (ED) (male UTI prevalence: 2-9%). There is often a wide variation in the initial clinical presentation. The French guidelines (SPILF, 2014) have specified the management of this disease with an underestimated morbi-mortality risk. The main objective of this study was to assess the management of acute prostatitis in an urban ED. We also wanted to evaluate in our ED whether the existing guidelines were followed

Methods: We present hereby a retrospective and monocentric study, collecting all the patients who attended with a simple acute prostatitis in 2014 in our ED (University Hospital). Patients presenting with complicated urinary infection were excluded from the study. 38 parameters (clinical, biochemical, treatments, outcome…) have been analyzed. 72 patients have been included for statistical analysis.

Results: The median was 68 years (IQ: [50-77]). The initial clinical signs were mixed, 68% of the patients presented with functional urinary signs and only 30% with fever. Biochemistry and hematology revealed an inflammatory profile (mean leukocytosis: 12790/mm3 and mean CRP: 79mg/l). Urine was tested with dipstick in 86% of the patients and 92% had their urine sent for culture. PR examination was performed in only 50% of these patients; it was tender in half of the cases. *Escherichia coli* remains the predominant uropathogen (63%). The bacterial environment also found was: 8% *S. Epidermidis*, 8% *C.Koseri*, 6% *K. Pneumoniae* and 15% of other uro-pahtogens. Fluoroquinolons were mostly prescribed (54%) and 33% of the patients were treated with 3rd generation cephalosporin. The median duration of treatment was 21 days (IQ: [15-23]). 20% of these patients were managed directly by the Urology Consultant in the ED. There was no significant difference in term of treatment duration (p=0.10), neither in term of antibiotics used (p=0.49) between physicians. 45% of the patients were sent for imaging (mostly ultrasound). Finally, 42% of the patients were admitted (95% CI: [27-58%]) (average hospitalisation duration: 6.3 days). For the ambulatory patients, a urology consultation was only offered for 61% of them. The mortality at Day28 was 3% (95% CI: [1-7%]).

Conclusion: Our study in the ED highlights the poor adherence to current guidelines. The management of male UTIs in the ED remains heterogeneous. The French guidelines suggest an interesting algorithm, which insists on the urine dipstick, UTIs with few symptoms, admission criteria and the appropriate use of imaging. As well as curbing the additional cost of non-guideline prescription, adherence to guidelines is essential in order to suppress growing resistances to antibiotic treatment.

#6453 : Evaluation of different adenosine dose in junctional tachycardia

Preferred format : ePoster

Authors:

Sarah Ugé (1), Mickael Forato (1), Pierrick Le Borgne (2), Céline Renfer (2), Laura Bejinariu (1), Laura Dascalu (2), Charles-Eric Lavoignet (2), Laurent Tritsch (1)

1. SAMU-SMUR, CHU Strasbourg, Strasbourg, FRANCE
2. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE

Keywords: adenosine, junctional tachycardia

Abstract :

Background: Junctional tachycardias (JT) occur in 36/100 000 persons per year. In France symptomatic episodes mostly benefit of out-of-hospital care. Since the year 2000, adenosine is the first-line treatment of JT. Although international guidelines advocate the use of a 6mg dose to reduce JT, French guidelines recommend to start with 3mg. The aim of the study was to evaluate the efficacy of different adenosine dosages in order to reduce JT. Further, to evaluate the efficacy of other interventions to reduce JT and the benefit of troponin testing after JT.

Methods: We present here a monocentric and retrospective study using data collected by the Emergency Medical Service (EMS). All adult patients from January 2011 to July 2015 were included. Patients were excluded if JT was not recorded during management on a hardcopy ECG.

Results: 110 patients were included for statistical analysis. 63 benefitted of at least one dose of adenosine and cessation of JT was achieved in 86% (95% CI (80-92%)). Considering all the dosages administrated, adenosine boli of respectively 3, 6 and 12 mg stopped 7%, 20% and 70% of JT. 70% of patients responded to a second 6mg adenosine dose after an unsuccessful first one. 56% of patients were given a 12mg dose when the 6mg dose failed. JT reduced spontaneously in 6 patients (5.5%). Vagal maneuvers were used in 71% (95% CI : (63-80%)) of patients and were successful in only 14%. 72% of all patients were conducted to the ER and 14% to the Cardiac Intensive Care Unit. Of these patients 51% (95% CI : (42-60%)) had at least one serum-troponin assay, and at least one troponin assay was elevated in 48% of these patients. Average troponin was 0,12ng/ml (N<0,04ng/ml). There was no relation between troponin-elevation and chest pain during JT (p=0.81) or ST-segment elevation (p=0.98). After hospital care, a daily treatment was initiated for only 5 patients.

Conclusion: Adenosine response is affected by an important inter- and intra-individual variability and considering the potential side-effects, low doses should be given first. Guidelines recommend first vagal maneuvers before pharmacological reduction. Efficiency of a 3mg dose among patients with JT remains low. Recent US recommendations advocate to begin with a 6mg bolus, and to follow with a 12mg bolus (to be repeated once). Our study also suggests the use of an initial 6mg adenosine bolus and an alternative to the second step of the guidelines repeating the 6mg dose.

#6454 : Analysis of Emergency Department Attendances and their Suitability for Primary Care: a retrospective observational study.

Preferred format : Oral presentation

Authors:

Karen Squires (1), Nicola Haines (2), Laura McGlynn (2), Emma Lynch (2), Helen Ryan (2), Jason Ngui (2), Rosalind Harrison (2)

1. Aintree University Hospital, none , Liverpool, UK
2. Aintree University Hospital, none, Liverpool, UK

Abstract :

There is a general feeling that work now undertaken by the Emergency Department (ED) at Aintree University Hospital, Liverpool, overlaps greatly with that of primary care. The reasons for this are multifactorial and are shared and recognised nationally. 1

In a move to consider incorporating a primary care services alongside the ED in the future, a retrospective analysis was conducted to gain the evidence needed to support such a service. Current estimates are around 15-20% of ED attendances would be suitable for primary care.

All attendances in March 2015 to Aintree University Hospital ED were analysed retrospectively from electronic notes.

Those presenting between midnight and 8am, category 2 on arrival, admitted to specialties or who had sustained minor injuries were excluded from the initial potential GP criteria. *

Correlation of the triage slip of those remaining with a robust, longstanding, potential GP suitable list, taken from our out of hours urgent care provider, was then assessed.**

The GP suitable patients were then scrutinised for: age, gender, time of presentation, presenting complaint, investigations done and disposal.

All information was tabulated and analysed.

6908 attendances to Aintree ED in March 2015.

663 patients were identified as GP suitable.**

This represents on average:

- 21 patients per day (range 11-39),
- 32% of population with exclusions** (range 17-59%) and
- 10% of all admissions (range 6-19%).

Further analysis revealed:

- predominant age was under 40y
- male=female
- steady stream throughout the day 8am until 12pm
- most common presentation was non traumatic joint or back pain and upper respiratory tract symptoms
- investigations were completed on 2/3 of patients, 2/3 of which did not change management on objective review.
- 99% of patients were discharged home

The study confirms the significant amount of primary care work taken on by our ED.

10% of all admissions is slightly less than expected, however, this still represents a large proportion of daily work. 1

The list used to assess GP suitability was thought to be conservative. The true figure may be higher than shown.

The evidence generated is sufficient to warrant a business plan to co-locate primary care with our ED. 32% reduction walking majors patients or 10% reduction of all attendances could dramatically decrease the workload.

*population with exclusions (ie, Those presenting between midnight and 8am, category 2 on arrival, admitted to specialties or who had sustained minor injuries)

**GP suitable criteria:

- Sore eyes
- Ear pain
- Sore throat
- Neck pain
- Viral illness, coryza, coughs and colds, well chest infection
- Chronic/mild abdominal pain, constipation, diarrhoea, gastritis
- Non traumatic back or joint pain
- Urinary symptoms
- Gynae symptoms
- Rashes, bunions, in-growing toenails
- Moles, lumps, bumps

References:

1. STEP campaign: RCEM's steps to rebuilding emergency medicine. Royal College of Emergency Medicine, 2015.

#6479 : Randomized Controlled Trial of Internal and External Targeted Temperature Management methods in post-cardiac arrest patients

Preferred format : Oral presentation

Authors:

Sohil Pothiawala (1), Xinqi Look (2), Kenneth Tan (1), Aaron Wong (3), Shahidah Nur (1), Pin Pin Pek (1), Juliana Poh (1), Eric Lim (3), Chee Tang Chin (3), Duu Wen Sewa (4), Marcus Ong (1)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
2. Yong Loo Lin School of Medicine, National University of Singapore, Singapore, SINGAPORE
3. Cardiology, National Heart Center Singapore, Singapore, SINGAPORE
4. Intensive Care , Singapore General Hospital, Singapore, SINGAPORE

Keywords: Targeted temperature management, cardiac arrest, emergency department, neurological function, survival outcomes

Abstract :

Introduction

Targeted temperature management (TTM) post-cardiac arrest is currently implemented using various methods, broadly categorized as internal and external, each with their advantages and disadvantages. Objective of the study is to evaluate survival-to-hospital discharge and neurological outcomes (Glasgow Pittsbugh Score) of post-cardiac arrest patients undergoing internal cooling verses external cooling. The secondary objective was to compare survival outcomes for TTM (either method) and normothermia (historical controls).

Methodology

A randomized controlled trial of post-resuscitation cardiac arrest patients was conducted from October 2008 – September 2014. Patients were randomized to either internal or external cooling methods. Historical controls were selected matched by age and gender. Analysis using SPSS version 21.0 presented descriptive statistics and frequencies while univariate logistic regression was done using R 3.1.3.

Results

23 patients were randomized to internal cooling and 22 patients to external cooling and 42 matched controls were selected. No significant difference was seen between internal and external cooling in terms of survival, neurological outcomes and complications. However in the internal cooling arm, there was lower risk of developing overcooling (OR=0.25, 95% CI=(0.06, 0.90)) or undercooling during maintenance phase (OR=0.12, 95% CI=(0.02, 0.52)). Compared to normothermia, internal cooling had higher survival (OR=3.361, 95% CI=(1.130, 10.412), and lower risk of developing cardiac arrhythmias (OR=0.182, 95% CI=(0.039, 0.632)). Subgroup analysis showed those with cardiac cause of arrest (OR=4.29, 95% CI=(1.26, 15.80)) and sustained ROSC (OR=5.50, 95% CI=(1.64, 20.39)) had better survival with internal cooling compared to normothermia. Cooling curves showed tighter temperature control for internal compared to external cooling

Conclusion

Internal cooling showed tighter temperature control compared to external cooling. Internal cooling can potentially provide better survival-to-hospital discharge outcomes and reduce cardiac arrhythmia complications in carefully selected patients as compared to normothermia.

#6480 : Predictive Performance of a Regression Model to evaluate clinical outcomes of Acute Low Back pain patients in emergency department

Preferred format : Oral presentation

Authors:

Sohil Pothiawala (1), Jiang Bo (2), Jennifer Liaw (2), Mark Leong (1), Celia Tan (2)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
2. Department of Physiotherapy, Singapore General Hospital, Singapore, SINGAPORE

Keywords: low back pain, emergency department, regression model, clinical outcomes

Abstract :

Background:

Low back pain (LBP) constitutes a challenging health problem which causes considerable socio-economic burden to healthcare system globally. Efforts have been focused on early prognostic assessment and stratification of LBP patients to matched interventions. Recently, the STarT Back Screening Tool (SBT) for back pain prognostic indicators has been developed to help initial decision making in primary care settings and has shown clinical and economic benefits. To our knowledge, SBT has not been used in the emergency department (ED) to assess LBP patients. In this study, we aim to create a regression model by integrating SBT, demographic and clinical variables and to evaluate its predictive performance for 6-month clinical outcomes of acute LBP patients presenting to the ED of a tertiary hospital in Singapore.

Methods:

A prospective observational cohort study was conducted. Eligible patients consulting ED doctors with acute LBP were invited to participate and administered the SBT at initial evaluation. Demographic information and LBP-related clinical characteristics were either gathered from patients' case notes or self-reported by patients via telephone interview. The primary clinical outcome was pain score measured using the Visual Analogue Scale which was collected at baseline and at 6-week and 6-month follow-up. Treatment or referral of patients was at the discretion of ED doctors in line with current best practice. Prediction of pain score at 6-month was evaluated by using a multiple regression model which integrated independent variables including SBT score, demographics (age, gender, ethnicity, BMI, employment status) and LBP-related clinical characteristics (prior LBP onset, current LBP episode duration, pain score at ED, pain score at 6-week).

Results:

A total of 173 eligible patients were recruited, of which 19 patients were excluded from the analysis due to loss of contact in 6-month follow-up. Multicollinearity diagnostic analysis showed no correlation between independent variables of interest except for SBT overall and psychosocial scores (Pearson correlation=0.90). Therefore, SBT psychosocial score was not included in the model development in this study. The multiple regression model achieved R^2 of 0.425 and adjusted R^2 of 0.375, where pain score at 6-week (β=0.58), employment status (β=-0.12) and age (β=-0.10) were the three strong predictors among all the variables.

Conclusion:

A regression model built by integrating SBT overall score, demographic and clinical variables has shown value in predicting 6-month pain score for acute LBP patients presenting to the ED. This study concludes that a predictive model is useful in determining the pain score at 6 months and early physiotherapy should be provided to high risk patients to avoid poor outcomes.

#6481 : Reduced Admission Process Times by Direct Admission of Cardiology Patients at the Emergency Department

Preferred format : Oral presentation

Authors:

Sohil Pothiawala (1), Swee Han Lim (1), Paul Lim (2), Aaron Wong (2), Evelyn Wong (1), Marcus Ong (1)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
2. Cardiology, National Heart Center Singapore, Singapore, SINGAPORE

Keywords: admission time, emergency department, workflow

Abstract :

Introduction:

Prolonged waiting times are common in Emergency Departments (ED) worldwide. Traditionally, patients presenting with cardiac complaints to ED at Singapore General Hospital (SGH) were seen by ED physician and then wait for review by on-call cardiologist before admission. The objective was to improve the admission process and evaluate the effect of a new direct admission pathway on ED admission process times.

Methods:

A joint ED-Cardiology workgroup proposed and implemented a direct admissions pathway. ED specialists were empowered to decide direct admission for stable cases of angina pectoris, heart failure and arrhythmias. But for cases needing a High Dependency or ICU bed, the ED doctor would consult cardiologist on-call to get a bed. Data before implementation (Indirect Admission) was collected from 16 Aug 2014 to 14 Sept 2014 (29 days) and after implementation (Direct Admission) from 15 Sept2014 to 16 Oct 2014 (32 days).

Results:

There were 302 cases in Indirect and 303 cases Direct Admission period. The median ED arrival to disposition time decreased significantly from 221 mins (interquartile range [IQR] = 147–308mins) in the Indirect Admission period to 132 mins (IQR = 78–187mins) in the Direct Admission period ($p < 0.001$). Also, the median time to duration of stay in DEM decreased significantly from 365 mins (IQR = 244–478minutes) to 262 mins (IQR = 186–337; $p = 0.001$).

Conclusion:

There was significant reduction in ED arrival to disposition times as well as reduced ED length of stay after implementation of Direct Admission to cardiology in tertiary teaching hospital. It also led to reduce the problem of overcrowding of the patients in the ED to a significant extent and thus reduce the number of adverse events of ED patients due to prolonged waiting times.

#6482 : Improved compliance with key quality and safety process measures during emergency intubation

Preferred format : ePoster

Authors:

Anne-Maree Kelly (1), Pannifex Jan (2)

1. ECCN , Department of Health and Human Services, Victoria, Australia, St Albans, AUSTRALIA
2. ECCN , Department of Health and Human Services, Melbourne, AUSTRALIA

Keywords: intubation, critical care, quality improvement

Abstract :

Background: Emergency intubation is a high risk procedure in emergency departments (ED). Recently published evidence strongly suggests that compliance with key process measures improves the safety of this procedure and avoids adverse events. The Emergency Care Clinical Network (ECCN, Victoria, Australia) works with ED across the state to improve clinical care by uptake of evidence-based practice and reduction in variation in practice. Member EDs vary in size, staffing and supporting specialist services; approximately half are based in rural and regional areas.

Participants and methods: The aim of this project was to improve compliance with key quality and safety process measures during emergency intubation in emergency departments. This was a quality improvement project measured by collection of before and after data. Participation was by expression of interest. ECCN uses a modified knowledge transfer methodology. The network management team develops the project parameters, conducts awareness raising activities, provides resources (including published papers, data collection tools), provides project management training for project leads, analyzes data and mentors project leads throughout the project. Local clinical leads and supporting teams develop a local implementation plan, implement changes and collect before and after data. Outcome of interest for this project were, at the ED level, routine use of intubation checklists and audit of emergency intubations. Patient level outcomes were documented structured risk assessment of the airway, use of apnoeic oxygenation, confirmation of correct tube placement by capnography, low tidal volume ventilation, post intubation chest xray and nasogastric tube placement.

Results: Fourteen ED completed the project. There were 272 patients in the pre-data and 242 in the post data set. Use of checklists and audits each increased from 14% to 93% ($p=0.0002$). The proportion of patients undergoing risk assessment increased from 43% to 69% ($p<0.0001$), the proportion having apnoeic oxygenation increased from 31% to 65% ($p<0.0001$), the proportion having capnographic confirmation of tube placement increased from 82% to 97% ($p<0.0001$) and the proportion having low tidal volume ventilation increased from 29% to 67% ($p<0.0001$). The proportion having CXR confirmation of ET tube increased from 88% to 94% ($p=0.04$) and the proportion having nasogastric tube insertion increased from 76% to 87% ($p=0.003$).

Conclusion: A locally managed, clinical network sponsored quality improvement project resulted in significant improvements to key quality and safety process measures for emergency intubation. This methodology is transferable to other clinical issues and across disciple boundaries.

Sources of funding: This project was supported by direct grants to ED from ECCN.

#6484 : Improved compliance with a bundle of care for chronic obstructive pulmonary disease

Preferred format : ePoster

Authors:

Anne-Maree Kelly (1), Pannifex Jan (2)

1. ECCN , Department of Health and Human Services, Victoria, Australia, St Albans, AUSTRALIA
2. ECCN , Department of Health and Human Services, Melbourne, AUSTRALIA

Keywords: COPD, quality improvement

Abstract :

Background: Chronic obstructive pulmonary disease (COPD) is a common reason for attending emergency departments (ED). Evidence and published guidelines recommend the use of a bundle of care including controlled oxygen therapy, inhaled bronchodilators and systemic corticosteroids along with antibiotics, blood gases and non-invasive ventilation (NIV) when indicated. The Emergency Care Clinical Network (ECCN, Victoria, Australia) works with ED across the state to improve clinical care by uptake of evidence-based practice and reduction in variation in practice. Member EDs vary in size, staffing and supporting specialist services; approximately half are based in rural and regional areas.

Participants and methods: The aim of this project was to improve compliance with bundle of care elements for the management of acute exacerbations of COPD in ED. This was a quality improvement project measured by collection of before and after data. Participation was by expression of interest. ECCN uses a modified knowledge transfer methodology. The network management team develops the project parameters, conducts awareness raising activities, provides resources (including published papers, data collection tools), provides project management training for project leads, analyzes data and mentors project leads throughout the project. Local clinical leads and supporting teams develop a local implementation plan, implement changes and collect before and after data. Outcome of interest for this project were administration of controlled oxygen therapy, inhaled bronchodilators, systemic steroids and taking of a chest xray and, for qualifying cases, administration of antibiotics, blood gas analysis and use of NIV.

Results: Seven ED completed the project, most from rural or regional areas. There were 180 patients in the pre-data and 203 in the post data set. The proportion of patients receiving controlled oxygen increased from 74% to 80% (p=ns), the proportion treated with bronchodilators increased from 81% to 90% (p=0.004) and the proportion treated with systemic corticosteroids increased from 76% to 88% (p=0.003). The proportion of patients with signs of infection receiving antibiotics increased from 85% to 99% (p<0.001), the proportion of non-mild cases having blood gas analysis increased from 82% to 91% (p<0.05) and the proportion of patients with pH <7.3 receiving NIV increased from 53% to 81% (p<0.02). The proportion having a chest xray was unchanged (98% vs 98%).

Conclusion: A locally managed, clinical network supported quality improvement project resulted in significant improvements in compliance with COPD bundle of care elements. This methodology is transferable to other clinical issues and across disciple boundaries.

Sources of funding: This project was supported by direct grants to ED from ECCN.

#6507 : The diagnostic value of optic nerve sheath diameter measurements by ultrasonography in elevated intracranial pressure in stroke patients.

Preferred format : Oral presentation

Authors:

Ali Batur (1), Mehmet Ali Karaca (1), Volkan Arslan (1), Mustafa Boz (1), Bulent Erbil (1), Zaur Ibrahimov (1), M.Ruhi Onur (2)

1. Emergency Medicine Department, Hacettepe University, Ankara, TURKEY
2. Radiology Department, Hacettepe University, Ankara, TURKEY

Keywords: Stroke, elevated intracranial pressure, ultrasonography, optik nerve sheath diameter, MRI

Abstract :

Indtroduction:Stroke is the most common 4th cause of death around the world. Due to brain edema elevated ICP is a reason of clinical deterioration in stroke patients (%33). ONSD measurement with ultrasonography is an indirect and non invasive technique to detect EICP.

Aim:The aim of this study is to invastigate the diagnostic value of ONSD measurements in EICP in stroke patients.

Methods:The paper involves data concerning a control group 50 individuals with study group of 105 patients diagnosed with acute stroke at the Adult Emergency Department of Hacettepe University between February 1,2015 and June 30,2015. Symptoms and physical examinations of the patients were recorded. We performed ON-US to all patients and ONSD measurements by US were compared with the results of study group MRI-ONSD measurements.

Results:MRI-ONSD measurements were used to diagnose EICP and the cut off for EICP was 5.0 mm in MRI-ONSD. The study group divided in two subgroups as EICP (n=47) and non-EICP (n=58) groups. Of the 155 patients studied, 81 (%52,3) were male and 74 were (%47,6) female. The means of ONSD by US; for non-EICP group for right and left eye were 4,52 mm/4,58 mm, for EICP group were 5,01 mm/5,03 mm. The means of MRI-ONSD for EICP group were 5,05 mm/5,06 mm and non EICP group were 4,56 mm/4,61 mm. Greater than 5,0 mm ONSD by US predicted EICP with sensitivity %95,7; specificity %100, general truth value %91,4 and kappa %82,8. The means of ONSD by US were significantly correlated with MRI-ONSD measurements. Symptoms such as headache, confusion and vomiting were significantly higher in EICP group and these symptoms predicted EICP with sensitivity %95,7; specificity 87,9. The intensive care requirement was increased in EICP group rather than non-EICP group (%25,5/%6,9). Especially MCA infarction associated with brain edema (%65,7) and elevated mortality rate (%14,3). 5 patients (%4,76) were exitus in intensive care unit and all the patients had MCA infarction.

Conclusion:As a result, ONSD measurements by US is sufficient, reliable and practical in the diagnosis of acute stroke. ICP assessment with ON-US in acute stroke patients could be used to predict treatment process, prognosis and mortality.

#6611 : An hour to save your life? Does intra-arrest extracorporeal membrane oxygenation application save life?

Preferred format : ePoster

Authors:

Jonathan Leung (1)

1. Emergency department, University College London Hospitals NHS Foundation Trust, London, UK

Keywords: ECMO, Extracorporeal membrane oxygenation, Cardiorespiratory resuscitation

Abstract :

Introduction

Extracorporeal membrane oxygenation [ECMO] integrated Cardiopulmonary resuscitation [CPR] [E-CPR] has become one of the most promising advancement in the field of resuscitation medicine. Our aim is to conduct an independent meta-analysis combining all available high quality observational studies, in order to evaluate whether E-CPR can result in neurological intact mortality benefit as compared with conventional CPR.

Method

A comprehensive search was performed in the following databases; Medline [1946 to present], EMBASE[1974 to present], CINAHL [1981 to present], BNI [1992 to present], AMED [1985 to present] andHealth Business Elite [1922 to present]. The literature search was supplemented with additional search of the following databases; Reference search and personal discussion with ECMO expert regarding grey literature.

Results

5 high quality comparison observational studies were identified. E-CPR application to IHCA and OOHCA has an impressive association with short term neurological intact survival benefit. [OR 0.24 (0.14-0.44) p<0.0001] Surprisingly, the analysis indicates that OOHCA E-CPR [OR 0.196 (0.085-0.455) p<0.0001] has a better survival benefit as compared with IHCA. [OR 0.3 (0.13-0.66) p=0.003].

Conclusion

E-CPR is associated with neurologically intact survival benefit. The main limitation of this meta-analysis is that the combined data are all observational dates, hence causation of benefit is yet to be proven.

#6623 : Oxygen concentration during patient transportation in the ambulance car

Preferred format : Oral presentation

Authors:

Jiri Kodet (1), David Peran (1)

1. EMS, Zdravotnická záchranná služba hl. m. Prahy, Prague, CZECH REPUBLIC

Keywords: oxygen, defibrillation, risk of fire, ambulance

Abstract :

Introduction

European Resuscitation Council Guidelines for Resuscitation 2015 and Advanced Life Support Provider Course teach that the oxygen supply must be removed from the patient during defibrillation to the distance of minimum of 1 meter. Scientific articles describe few incidents of fire during defibrillation in oxygen – enriched atmospheres.

Methodology

We performed a series of measurement of the oxygen concentration in the ambulance vehicle of 10 cubic meters. The measurements were made in parked vehicle. Patient was seated on the stretchers and oxygen was applied with oxygen mask on high flow (15 l per minute).

We measured the oxygen concentration on different places in the ambulance car – the patient‘s face, on the chest, on the wall in front of the car, on the wall in the rear and on the celling. We measured temperature, atmospheric pressure and humidity together with oxygen concentration.

We used Dräger X-am 5600 device with XXS sensor for the CH_4, O_2 a CO. For the oxygen concentration was used DrägerSensor XXS O_2 with range of 0 – 25 % with measurable variation of 0,1 %. We also used another device GasAlert MicroClip XL with sensor for the H_2S, O_2 a CO with the range of 0 – 30 % with measurable variation of 0,1 %.

Results

The result of our study showed that the oxygen concentration has risen from 21 % to more than 25 % at all locations of the ambulance. In certain locations the concentration has increased over 30 %.

Recommendations

We have prepared recommendations for defibrillation during oxygen administration according to the literature and our study:

I. Remove the oxygen supply to the distance of minimum of 1 meter from the patient before defibrillation is performed (if the oxygen is given via open circuit).

II. Do not remove the oxygen before defibrillation is performed if the circuit is closed without any leak because of the risk of dislodging the endotracheal airway.

III. During the defibrillation of a patient receiving oxygen, apply the defibrillator paddles firmly (i.e. with at least 25 lb of pressure).

IV. Do not defibrillate if the chest is coated with enough gel or saline solution to form a conductive bridge between the paddles.

V. Ensure that the patient’s ECG leads are not draped near an area of the body where delivering oxygen is likely to pocked or go undetected or where the paddles are placed.

VI. Open the window or turn on the fan during administration of the oxygen in an ambulance car.

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#6784 : A prospective comparison of bedside ultrasound and CT- scan of the chest for the diagnosis of traumatic pneumothorax

Preferred format : Oral presentation

Authors:

Muhammad Abdulhaleem (1)

1. , none, alex, EGYPT

Keywords: Traumatic pneumothorax, EFAST in diagnosis of traumatic pneumothorax,comparison of bedside ultrasound and CT-scan of the chest

Abstract :

INTRODUCTION

In the United States, it is estimated that trauma is responsible for approximately 100,000 deaths annually.

Accidents (unintentional injuries) are the fifth most common cause of death.

Approximately 25% of deaths from blunt trauma arise from chest injuries.

Traditional imaging for a potential traumatic pneumothorax initially begins with chest radiography. However, due to the limitations of spinal immobilization in trauma patients, this examination often consists of anteroposterior (AP) supine films, in which radiographic features of pneumo thorax may be quite subtle. Computed tomography (CT) is much more sensitive for pneumothorax, but requires the patient to be removed from the emergency department (ED) environment and its resuscitative capability.

Bedside ultrasound become a very sensitive tool for the diagnosis of traumatic pneumothorax not only in detection of its presence but also in quantification of its size without the transportation risk and radiation exposure and with a lower cost.

AIM OFTHE WORK

The aim of this study is to evaluate the sensitivity and specificity of chest ultrasound in the detection of traumatic pneumothorax and quantification of its size in comparison to the CT-Chest as a gold standard diagnostic tool. PATIENTS

Exclusion criteria:

Life threatening pneumothorax.

Patients who do not undergo CT-Chest either for not being stable for transportation or do not met American college of radiology appropriateness criteria (ACR APPROPRIATENESS CRITERIA).

METHODS

Patients with chest trauma presenting to our emergency department (ED) at Alexandria Main University Hospital will be examined according to the primary survey described by the ETC course and resuscitated as needed and the attending EM physician will perform the Extended Focused Assessment with Sonography for Trauma (EFAST PROTOCOL). The chest will be scanned (using the superficial probe 7.5 MHz type L7M-A of our CHISON device model ECO 2) at three lines and two views for each hemithorax as the following (1)anterior second through sixth intercostal spaces at the parasternal line, (2) anterior second through sixth intercostal spaces at the mid-clavicular line, (3) fourth through sixth intercostal spaces at the anterior axillary line,(4) fourth intercostal space at the mid-axillary line, (5) fourth intercostal space at the posterior axillary line, to assess for the presence of a sliding lung. Presence or absence of this sign will classify the patient either being negative or positive for pneumothorax. If positive for pneumothorax absent lung sliding in the 3 lines denotes small pneumothorax , absence of this sign up to view 4 denotes moderate pneumothorax and absence of lung sliding at the five views denotes massive pneumothorax (in spontaneously breathing patients or intubated patients after exclusion of right main bronchus intubation). Then the patient will be admitted to the surgical emergency unit where resuscitation is continued as required and the patient will be investigated including CT-Chest scanning if needed according to the ACR APPROPRIATENESS CRITERIA.

Then the result from both will be compared.

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#6978 : Hyperglycemic crisis episodes may be associated with higher risk of pancreatic cancer: a population-based cohort study

Preferred format : ePoster

Authors:

Yung-Cheng Su (1), Yung-Cheng Su (2)

1. , Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi, TAIWAN
2. attending physician,, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi, TAIWAN

Keywords: Hyperglycemic crisis episodes; pancreatic cancer; diabetes

Abstract :

Introduction: The relationship between diabetes and pancreatic cancer has been discussed. However, the effects of glycemic control on pancreatic cancer have never been evaluated. We address the strength of association for relationship between glycemic control and pancreatic cancer.

Methods: The sampled data from one million National Health Insurance beneficiaries were utilized. The study cohort consisted of 46,973 diabetic patients and 652,142 unexposed subjects. Among patients with diabetes, 1114 who had been admitted for hyperglycemic crisis episodes were defined as diabetes with poor control. All adult beneficiaries were followed from 1 January 2005 to 31 December 2013 to evaluate if pancreatic cancer was diagnosed. Cox regression models were applied to compare the hazards adjusted for potential confounders.

Results: After controlling for age, gender, urbanization level, socioeconomic status, chronic liver disease, hypertension, coronary artery disease, hyperlipidemia, malignancies, smoking, chronic obstructive pulmonary disease, obesity, history of alcohol intoxication, chronic renal insufficiency, biliary tract disease, chronic pancreatitis, Charlson Comorbidity Index score and high-dimensional propensity score, the adjusted hazard ratio of pancreatic cancer was 2.53 (95% confidence interval, 1.96—3.26) in patients with diabetes. In diabetic patients with poor control, the hazard ratio of pancreatic cancer was significant higher. (hazard ratio, 3.61; 95% confidence interval, 1.34—9.78)

Conclusions: This cohort study reveals a possible relationship between diabetes and pancreatic cancer. Moreover, poorly-controlled diabetes may be associated with a higher risk of pancreatic cancer.

#6992 : Acute shoulder dislocation in the ED: Retrospective evaluation of pain management and a proposal for a standard operating procedure

Preferred format : ePoster

Authors:

Oriane Guillot (1), Jean-Philippe Steinmetz (2), Philippe Kauffmann (1), Pierrick Le Borgne (1), Charles-Eric Lavoignet (1), Claire Kam (1), Philippe Adam (3), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. Chirurgie générale et digestive, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
3. Service de traumatologie et de chirurgie orthopédique, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE

Keywords: shoulder discolation, pain managment, analgesic

Abstract :

Introduction:

Shoulder dislocation is a very common condition in the emergency department (ED). It’s one of the most painful medical emergency (VAS score, mean visual analog scale at the admission: 7.3) for which there is no specific recommendation supported. The main objective of this study was to analyze the management of pain in the ED. The secondary objective was to investigate the influence of seven clinical parameters on the choice of analgesic drugs.

Methods:

We conducted a monocentric and observational study, on 238 patients who consulted for an acute shoulder’s dislocation from 1 January 2012 to 30 April 2015 in our ED admitted in the "lying-area” or in the "ambulatory-area”. We excluded all other patients who had already been reduced, who had shoulder prosthesis (dislocation or asymptomatic chronic dislocations with fortuitous discovery). Fifty-seven parameters reflecting the overall management were analyzed.

Results:

Descriptive analysis confirmed that acute dislocation shoulder, were reduced mostly in the ED (221/238: 93% of all dislocations). The main analgesics used were equimolar mixture of oxygen and nitrous oxide (nitrous oxide) (119/238: 50%), midazolam (11%), morphine (6%), nefopam (15%), tramadol (11%) and acetaminophen (25%). Ketamine and propofol were used in less than 1% cases. There was no trace of analgesic prescription in 22% of complicated fracture dislocation files. Admission’s VAS mean score was: 7.5/10 (95% CI: [7-8.1]) for all patients. The univaried analyzes show a significant relationship between the prescription of morphine and other two parameters: the place in the ED of patient care, for “the lying area” (p=0.035) and the presence of an associated fracture (p=0.05). Whatever, the level of analgesic considered, there was no statistical relation with admission’s VAS score (p> 0.05).

Conclusion:

This study showed a very few use of strong analgesics and hypnotics despite high admission VAS score, even if there was an associated fracture. These findings highlight the importance of informations traceability in medical files. Our pain management standard operating procedure try to improve patients analgesics care especially during reduction maneuvers in the ED.

#6999 : THE USE OF HIGH SENSITIVE CARDIAC TROPONIN T AS AN INDEPENDENT PREDICTOR OF IN-HOSPITAL MORTALITY IN EMERGENCY DEPARTMENT PATIENTS HOSPITALIZED WITH SUSPECTED INFECTION.

Preferred format : Oral presentation

Authors:

Bas de Groot (1), Gordon Chu (2), Mo Abbas (2), Marisya van Gemert (2), Gurpreeth Singh (2), Sophie ter Haar (2), Thom Rijken (2)

1. , None, Leiden, THE NETHERLANDS
2. , Leiden university medical centre, Leiden, THE NETHERLANDS

Keywords: Risk stratification, sepsis, infectious disease, high sensitivity cardiac troponin T, mortality.

Abstract :

Study objective

The aim of this study was to investigate if high sensitive cardiac troponin T (hs-cTnT) is an independent predictor of in-hospital mortality, and improves risk stratification by the Predisposition, Infection, Response, and Organ failure (PIRO) score of emergency department (ED) patients hospitalized with a suspected infection.

Methods

This was a prospective observational cohort study including 1169 patients. The prognostic performance of hs-cTnT (in 3 categories – low:

Results

The hs-cTnT level (median (IQR)) was 36 (17-76) ng/L in non-survivors, significantly higher ($p < 0.001$) than the 12 (4-34) ng/L in survivors. Hs-cTnT was an independent predictor of in-hospital mortality: Corrected odds ratios (OR (95% confidence intervals)) were 2.8 (1.2-6.3) for hs-cTnT in the intermediate, and 2.4 (1.0-6.0) for the highest category, compared to the lowest category. For intermediate PIRO scores (5 through 19 points), a rise in hs-cTnT category is correlated with higher in-hospital mortality. For the lowest (0 to 4 points) and the highest (> 19 points) scores, hs-cTnT does not improve mortality prediction by the PIRO score.

Conclusion

In ED patients hospitalized with suspected infection, the routinely used biomarker hs-cTnT is an independent predictor of in-hospital mortality, and improves risk stratification of patients with intermediate illness severity as measured with the PIRO score.

#7008 : Relevance of imaging in case of dizziness in an urban ED

Preferred format : ePoster

Authors:

Laura Dascalu (1), Pierrick Le Borgne (1), Charles-Eric Lavoignet (1), Sarah Ugé (2), Céline Renfer (1), Hakim Slimani (1), Claire Kam (1), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. SAMU-SMUR, CHU Strasbourg, Strasbourg, FRANCE

Keywords: Diagnostic imaging, Dizziness, Acute vestibular syndrome (AVS), Head impulse test (HIT)

Abstract :

Introduction:

Dizziness is responsible for an estimated 1-2% of emergency department (ED) visits in France. Faced with various clinical presentations, physicians must distinguish between peripheral and central causes of dizziness. The aim of this study was to assess the relevance of imaging examinations in case of dizziness in a teaching hospital in France.

Methods:

We present here a retrospective and monocentric study that enrolled all patients from July 15 to November 15 (2015) in a teaching hospital. The target population was patients presenting with acute dizziness, nystagmus or balance problems.

Results:

One hundred seventy-four patients with dizziness were included for statistical analysis. The study population consisted of 32.2% men with an average age of 52 years (+/-14 years; ranging from 16 to 97 years). Based on clinical examination, we divided the patients into 3 groups: A) central lesion = 9 patients, B) benign peripheral vestibular disorders = 110 patients, and C) all other causes (hypotension, headache, hypoglycemia, intoxication) = 55 patients. 9 MRI (magnetic resonance imaging) were performed on group A and 6 strokes were found. 112 CT scans (computed tomography scan) without enhancement were performed on groups B (n=96) and C (n=16), without any acute pathological findings. A specialized consult was requested in 82% of cases (64% neurology and 18% ENT specialist). Group A consisted of 6 cases with vertebrobasilar stroke, 2 cases of newly diagnosed tumor and 1 case of multiple sclerosis. Group B had a diagnosis of benign paroxysmal positional vertigo in 100 cases, Meniere's disease in 6 cases and vestibular neuritis in 4 cases. In group C, a diagnosis of hypotension was made in 3 cases, cervical pain in 3 cases, headache in 12 cases and hypoglycemia or discomfort in 42 cases.

Discussion:

In our study, the initial examination consisted of a full clinical examination (cardiovascular, respiratory, digestive), a vestibular examination (nystagmus, index deviation, Fukuda and Romberg's tests) and a neurological examination (cranial nerves, muscular and sensitivity test, deep tendon reflexes, Babinski). Recent studies suggest that a complete bedside clinical examination combined with a benign result to HINTS (head impulse test, nystagmus, skew deviation) examination "rule out" stroke with an acceptable specificity (96%), which reduces the number of imaging test.

Conclusion:

Despite a clinical diagnosis of benign peripheral vestibular disorders, most physicians choose to perform an imaging test to exclude a more serious condition, mainly a stroke. Using the HINTS test combined with an ABCD2 score (age, blood pressure, clinical features, diabetes), could help ED physicians in their diagnostic process and reduce the number of imaging tests performed as well as patient radiation dose.

#7033 : Effects of Silk Sericin on Incision Wound Healing in a Dorsal Skin Flap Wound Healing Rat Model

Preferred format : Oral presentation

Authors:

Murat Ersel (1), Yigit Uyanikgil (2), Funda Karbek Akarca (1), Enver Ozcete (1), Yusuf Ali Altunci (1), Fatih Karabey (3), Turker Cavusoglu (2), Ayfer Meral (4), Gurkan Yigitturk (2), Emel Oyku Cetin (5)

1. Department of Emergency Medicine, Ege University School of Medicine, İzmir, TURKEY
2. Department of Histology and Embryology, Ege University School of Medicine, İzmir, TURKEY
3. Department of Biotechnology, Ege University Graduate School of Natural and Applied Sciences, İzmir, TURKEY
4. Department of Biochemistry, Faculty of Medicine, Dumlupınar University, Kutahya, TURKEY
5. Department of Biopharmaceutics and Pharmacokinetics, Ege University Faculty of Pharmacy, İzmir, TURKEY

Keywords: Antioxidants, Sericins, Wound Healing

Abstract :

Background: The wound healing process is complex and still poorly understood. Sericin is a silk protein synthesized by silk worms (Bombyx mori). The objective of this study was to evaluate in vivo wound healing effects of sericin containing gel formulation in an incision wound model in rats.

Material&Methods: Twenty-eight Wistar-Albino rats were divided into 4 groups (n=7). No intervention or treatment was applied to the Intact control group. For other groups, a dorsal skin flap (9x3 cm) was drawn and pulled up with sharp dissection. The Sham operated group received no treatment. Also the placebo group received placebo gel without sericin and the sericin group received 1% gel. Both gels applied to the incision area once a day, from day 0 to day 9. Hematoxylin and eosin stain was applied for histological analysis and Mallory-Azan staining was applied. For histoimmunochemical analysis of antibodies and iNOS (inducible nitric oxide synthase) and desmin was applied to paraffin sections of skin wound specimens. Parameters of oxidative stress were measured in the wound area.

Results: Epidermal thickness and vascularization were increased, and hair root degeneration, edema, cellular infiltration, collagen discoloration and necrosis were decreased in Sericin group in comparision to the Placebo group and the Sham operated group. Malonydialdehyde (MDA) is an important oxidative stress marker which appears after lipid peroxidation, MDA levels were decreased, but activites of important antioxidative defense enzymes such as superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx) were found to be as increased in the Sericin group.

Conclusions: We found that Sericin had significant positive effects on wound healing and antioxidant activity. Sericin-based formulations can improve healing of incision wounds.

#7039 : Violence against staff of emergency departments across south Trinidad

Preferred format : Oral presentation

Authors:

SRIRAM NALLAMOTHU (1), kavitha Duggineni (1), Rishi Ramtahal (1)

1. , None, SAN FERNANDO, TRINIDAD AND TOBAGO

Keywords: Violence, Staff ,Emergency department ,South Trinidad

Abstract :

Purpose: The increase in incidence of violence aganist health care workers is a matter of great concern in developing societies across the globe.On a compartive basis the health care sector ranks highest as the target of workpalace violence.The present study was designed to identifiy the prevalence and extent of violence directed at emergency department staff across south Trinidad.

Methods/Materials: The investigation was conducted in five emergency departments across South Trinidad.A questionnaire was designed based on guidelines from earlier studies obtained through literature search. It was modified to suit local practices and used as a tool for collecting data from 131 staff working across various emergency settings at various professional levels. The study sample and occurence of violence were charcterized with the help of descriptive statistics.

Results: The study revealed 87.8% of the participating staff had been subjected to violence ,but only 43.1% of the cases had been reported.76.9%of the sample were ignorant about saftey policies, and 84.9% of them had never received training in handling of violent patients.

Conclusion: The present study brought to light the fact that healthcare workers faced a high risk of violence and abuse, but lacked the skills and knowledge to deal with such situations.Every health facility must take protective measures like increasing security,and should adopt stringent measures to punish the offenders.

#7048 : Risk management in the Accident and Emergency Department: shall we play?

Preferred format : ePoster

Authors:

Sophie Montagnon (1), Ghanima Al Dandachi (1), Colombine Bonier (1), Patrick Plaisance (1)

1. Accident and Emergency Department, Hôpital Lariboisière, APHP, Paris, FRANCE

Keywords: Behaviour, Risk management, Serious game

Abstract :

Introduction

How to teach behavioural skills? Even the best presentation is not an effective tool to change our behavior. Talking about behavior can be very difficult in a one-to-one interview and the presence of an observer automatically generates a different behavior.

As a link between defects of communication skills and risks, for professionals and patients, has been proved, couldn’t we find a new way to approach this topic? How could we increase our perception of our own risk generation?

Methods

In group work, we used a module focused on management of aggressiveness, which is a part of a serious game initially designed to teach behaviour and soft skills to reception agents in the hospital. The same questionnaires were submitted to each learner before and after the one-hour session. They included a common part, with analogic scales about risk perception, importance of behavior and importance of induced stress. The means before the session and after the session were compared by using paired sample T-test.

Results

28 medical students were enrolled. 26 completed fully the both questionnaires. We observed a significant increase in levels of risk perception (75.9 vs 70.8/100, $p<0.05$). A decrease was observed in levels of induced stress and an increase in levels of opinion on impact of the behaviour on the risk. 88% of the participants declared that they will communicate differently after this activity.

Discussion

Serious games have shown their capability to induce behavioural changes and to generate an intrinsic motivation from participants. In fact, the tool used for this activity is more a sort of game-based learning, without a real gameplay. But it acts as a mediator in a reflective activity and helps to generate engagement on this sensitive topic. It can be an interesting perspective when students consider as moderate the capacity of their practical training to prepare them to manage risks.

#7049 : Compared analysis of London, Boston and Paris attacks : learning from each other to become stronger.

Preferred format : Oral presentation

Authors:

Sophie Montagnon (1), Xavier Lesaffre (2), Daniel Jost (3), Stéphane Boizat (4), Olivier Bon (3), Michel Bignand (3), Patrick Plaisance (1), Jean-Pierre Tourtier (3)

1. Accident and Emergency Department, Hôpital Lariboisière, APHP, Paris, FRANCE
2. Medical service of the First Fire Group, Paris Fire Brigade, Paris, FRANCE
3. Emergency Medical Department, Paris Fire Brigade, Paris, FRANCE
4. Medical service of the Third Fire Group, Paris Fire Brigade, Paris, FRANCE

Keywords: Bombings, Terror attacks, Mass Casualties Incident Plan

Abstract :

Background

In 2005, 2013 and 2015 respectively, London, Boston and Paris (November events for this study) were targeted by major terrorist attacks. Despite their differences these attacks caused many common difficulties and issues for rescue organizations in countries with mass casualty plans that differ widely. The aim of the present study was to analyze and compare the specific responses of each city to a similar kind of crisis.

Participants and methods

We used publications and official reports about the London bombings [1], Boston bombings [2] and Paris terrorist attacks [3,4]. We detailed, when available, response timelines for each attack, the resources committed, the pre-hospital organization and hospital dispatch.

Results

In London, 4 suicide-bomb attacks (3 aboard London Underground trains and 1 on a double-decker bus) killed 52 civilians and injured over 700 more. In Boston, 2 pressure cooker bombs placed near the finish line of the Boston marathon killed 3 civilians and injured 264 more. In Paris, suicide bomb attacks, mass shooting and hostage taking killed 130 civilians, including 89 on one closed site of mass shooting, and injured over 413 more. Three different dispatch strategies were used: proximity dispatching in London, equal pre-defined dispatching in Boston and regional partially medical dispatching in Paris. If not already activated, national crisis management facility was operational in less than 40 minutes. 7 to 17 hospitals were involved in caring the victims. In all cities, evacuation of the victims was achieved in less than about 6 hours after the beginning of the attack.

Discussion

Several key points can be extracted from the three responses. A pre-defined idea of the capacities of each hospital as well as a real-time assessment proved extremely helpful. A unique dispatch and control center allows a good overview of the destination of the patients. Dedicated communication channels between all the critical national infrastructures allow swifter alert of all the involved services. Good communication is always a major issue, particularly in areas where networks are saturated, switched off, degraded or destroyed. When the network is on, giving the right information to the right persons at the right time is both vital but very difficult. Mass casualties require material, vehicles and personnel in numbers that need to be organized in advance if we want to respond without delay. Dealing with the uncertainty of the situations and reacting quickly requires response systems that are simple and robust and that favor the autonomy of the operational teams. Finally, drills, exercising, and repeating procedures again and again are absolutely crucial if we are to be agile and effective in our responses.

1. Report of the Official Account of the Bombings in London on the 7th July 2005

2. *After Action Report for the Response to the 2013 Boston Marathon Bombings*, dec 2014

3. Hirsch M et al., *The medical response to multisite terrorist attacks in Paris,* Lancet 2015 Dec 19;386(10012):2535-86.

4. Lesaffre X, *Attacks on Paris: what can we learn,* oral presentation

#7050 : Clinical features and outcomes of patients with organophosphate poisoning: a five-year retrospective analysis in a medical center.

Preferred format : Oral presentation

Authors:

Po-Sung Li (1), Cheng-Han Tsai (2)

1. Emergency physician, Taichung veterans general hospital, Taichung, TAIWAN
2. Emergency phsician, Chia-yi branch, Taichung veterans general hospital, Chia-yi , TAIWAN

Keywords: Organophosphate poisoning, risk factor, mortality, APACHE II score.

Abstract :

Background: Organophosphorus pesticides are widely used in Taiwan. These insecticides include more than one hundred varieties and have large impact on human and animals. According to the statistical information of World Health Organization, there are about 30 million people with pesticide posioning every year, in which the majority of these patients have organophosphate poisoning. Regardless of the exposure pathways in organophosphate poisoning, it is likely to cause serious outcomes or irreversible harm, even death. Therefore, the purpose of this study was to identify determinants of prognosis in patients with organophosphate poisoning.

Methods: This retrospective study was conducted at a medical center. Consecutive patients having organophosphate poisoning who visited the Emergency Room between January 2008 and December 2012 were retrospectively enrolled. Data which were collected from the medical record of every patient included demographic information, details of medical history, clinical information, the treatment modalities and outcomes. Logistic regression was performed to determine independent corelates of mortality in patients with organophosphate poisoning.

Results:Of the 46 patients with organophosphate poisoning recruited, their mean age was 57 +/- 18.7 years, in which 80.4% were male and 63.0% were admitted to the intensive care unit. The most common comorbidities in these patients were psychiatric disorder(32.6%), followed by cardiovascular disorders(19.6%) During the study period, 5 of the 46 patients died, giving an overall case fatality rate of 10.9%. In multivariate analysis, an increased Acute Physiology and Chronic Health Evaluation(APACHE) II score (p=0.031) was associated with ICU mortality.

Conclusion:The APACHE II score on ICU admission is a significant prognostic indicator in patients with organophsphate poisoning. A further prospective study to strengthen this point is required.

Key Words:Organophosphate poisoning, risk factor, mortality, APACHEII.

#7052 : Effect of Capsaicin in Acetaminophen Poisoning: An Experimental Rat Model

Preferred format : ePoster

Authors:

Ahmet Can Deniz (1), Mehmet Tahir Gökdemir (2), Hasan Büyükaslan (2), Halil Kaya (3)

1. Emergency Medicine, Harran University, sanliurfa, TURKEY
2. Emergency Medicine, Harran University, şanlıurfa, TURKEY
3. Emergency Medicine, Şevket Yılmaz Training and Research Hospital, Bursa, TURKEY

Keywords: Capsaicin, Paracetamol Poisoning,Rats

Abstract :

Objective: Plants have been used as a medicine in thetreatment of diseases among peopleforcenturies. The hot pepper which containing capsaicin is one of theseplants. It has ben shown that the capsaicin haveanalgesic, antitumoral, antioxidant, antimicrobial, anti-inflammatoryan dimmunomodulatory effects. Theaim of this in vivo study was to investigate the positive effects of capsaicin on acetaminophen poisoning using a rat model.

Material and Methods: 21 female weight sranging from 280-300 g Wistar-Albino rats were included to study. Wistar rats were randomized into 3 groups of 7 each: group 1, control, no treatmentand no poisoning; group 2, paracetamol poisoning; group 3, paracetamol poisoning and treated with capsaicin(Table1). All therats rats were anesthetized with intramuscular injection of 90 mg / kg ketamine (ketamine 50 mg / mL, 10 mLvials, Pfizer) and 10 mg / kg xylazine (Basilaz 2% 25 mL, bavette). Blood samples and liver tissue were taken for biochemical and pathological examination. The study protocol was approved Dollvet Inc. Animal Experiments Ethics Board (Dollvet-HADYEK) supervised by Harran University Animal Experiments Local Ethics Committee. All statistical analysis was performed using Statistical Package for the Social Sciences 20.0 (SPSS) software program. The results were expressed as median±IR. Analysis was performed using the ANOVA, Mann-Whitney U andchi-squaretests. P valueslessthan 0,05 were considered statistically significant.

Results: Any inflammation were not observed by pathological examination in the group 1 (controlgroup) and group 3 (poisoning and treated with capsaicin). However inflammation was significantly observed in the grup 2 (paracetamolgroup grup) (p=0,007).Compared to the group of poisoning,reduction of biochemical parameters were observed in the capsaicin group. But no significant difference has been noted between the 3 groups for ALT, ALT, ALP or CRP median valuelevels in biochemical examination.

Conclusion: Inconclusion, according to the histopathological examination of the liver samples ,capsaicin have a preventive inflammation effect in therat model. Further studiesare necessary fore valuating the benefits effects of the capsaicin on paracetamol poisoning.

#7053 : Comparison of proposed d-dimer age-related cut-offs for the accurate identification of pulmonary embolism

Preferred format : ePoster

Authors:

imogen Acklerly (1), Anne-Maree Kelly (2), Klim Sharon (3)

1. JECEMR, Western Health, Melbourne, AUSTRALIA
2. ECCN , Department of Health and Human Services, Victoria, Australia, St Albans, AUSTRALIA
3. JECEMR, Western Health, St Albans, AUSTRALIA

Keywords: pulmonary embolism, d-dimer

Abstract :

Background: Previously, a fixed cut-off for d-dimer (< 500 µg/L) was used as part of a 'rule out' pulmonary embolism (PE) diagnostic pathway however evidence suggested that this approach lacked specificity in patients aged over 50 years resulting in a high proportion of false positive tests. A range of age-specific d-dimer cut-offs have been proposed (age x 10, age x 16 and decade-stratified), aimed at increasing specificity without reducing sensitivity of d-dimer testing in older patients. Our objective was to compare the diagnostic performance of the conventional cut-off with the three proposed alternatives.

Participants and methods: This was a retrospective cohort study conducted by medical record review of patients investigated for PE with both a d-dimer assay and CT pulmonary angiography (CTPA) in a university teaching hospital. Data collected included demographics, clinical parameters, PE risk score data and CTPA results. The assay used was Innovance d-dimer (Siemens Medical Solutions). Outcomes of interest were diagnostic performance (sensitivity, specificity and negative predictive value (NPV)) for PE.

Results: 226 patients met inclusion criteria. Median age was 65 (IQR 57-75) and 52% were female. Twenty three patients had confirmed PE (10.2%, 95% CI 6.9-14.8%). Sensitivity for conventional cut-off versus the decade-stratified, age x 10 and age x16 cut-offs were 100%, 96%, 96% and 87% respectively with specificity of 12%, 28%, 36% and 66% respectively and NPV of 100%, 98%, 99% and 98% respectively. Adoption of the age x 10 cut-off would result in 28% fewer patients requiring CTPA to rule out PE (95% CI 22-35%).

Conclusion: Both the decade-stratified and age x 10 cut-offs had acceptable diagnostic accuracy and would result in few fewer patients requiring CTPA, although the small number of PE makes the confidence intervals wide. Further data is required to confirm these findings.

Sources of funding: This project was by The University of Melbourne Scholarly Selective Program.

#7054 : Striving for Balance

Preferred format : Oral presentation

Authors:

Anna Horberg (1), Veronica Lindstrom (2), Susanne Kalén (3), Max Scheja (4), Veronica Vicente (1)

1. Ambulance, AISAB, Stockholm, SWEDEN
2. Karolinska Institutet, Karolinska Institutet, Stockholm, SWEDEN
3. Stockholms läns landsting, SLL personal och utbildning, Stockholm, SWEDEN
4. Education, Stockholms universitet , Stockholm, SWEDEN

Keywords: Ambulance, Emergency medical technicians, Prehospital emergency nursing, being new, professional development, learning

Abstract :

Background: New nurses in the prehospital emergency care service are a precious and valuable resource, however they enter a challenging environment and the risk of clinical errors is increased. The transition from novice to proficient has been described as a process of becoming. An evolutionary journey that, although not always linear or strictly progressive, is ultimately transformative. This transformational journey has been well described in students becoming professionals in intrahospital context. Little is known however about the experience of being new in the prehospital setting, where a novice prehospital care nurse work with the sole medical responsibility of the patients, with no doctor and often without an experienced nurse to ask for support when difficult situations emerge.

Aim: This study aimed to deepening the understanding of newly hired ambulance nurses experiences of the first year of employment in the Emergency Medical Service, EMS.

Method: Data were generated from 13 semi-structured interviews with newly hired prehospital emergency care nurses, PECN’s, from seven districts representing rural, urban and suburban areas in Sweden. Analysis was a latent inductive qualitative content analysis.

Result: The findings show that being new is experienced as *Striving for balance in internal expectations and external conditions* and can be described with the three generic categories; *Reflecting on the own ability, Searching for identity* and *Strategies for learning.*

This study adds to the knowledge about being new in the EMS and illuminates the need for further research in how to support novice PECN’s strive for balance in this context.

#7056 : Simple questionnaire to enable nurse-led emergency department referral direct to mental health

Preferred format : ePoster

Authors:

Liam Kevern (1), Charlotte Lindenbaum (1), Ffion Barham (1)

1. NHS, North Devon District Hospital, Barnstaple, UK

Keywords: mental health, psychiatry liaison, direct referral

Abstract :

Introduction

7913 patients attended 183 British emergency departments (EDs) for mental health issues in 2014-2015[1]. The Royal College of Emergency Medicine (RCEM) 2014 “Mental Health in the ED” report[1] was critical of risk assessment documentation and time to be seen by a mental health practitioner (MHP), as nationally standards were not met. The Emergency Department Adult Mental Health Triage Tool (the tool) allows the triage nurse to refer patients directly to the psychiatry liaison service (PLS) without the need for repeated assessments and potentially unnecessary waiting time. The aims are to reduce the time to PLS referral, total time in department, the number of patients who abscond, prevent the stress and cost of unnecessary repeated consultations and perform a standardised risk assessment.

Methods

The records of 50 consecutive patients presenting with mental health complaints before and after the introduction of the tool were reviewed and relevant timings recorded anonymously. Patients were only included if they were medically fit adults (no intoxication, self-poisoning or self-harm requiring medical/surgical assessment) and referred directly to psychiatry by the attending doctor/triage nurse. The tool consists of a standard risk assessment, demographic data collection and triage discriminators (5 questions).

Results

Average time-to-referral was significantly reduced (1 hour 43 minutes to 21 minutes) and patients rarely saw two healthcare teams after triage (6% rather than 92%). 4-hour target breaches were halved (20 to 10) after the introduction of the tool. Average time in department was slightly reduced (4:05:54 to 3:28:22). No significant reduction in absconding but PLS was aware of these patients after the introduction of the tool. Admissions rose from 12% to 20% but it is unclear whether these could have been avoided with ED doctor intervention. Documentation improved globally.

Discussion

This vulnerable group of patients has received improved care since the introduction of this tool, as demonstrated by the parameters above. Patients have not unnecessarily given the same history to two healthcare teams and fewer have breached which has improved the patient experience. ED doctors are released to see other patients. Faster, standardised referrals mean PLS are advised of the need to assess a patient as soon as is possible. The department is not a “Place of Safety”, so all efforts to reduce the risks to patients and others and ensure a management plan is created quickly and efficiently will best serve to protect these individuals. A description is recorded for patients who abscond. The limitations of this tool include; triage nurses receiving no additional mental health training, and no effect on time from referral to PLS assessment. This simple tool has the potential to reduce distress, overall time and cost for every medically fit mental health ED patient.

No associated conflicts of interest or funding.

References

1 RCEM Mental Health in the ED National Report 2014-2015

#7058 : Delta neutrophil index as an early predictor of acute appendicitis in adults

Preferred format : Oral presentation

Authors:

Young Hwan Lee (1), Hee Cheol Ahn (1), Seung Min Park (1), Young Taeck Oh (1), Ji Hun Kim (1), Moon Sik Kim (1)

1. Department of emergency medicine, Sacred Heart Hospital, Hallym University School of Medicine, Anyang, KOREA, REPUBLIC OF

Keywords: Appendicitis, complicated appendicitis, delta neutrophil index

Abstract :

Background.

The delta neutrophil index (DNI) is new inflammatory marker and this retrospective study aimed to evaluate the ability of the DNI to predict acute appendicitis pre-operatively and to differentiate between simple and complicated appendicitis.

Methods.

A data of 650 patients who underwent surgical appendectomy was evaluated. Based on postoperative histopathological examination, the patients were divided into positive and negative appendectomy groups. The patients in the acute appendicitis group were further sub-divided into simple and complicated (perforation, abscess, peritonitis) appendicitis groups.

Results.

DNI was significantly higher in positive group than negative appendectomy group (0.4 vs. -0.4, $p<0.001$). DNI independently predicted positive appendectomy [odds ratio (OR) 2.62, 95% confidence interval (CI) (1.11~6.16), $p=0.028$]. The optimum cutoff for initial DNI was 0.2, giving a sensitivity of 59.8% and specificity of 77.1% (AUC 0.709). Also, DNI was significantly higher in complicated group than simple appendicitis group (1.2 vs. 0.3, $p<0.001$). DNI independently predicted acute complicated appendicitis [odds ratio (OR) 4.10, 95% confidence interval (CI) (2.94~5.80), $p<0.001$]. The optimum cutoff for initial DNI was 0.6, giving a sensitivity of 65.0% and specificity of 71.0% (AUC 0.727).

Conclusions.

We suggest that preoperative DNI is a useful parameter to aid in the diagnosis of acute appendicitis and differentiate between simple and complicated appendicitis.

#7059 : The effect of alcohol consumption on patient survival after organophosphate poisoning

Preferred format : Oral presentation

Authors:

Hee Cheol Ahn (1), Young Hwan Lee (1), Park Seung Min (1), Young Taeck Oh (1), Ji Hun Kim (1), Moon Sik Kim (1)

1. Department of emergency medicine, Sacred Heart Hospital, Hallym University School of Medicine, Anyang, KOREA, REPUBLIC OF

Keywords: organophosphate, poisoning, alcohol, mortality

Abstract :

Aim: Organophosphate (OP) intoxication remains a serious worldwide health concern, and many patients with acute OP intoxication have also consumed alcohol. Therefore, we evaluated the effect of blood alcohol concentration (BAC) on mortality among patients with OP intoxication.

Methods: We retrospectively reviewed records from 135 patients who were admitted to an emergency department for OP intoxication between January 2000 and December 2012. Factors that were associated with patient survival were identified via receiver operating characteristic curve, multiple logistic regression, and Kaplan-Meier survival analyses.

Results: Among 135 patients with acute OP poisoning, 112 patients survived (overall mortality rate: 17%). The non-survivors also exhibited a significantly higher BAC, compared to the survivors (non-survivors: 192 mg/dL, interquartile range [IQR]: 97–263 mg/dL vs. survivors: 80 mg/dL, IQR: 0–166.75 mg/dL; $p < 0.001$). A BAC cut-off value of 173 mg/dL provided an area under the curve of 0.744 (95% confidence interval [CI]: 0.661–0.815), a sensitivity of 65.2%, and a specificity of 81.2%. A BAC of >173 mg/dL was associated with a significantly increased risk of 6-month mortality in the multiple logistic regression model (odds ratio: 4.92, 95% CI: 1.45–16.67, $p = 0.001$). The Cox proportional hazard model revealed that a BAC of >173 mg/dL provided a hazard ratio of 3.07 (95% CI: 1.19–7.96, $p = 0.021$).

Conclusion: A BAC of >173 mg/dL is a risk factor for mortality among patients with OP intoxication.

#7060 : Refractory ventricular fibrillation treated with esmolol

Preferred format : Oral presentation

Authors:

Seung Min Park (1), Young Hwan Lee (1), Hee Cheol Ahn (1), Young Taeck Oh (1), Ji Hun Kim (1), Moon Sik Kim (1)

1. Department of emergency medicine, Sacred Heart Hospital, Hallym University School of Medicine, Anyang, KOREA, REPUBLIC OF

Keywords: Cardiopulmonary Resuscitation, Ventricular Fibrillation, Adrenergic beta-1 Receptor Antagonists

Abstract :

Aims: This study aimed to evaluate the effects of esmolol treatment for patients with refractory ventricular fibrillation (RVF) and out-of-hospital cardiac arrest (OHCA).

Methods: This single-centre retrospective pre-post study evaluated patients who were treated between January 2012 and December 2015. Some patients had received esmolol (loading dose: 500 μg/kg, infusion: 0–100 μg/kg/min) for RVF (≥3 defibrillation attempts), after obtaining consent from the patient's guardian.

Results: Twenty-five patients did not receive esmolol (the control group), and 16 patients received esmolol. Sustained return of spontaneous circulation (ROSC) was significantly more common in the esmolol group, compared to the control group (56% vs. 16%, p = 0.007). Survival and good neurological outcomes at 30 days and at 3 months were >2-fold better in the esmolol group, compared to the control group, although these increases were not statistically significant. A multiple logistic regression model revealed that esmolol treatment provided an odds ratio of 9.24 for sustained ROSC (95% confidence interval: 1.64–52.11, p = 0.012).

Conclusions: Among patients with RVF and OHCA, treatment with esmolol was associated with higher rates of sustained ROSC and survival, and patients who received esmolol exhibited an odds ratio of 9.24 for sustained ROSC. Therefore, we suggest considering esmolol for patients with RVF and OHCA after administering standard therapy.

#7061 : Delta neutrophil index as an early predictor of acute appendicitis in the elderly.

Preferred format : Oral presentation

Authors:

Ji Hun Kim (1), Young Hwan Lee (1), Hee Cheol Ahn (1), Seung Min Park (1), Oh Young Taeck (1), Moon Sik Kim (1)

1. Department of emergency medicine, Sacred Heart Hospital, Hallym University School of Medicine, Anyang, KOREA, REPUBLIC OF

Keywords: Appendicitis, perforated appendicitis, delta neutrophil index

Abstract :

Background.

About half of elderly patients with acute appendicitis present with perforation, and the early diagnosis of perforation is known to improve outcome. Serum delta neutrophil index (DNI) is a new inflammatory marker and the present study aimed to evaluate the predictive value of the DNI for the presence of a perforation in elderly with acute appendicitis.

Methods.

This retrospective observational study was conducted on 108 consecutive elderly patients (≥ 65 years old) with acute appendicitis treated over a 24-month period. DNI, C-reactive protein (CRP), and white blood cells (WBCs) were measured in an emergency department and investigated with respect to their ability to predict the presence of appendiceal perforation.

Results.

Sixty-nine of the 108 patients (median age, 72 years) were allocated to the perforated appendicitis group (63.9%) and 39 to the non-perforated appendicitis group (36.1%). WBC, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio and DNI were significantly higher in the perforated group. In multiple logistic regression analyses, initial DNI was the only independent marker that can significantly predict the presence of perforation in multiple regression [odds ratio 9.38, 95% confidence interval (2.51~35.00), p=0.001]. Receiver operator characteristic curve analysis showed that serum DNI is a good predictor for the presence of appendiceal perforation at an optimal cutoff for DNI being 1.4% (sensitivity 67.7%, specificity 90.0%, AUC 0.807).

Conclusion.

Clinicians can reliably differentiate acute perforated appendicitis from non-perforated appendicitis by DNI level of more 1.4 or more in elderly patients.

#7063 : Reducing the pain of paediatric emergency department intravenous cannulation – comparison of a new local cooling device with topical anaesthetic cream

Preferred format : Oral presentation

Authors:

Vanessa Merrick (1), Jessica Farlow (1), Anya Wilson (1), Rose Sacca (1), Elizabeth Barnes (2), Mary McCaskill (1)

1. Paediatric Emergency Department, The Children's Hospital at Westmead, Sydney, AUSTRALIA
2. Kids Research Institute, The Children's Hospital at Westmead, Sydney, AUSTRALIA

Keywords: Intravenous cannulation, pain, children, topical anaesthetic, cooling

Abstract :

Background

Topical local anaesthetic creams are proven to reduce the pain and distress associated with intravenous cannulation in children. A major disadvantage of their use is the relatively long application time. A minimum of 30 minutes is required for LMX4™ (4% Lidocaine w/w cream) [Ferndale Pharmaceuticals Ltd], the most rapidly acting agent. Coolsense™ [Coolsense Medical Ltd] is a relatively new, reusable device designed to produce immediate, transient local analgesia through rapid cooling of the skin surface. No study has yet assessed the effectiveness of Coolsense™ use in the paediatric emergency department (PED).

Aims

To determine any difference in age-appropriate paediatric pain score, at the time of intravenous cannulation, following use of the Coolsense™ device or LMX4™ cream. To describe the effect of each intervention on additional outcomes, such as time from decision to cannulate to performing the procedure, which may influence the decision to select a particular method for use in the PED.

Methods

Prospective, quasi-randomised study in a tertiary PED over 6 weeks (February – March 2016).

Results

175 patients were included (mean age 7.4 years). 80 were allocated to receive Coolsense™ and 95 LMX4™, on a week-by-week basis. When analysed by allocated intervention, the **mean pain score at time of cannulation was significantly lower with Coolsense™ than LMX4™ (2.5 vs. 3.8; p=0.006). Mean time from decision to cannulate to performing the procedure was significantly shorter with Coolsense™ than LMX4™ (25.6 mins vs. 48.4 mins; p<0.0001).** There was no significant difference in the number of successful first cannulation attempts (67% vs. 73%; p=0.23), or intervention-associated adverse effects (1.2% vs. 3.2%; p=0.39), between the two groups. Redness, vasoconstriction and increased anxiety were associated with LMX4™ application in a minority of cases.

Conclusions

The Coolsense™ device performed better than LMX4™ cream at reducing the pain associated with intravenous cannulation in children. The immediate nature of its local analgesic effect means it significantly reduces the waiting time to cannulation. Both interventions produce similar first cannulation success rates and frequency of reported adverse effects. Coolsense™ should be considered a viable alternative to topical anaesthetic cream for providing local analgesia in children requiring intravenous cannulation in the PED.

#7064 : A two-pronged approach to improving efficiency of patient transfer from the emergency department to the ICU in an urban hospital setting

Preferred format : ePoster

Authors:

Yvette Calderon (1), Uttara Gadde (1), Susan Gullo (1), Magdalena Cherry (2), Daisy Nanta (2), Frederick Nagel (1)

1. Emergency Medicine, North Central Bronx Hospital , Bronx, USA
2. Intensive Care Unit, North Central Bronx Hospital , Bronx, USA

Keywords: quality improvement,emergency medicine,operations

Abstract :

BACKGROUND: Emergency Department (ED) volumes have been rapidly increasing, with a 40% increase in annual patient visits in the US from 1995 to 2009. Crowding is a serious problem that can impact patient care, safety, and hospital efficiency. Delays in patient transfer from the ED to the ICU have been associated with higher patient mortality rates. This quality improvement project sought to improve ICU patient transfer from the ED by implementing strategies to decrease patient length of stay (LOS) in the ED.

DESIGN AND METHODS: This project was conducted in a 232-bed urban hospital in Bronx, NY. A two-pronged intervention was implemented to reduce patient LOS in the ED by: (1) removing the SMR's (Senior Medical Resident's) involvement from the throughput process and (2) implementing a pull-process of sending the patient directly up to the ICU for the face-to-face nursing handoff. Trained research assistants monitored each patient's length of stay in the ED from documented patient arrival to exit according to the hospital's electronic recording system. Average ED LOS was monitored over time to determine if the implementation of this ED-based intervention was associated with a decrease in average patient LOS in the ED. Sepsis data was monitored over time as a marker of healthcare outcomes.

RESULTS: Average ICU patient LOS in the ED was collected over a 15-month time period (including six months post-intervention). Since the beginning of the two-pronged intervention, average ICU patient LOS decreased from 6 hours to approximately 3 hours and 48 minutes, an overall decrease of 2 hours and 12 minutes. The implementation of the intervention was associated with a clear decreasing trend of patient LOS in the ED. In addition, sepsis data showed a marked improvement on timely administration of several treatment measures. Percent adherence of timely administration of broad spectrum antibiotics increased from 27.8% to 81.8%, timely lactate level increased from 50.0% to 90.9%, and timely administration of vasopressor increased from 60.0% to 100%.

CONCLUSION: A two-pronged approach to reducing ED patient LOS using multi-staff buy in can improve timeliness of ICU patient transfer. This result has positive implications for both hospital efficiency and patient safety. By utilizing the power of ED-based interventions to improve patient flow, ED management can create a safer, more efficient hospital experience for critically ill patients.

#7070 : Pediatric case of Accidental Methotrexate Ingestion

Preferred format : Oral presentation

Authors:

Comfort Adedokun (1), Iomhar O'sullivan (2), Adrian murphy (3), Rizwan muhammed (4)

1. Emergency Medicine , Pediatrics, Cork university hospital , IRELAND
2. Emergency Medicine , Pediatric Emergency medicine, Cork, IRELAND
3. Emergency Medicine , Pediatric Emergency medicine, cork, IRELAND
4. pediatrics, Pediatrics, cork, IRELAND

Keywords: myelosuppression,methotrexate, rescue therapy

Abstract :

Paediatric overdoses and acute poisoning is a common phenomenon encountered in clinical practice. However, methotrexate over doses is a rare presentation despite the increasing use in practice.
Methotrexate is a cytotoxic antimetabolite and antifolate drug widely used for chemotherapy,treatment of autoimmune diseases and seldomly as an abortifacient.It has both rapid and complete absorption from the gastrointestinal tract with primary renal excretion. Parenteral toxicity has been reported to be lethal, more frequently known to result in myelosupression, respiratory failure ,renal failure, hepatotoxicity, neurological dysfunction, abortion,sepsis and multi-organ failure.
Antidotes like Glucarparidase (Voraxaze) may be considered in severe toxicity and acute kidney injury.
Regular infusion of leucovorin (folinic acid) remains the recommended initial treatment in symptomatic and significant overdoses to reduce toxicity.Activated charcoal can be used within an hour of suspected toxicity. Urine alkalinisation may be beneficial in drug excretion.

We present a case of Paediatric Methotrexate acute ingestion with no previous therapy in a 2 years old boy, who presented to the emergency department 3 hours following a suspected accidental ingestion of his mother's medication.
History revealed suspected intake was greater than 3mg/kg as 60mg tablets was unaccounted for my parent. He had non-specific symptoms with a single vomiting episode and an hour of profound hyperactivity.He was treated with immediate leucovorin rescue therapy without waiting for methotrexate assay as recommend by Toxbase to avoid severe toxicity. Blood investigation (6h) result showed leucocytosis, with slightly raised Alkaline Phosphatase and elevated methotrexate level.
National poisoning centre (NPIC) was contacted and patient was admitted by paediatric team with unremarkable clinical course also with no adverse sequelae 4 weeks after overdose.
In conclusion, early identification and calculation of estimated dosage is essential, including prompt administration of folinic acid to decrease toxicity and prevent methotrexate overdose vast complication in patient management.Weekly assessment with blood investigation for 4weeks post-acute ingestion due to delayed complications is recommended.

#7071 : Three meters of bowel gangrene caused by strangulated Petersen’s hernia 9 years after open total gastrectomy.

Preferred format : ePoster

Authors:

Daisuke Nishioka (1), Yo Inokuchi (1), Keitaro Goto (1), Giichiro Ohno (2)

1. Emergency Department, Tokatsu Hospital, Nagareyama, Chiba, JAPAN
2. Surgery, Tokatsu Hospital, Nagareyama, Chiba, JAPAN

Keywords: Petersen's hernia, internal hernia after gastric bypass, bowel gangrene

Abstract :

BACKGROUND: Petersen’s hernia is one of the internal hernias develops after gastrectomy with Roux-en-Y (R-Y) reconstruction. Petersen’s hernia is a specific type of hernia that the small bowel moves into a mesenteric defect of the transverse mesocolon. Although internal hernia is well-known complication of R-Y gastric bypass, there are few reports of bowel necrosis caused by Petersen’s hernia. We experienced the case of bowel gangrene as long as 3 meters due to Petersen’s herniation 9 years after open total gastrectomy. Internal hernia might present with ambiguous physical examination findings, initial almost normal laboratory, and nonspecific radiographic results, making early diagnosis and treatment difficult, while there is a case resulting in massive bowel necrosis.

OBJECTIVE: This is a rare case of massive bowel gangrene occurred after open gastrectomy. The purpose of the report is to heighten awareness of Petersen’s hernia among physicians of all specialties who have relevance to the patients after gastrectomy and all emergency physicians who deal with acute abdomen. Increased suspicion against internal hernia, physicians can obtain prompt surgical consultation in gastric bypass patients with unspecific abdominal symptoms.

CASE REPORT: 82-year-old man, who had undergone open total gastrectomy with R-Y reconstruction for gastric cancer 9 years earlier, was transported to our emergency department by ambulance because of his altered mental status. Abdominal examination was distended, and revealed diffuse abdominal tenderness and peritoneal irritation. Abdominal computed tomography showed dilation of small intestine and the whirl sign of superior mesenteric artery. Almost all of small intestine had no enhancement despite the use of contrast agent. Based on these findings, he was diagnosed as having internal jejunal hernia and possible massive bowel necrosis. During an emergent operation, he was found to have a strangulated Petersen's hernia with colour change that suggests bowel necrosis, and necessitated 3 meters of extensive small bowel resection. Pathological findings showed that there was a short time until forming the bowel obstruction and necrosis by the contents of resected intestine.

DISCUSSION and CONCLUSIONS: The reports of Petersen's hernias are increasing recently, and the incidence of the hernia is described as higher in laparoscopy than in laparotomy. Therefore, there are some cases of bowel gangrene caused by Petersen’s hernia after laparoscopic surgery, but rarely met after open gastrectomy. Petersen’s hernia can occur within days or several years after gastric bypass. Furthermore, patients with internal hernia may present with vague complaints such as intermittent abdominal pain, nausea, or vomiting and initial unremarkable laboratory and x-ray findings. Thus it can lead to the delay of physician’s diagnosis, heighten suspicion and careful evaluations are needed when seeing the patient after gastric bypass. Such our case, there is a case of Petersen’s hernia that develops bowel gangrene after laparotomy and that results in extensive bowel resection, it is essential to be aware of early recognition and treatment against the herniation not only after laparoscopic surgery but after open surgery.

#7072 : Antibioprophylaxis in nonsurgical facial trauma in the ED

Preferred format : ePoster

Authors:

Charles-Eric Lavoignet (1), Pierrick Le Borgne (1), Carmen Hammann (1), Céline Renfer (1), Sarah Ugé (2), Philippe Kauffmann (1), Hakim Slimani (1), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. SAMU-SMUR, CHU Strasbourg, Strasbourg, FRANCE

Keywords: Facial trauma, Antibiotics

Abstract :

Introduction:

Facial fractures are a frequent cause of emergency department (ED) visit. The indication for surgery is rare. Antibiotic prophylaxis is frequently introduced in not requiring urgent surgery patients. Infectious complications of theses fractures are unusual. The indications and modalities of this antibioprophylaxis are not well codified in the literature and are based mostly on empirical habits. Any antibiotic provides bacterial resistance. We aim to determine what proportion of patients are treated with antibiotics in non-surgical trauma of the face. We also wanted to discuss the modalities of such an antibioprophylxis in our ED.

Methods:

We conductes a single-center and retrospective study for 3 months (from June to August 2015) in the ED of an urban teaching hospital. All patients with 1 or 2 facial fractures without urgent surgical indication were included. The existence of antibiotic therapy and its modalities (molecule, dosage, duration) were sought. Patients with a fracture requiring urgent surgery, or with multiple fractures were not included.

Results:

105 patients were enrolled in this study for statistical analysis. Antibiotic treatment was introduced in 44 patients (41.9%, [CI: 32.6-51.4%]). The amoxicillin-clavulanic acid association was used in 43 cases (97.7%) with an average of 6.14 days of treatment (SD: 1.87 days).

Conclusion:

Antibiotics are prescribed in nearly 40% of injuries in the non-surgical facial trauma whereas real indications are rare. In the current climate of increasing bacterial resistance and concern, interest of antibiotic prophylaxis in nonsurgical trauma of the face should be discussed taking into account the risk of selecting resistant bacteria, or encourage late infection with resistant organisms. When antibiotic treatment indication was laid in prophylaxis, especially in fragile patients and in situations with increased risk of infectious complications, the use of amoxicillin-clavulanic acid combination is a possibility. However, the environmental consequences of its widespread use should be considered. Pristinamycin and clindamycin may constitute interesting alternatives in this non-surgical trauma situation. The duration of treatment should not exceed 48 to 72 hours.

#7073 : Can clinical evaluation determine the need for pelvic x-ray in awake and stable blunt trauma patients?

Preferred format : Oral presentation

Authors:

Muhammad Asad Moosa (1), Hasnain Zafar (1), Raza Sayyed (1), Iqra Jangda (2)

1. Surgery , Aga Khan University Hospital , Karachi, PAKISTAN
2. Anesthesia, Aga Khan University Hospital , Karachi, PAKISTAN

Keywords: Blunt Trauma, Radiation in ER, Clinical examination

Abstract :

Aim: Pelvic fractures is common and can be potentially life threatening. The early diagnosis of pelvic fractures resulting from blunt abdominal trauma traditionally relies on the anterior-posterior pelvic radiograph although sometimes it may not give a definitive diagnosis of pelvic fractures. So reliability of pelvic x-ray has been questioned and ways of removing pelvic x-ray from the ATLS protocol are being observed on the basis of finding the reliability of clinical examination in finding out pelvic fractures in alert and awake, hemodynamically stable patient and also to avoid the unnecessary exposure of radiation and reduce the financial burden.

Methods: This is a cross sectional study conducted in the department of surgery, Aga Khan University Hospital, Karachi. This study included patients with blunt trauma mainly the road traffic accident victims presenting the emergency department with GCS of 15, hemodynamically stable and alert and awake. Clinical examination of pelvis of these patients were done on three different examination maneuvers and assessment of pelvic made which was then compared to routine pelvic x-ray findings.

Results: Total of two twenty one (221) of blunt trauma patients were reviewed having mechanism of injury being road traffic accident and history of fall. Of these 221 patients thirty two (32) were not entered in the study as they had GCS of < 15, fifteen patients were not included as they have abdominal tenderness, fourty one (41) patients had associated lower limb injuries. So the final of one thirty three (133) patients were included in our study. Of these 133 patients majority of patients were male around 91.7% and 8.9% were females. Mean age of patients included in this study 37 with standard deviation of +/- 14.2. Fourteen patients were positive for pelvic fracture on clinical examination and positive on PXR categorized as true positive (TP), fourteen patients were positive for pelvic fracture on clinical exam but negative on PXR and categorized as false positive (FP), two patients were negative for pelvic fracture on clinical exam but positive on PXR categorized as false negative (FN), one hundred and three patients were negative for pelvic fracture both on clinical exam and PXR and were labelled as true negative (TN).

Sensitivity, Specificity, Positive predictive value and Negative predictive value were calculated by using two X two table. Sensitivity of clinic examination was found to be 87.5%, Specificity 88.03%, Positive Predictive Value 50% and Negative predictive value 98.09%.

Conclusion: In relation to above mention findings new protocol can be advised for alert and awake patients and pelvic x-ray can be avoided helping in reducing the financial burden to patient, reducing emergency hassle and unnecessary radiation.

#7076 : Hyperpyrexia as a predictor for serious bacterial infection (SBI) in children – a systematic review and meta-analysis

Preferred format : Oral presentation

Authors:

Noa Rosenfeld-Yehoshua (1), Shiri Barkan (2), Ibrahim Abu-Kishk (1), Meirav Booch (3), Ruth Suhami (4), Eran Kozer (5)

1. Pediatric Intensive Care Unit, Assaf Harofeh Medical Center, Zerifin, ISRAEL
2. Pediatric Emergency Unit, Assaf Harofeh Medical Center, Zerifin, ISRAEL
3. Medical Library, Assaf Harofeh Medical Center, Zerifin, ISRAEL
4. Gitter-Smolarz Life Science & Medicine Library, Tel Aviv University, Tel Aviv, ISRAEL
5. Pediatric Emergency Unit, Assaf Harofeh Medical Center; Tel Aviv University, Zerifin, ISRAEL

Keywords: Fever, hyperpyrexia, children, bacterial infection, meta-analysis

Abstract :

Importance: Fever is one of the most common symptoms in children. It is not clear if children with high fever are at increased risk for serious bacterial infection (SBI).

Objectives: To systematically review and to perform a meta-analysis, in order to determine whether children suffering from high fever are at high risk for SBI.

Data sources: The following databases were searched from their inception until the last week of December 2014: Embase (via Embase.com), Medline (via OvidSP) and Pubmed.

Study selection: Cohort and case control studies comparing the incidence of SBI in children with a temperature higher than 41^{0}C, with children with fever of 41^{0}C or less, and children with a temperature higher than 40^{0}C, with children with fever of 40^{0}C or less.

Data extraction and synthesis: Based on a preliminary review, two reviewers independently pooled studies for detailed review using a structured data-collection form. We calculated the odds ratio and 95% confidence intervals (CI) for SBI, assuming a random-effects model. A sub-group analysis was conducted based on age.

Main outcome and measures: SBI

Results: Ten studies met the inclusion criteria. Only two studies compared children with temperature over 41^{0}C with children with lesser degree of fever. Children with temperature over 41^{0}C had higher risk for SBI (OR 1.96 95%CI 1.3-1.97). Nine studies reported on children with temperature over 40^{0}C. The summary end-point suggests an increased risk for SBI in children with high fever (OR 3.21 95% CI 1.67;6.22). When analyzing the studies reporting on young infants, the odds ratio for SBI in children with temperature over 40^{0}C was higher compared to infants with lower degree of fever (OR 6.3 95% CI 4.44;8.95). Four studies reported on older children; the odds ratio for SBI in children with high fever was only slightly higher than in children with lower degree of fever (OR 1.36 95% CI 1.16;1.61).

Conclusions and relevance: Young infants with temperature higher than 40^{0}C are at increased risk for SBI. Compared with children who have lower degree of fever, the risk of SBI in older children with temperature >40^{0}C is minimal.

#7078 : Multicentre validation of AMPDS code with ICU admission and 30 day mortality

Preferred format : Oral presentation

Authors:

Alasdair Corfield (1), Rooney Kevin (2), Kelly Paul (3), Stewart Elaine (2), Silcock Danny (4)

1. Emergency Department, Royal Alexandra Hospital, Paisley, UK
2. Health Care Improvement, University of West of Scotland, Hamilton, UK
3. Clinical Governance, Scottish Ambulance Service, Dundee, UK
4. Intensive Care, NHS Greater Glasgow & Clyde, Glasgow, UK

Keywords: emergency medical services; mortality; AMPDS

Abstract :

Introduction

Algorithim based dispatch codes are widely used amongst ambulance services to prioritise dispatch of ambulance resources. This prioritisation is based on perceived urgency at the time of dispatch. There is little described in the literature about how this perceived level of urgency at ambulance dispatch relates to long term outcome.

Aim

To determine whether the AMPDS dispatch code was a predictor of a composite outcome of mortality within 30 days and/or ICU admission within two days.

Methods

All adult patients attended to by ten Scottish Ambulance Service (SAS) paramedics working across 5 centres.over a 13-month period. Data for all patients in the study was obtained from the electronic records via the SAS Data Warehouse. This data was then matched with the receiving Intensive Care Units and hospital information systems to ascertain outcome.

Results

A total of 1900 patients were available for analysis. Complete data on AMPDS code and outcome was available for 1895/1900 (99.7%).

The mean age of subjects in the study was 61.6 years (95% CI 60.7 to 62.6) with 50.5% of subjects being male gender.

Regarding outcome, 0.3% of subjects were admitted to an Intensive Care Unit within 48 hours and 4.9% of subjects died within 30 days of the initial ambulance call. The combined outcome of ICU admission within 48 hours or death within 30 days contained 5.0% of all subjects. Some subjects were in both of these groups.

There were a total of 191 different AMPDS codes used to dispatch an ambulance resource to the subjects in our study.

24 of 191 codes had more than 20 subjects dispatched. In this group of 20 codes the combined outcome measure again varied between 0 and 17.9% with a median of 3.5%.

9 of the 24 codes, covering 270 subjects, had a 10% or greater rate of the combined outcome measure of ICU admission within 48 hours or death within 30 days.

10 of the 24 codes, covering 364 subjects, had no subjects associated with a combined outcome measure of ICU admission within 48 hours or death within 30 days.

Discussion

This data is the first to link initial AMPDS coding to medium term outcomes such as ICU admission or 30 day mortality. Firstly the data from our study shows that this is feasible.

We also show that there is a wide variation in outcomes according to AMPDS code, Some codes, such as cardiac arrest, are associated with a high incidence of adverse outcome,. Some other less specific codes such as sick person/unwell are also associated with a high incidence of adverse outcome.

Conversely, some codes have no adverse outcomes associated with them. Although these are based on low absolute numbers, this may support

down grading or regarding of some dispatch codes.

These findings will require replication in a much bigger cohort to confirm its accuracy at an acceptable level, however they open the possibility of basing dispatch codes based on hard outcomes such as ICU admission or 30 day mortality, rather than just immediate outcomes.

#7079 : Management of children presenting with Deliberate Self-Harm in a medium-sized District General Hospital

Preferred format : ePoster

Authors:

Colin Wong (1), Howie Isaac (1)

1. Paediatrics, NHS, Chester, UK

Keywords: Deliberate Self-Harm, Staff Attitudes, Children, Adolescents, Safeguarding, Paracetamol, Anti-Depressants, Survey

Abstract :

Introduction

Deliberate self-harm (DSH) is reaching epidemic proportions in the UK adolescent population with an estimated 10-20% of young people self-harming and Childline estimating a 41% increase in deliberate self-harm in children which ties in with Public Health England figures giving a 68% rise in ten years. This equates to about 21,000 attendances per annum in England for under 19s.

People who deliberately self-harm have a 30 times greater risk of completing suicide than the general population.

Managing patients presenting with Deliberate Self-Harm is an area that many healthcare professionals feel uncomfortable with.

Method

We established how children and young people under the age of 19 presenting with Deliberate Self-Harm to a medium-sized District General Hospital were managed with regard to local and National Institute of Clinical Excellence (NICE) guidelines through a retrospective audit of case notes.

In addition to this we conducted a survey of 80 clinical staff working in the Paediatric Department, the Emergency Department, the Medical Assessment Unit and other clinical support teams to identify training received and how competent and comfortable staff felt dealing with children who presented with DSH.

Results

A total of 127 episodes of DSH in 18s and under were identified in a fifteen month period.

Compliance with the local guidleines and NICE guidance ranged between 9% and 100% for various items. Looked after Children and Multiple attenders made up the majority of attendances.

Five children were responsible for 48% of all Deliberate Self-Harm presentations to this Emergency Department (ED).

Fifteen children had 3 or more presentations. One had 11 attendances.

24% of DSH attendances were by children known to social services. 20% of presentations to the ED were by psychiatric inpatients at the time of the episode. 11% of attendances were for overdose with prescribed antidepressants. One patient overdosed whilst admitted and awaiting treatment for another overdose.

Two-thirds of presentations were for potentially fatal overdoses.

Paracetamol as well as antidepressant and NSAID overdose were by far the most common presenting complaints followed by lacerations.

40% of staff respondents who deal with children have received no training in how to manage DSH in children, two thirds felt they had received inadequate training. A third were were not confident in handling children presenting with DSH.

100% of staff surveyed agreed or strongly agreed they would benefit from further training.

Conclusions

There were large variances in how front-line staff assessed children medically and psychosocially. Staff feel their training could be better. There may be a link.

A formal, structured pathway needs to be considered for children presenting with DSH.

Staff training needs to be improved throughout the trust including areas where adolescents may be admitted and treated as adults.

Social Services involvement should be considered for multiple attenders.

It is essential General Practitioners prescribing anti-depressants to young people consider the risk of Deliberate Self-Harm.

#7080 : After cardiac arrest - dilemmas in a case of acute coronary syndrome by lupus vasculitis disease

Preferred format : Oral presentation

Authors:

Luciana Rotaru (1), Cristian Boeriu (2), Letitia Bojin (3), Virginia Armega (4)

1. ED - SMURD, University County Hospital, Craiova, ROMANIA
2. ED, County hospital, -, Targu Mures, ROMANIA
3. emergency department, University County Hospital, Craiova, ROMANIA
4. ED, County Hospital Craiova, -, Craiova, ROMANIA

Keywords: cardio respiratory arrest, acute coronary syndrome, CAD, systemic lupus erythematosus, anticardiolipin antibodies

Abstract :

Background. CAD as an important cause of cardio respiratory arrest and sudden death, has however, specially to young peoples, so much particular faces to confirm for early and adequate management, some of these difficult to explore or implement during cardiac arrest.

Purpose of the study was to highlight the specific practical issues related to a special coronary artery occlusion etiology, outcome impact and subsequent prevention, for a cardiac arrest case occurring at a very young age women, caused by non usual coronary artery disease in systemic vascular inflammatory disease context

Case presentation – a 29 years women with sudden, in hospital, cardio respiratory arrest (refractory VF). No significant personal or family pathological history or prodrome.

Prompt resuscitation in scene by hospital resuscitation team. Early after ROSC, echocardiography suggests akinesis zone and mitral valve vegetation suggestive for endocarditis. ECG – anteroseptal acute STEMI. Low level of LDL, NT – proBNP – 421pg/ml, creatinine level – 0,9 mg%.

The coronarography identifies a myocardial necrosis area and vascular changes suggestive for autoimmune vasculitis, no elements for coronary artery atherosclerotic plaques or spasm. Completion of imagistic (CT angiography and cardiac RMI) and laboratory tests reveal elements of confirmation of systemic lupus erythematosus disease with diffuse coronary artery vasculitis and subclinical renal determinations. Anticardiolipin antibodies founded.

In terms of prompt and vigorous resuscitation, general anesthesia maintaining and immediately air evacuation to a interventional level I cardiology center, myocardial necrosis was restricted to a small apical territory. Evolution without cerebral sequelae, acute heart failure phenomena or signs of heart failure at 4 months.

Conclusions

1. F ocusing on differentiation causes of CAD to a young women without any risk elements for coronary artery atherosclerosis was from the begining a target

2. Observing anterior mitral valve changes suggesting endocarditis has been the main reason for targeting primary interventional cardiology

3. The main therapeutic dilemma was to refrain from the initial thrombolysis during resuscitation (INR 2.2 spontaneously) even with approximately 70' delay anticipation to primary PCI

4. Lupus vasculitis disease existence generated a debate about type, therms, risks and benefits of antiplatelet agents use.

5. Immunosuppressive - corticoide therapy combination brings into question the subsequent coronary risk augmentation through the side effects of this therapy, even in conditions of vasculitis disease impact control, which, in turn, requires customizing imaging resources algorithm

6. The recurrence risk of malignant arryhythmias remains high, leading to evaluate defibrillator implantation benefits

Lerning points

Young, healthy peoples developing an ACS are strongly suspected to have special etiology of CAD, other than thrombotic

In that circumstances primary PCI strongly, early indicated

Special investigation (CT angiography, cardiac RMI), endomyocardial biopsy, nuclear study, inflammatory / immunologic tests, risk score assessment remains mandatory to direct therapy

There in unclear how antithrombotic therapy influences the late prognosis, or if thrombolysis during resuscitation (CAD with unknown etiology) influences ROSC, or survival chance

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and Rheumatism. June 2001, Vol.30(6):436–443, doi:10.1053/sarh.2001.23498

#7082 : Emergency physician knowledge of anaphylaxis in US

Preferred format : Oral presentation

Authors:

sandra schneider (1), david sklar (2), ester choo (3), lynne richardson (4)

1. , none, Irving, tx, USA
2. , none, Albequerque, NM, USA
3. , none, Providence, ri, USA
4. , none, new york, ny, USA

Keywords: anaphylaxis, knowledge

Abstract :

Anaphylaxis requires immediate treatment with epinephrine to prevent death. All physicians, but especially emergency physicians, should be able to recognize and treat patients with anaphylaxis. While guidelines suggest that all patients be discharged with self administered epinephrine, prior studies suggest that this practice is not universal in the emergency department. However these studies did not adjust for the potential that patients already had epinephrine at home. We sought to survey emergency physicians, using a representative sample of members of the American College of Emergency Physicians (ACEP), regarding their knowledge of anaphylaxis and its treatment.

Objective: to determine if emergency physicians know to discharge patients with self-administered epinephrine. In addition we assessed the specific triggers of anaphylaxis, and follow established guidelines for care of these patients.

Methods: An on-line survey was distributed to the Emergency Medicine Practice Research Network (EMPRN), a group of ACEP members who have agreed to complete surveys on a quarterly basis. EMPRN membership is representative of ACEP members by geographic area, sex and age. The survey invitation and 2 followup reminders were sent out during the survey period of 11/15-2/16. Simple descriptive statistics were used. Guidelines published by the American Academy of Allergy Asthma and Immunology (AAAAI) were used as the gold standard. These guidelines are very similar to those produced by the United Kingdom, Australia and the World Allergy Organization

Results: A total of 367 responses were received from the 1434 members. 77% were male, median age 51 years. All respondents would prescribe self-administered epinephrine at discharge, 86% glucocorticoids, 13% Beta agonists, 67% H2 blockers. All respondents recognized insects and peanuts could cause anaphylaxis, however fewer respondents correctly identified other triggers. Exercise was correctly identified by 57%, garlic by 56%, menses by 30% and spontaneous anaphylaxis by 66%. However 45% of respondents indicated steak could cause anaphylaxis. Acute anaphylaxis has not been reported (a delayed allergic type reaction has been reported in a few case studies). Only 28%% of respondents correctly identified the length of time a stable patient should be observed after treatment (4-8 hours), and 39% correctly identified the correct observation time for an initially hypotensive, unstable patient (>8 hours).

Conclusion: This study demonstrates that emergency physicians do understand the need to prescribe self-administered epinephrine on discharge. Prior studies which suggested that emergency physicians did not prescribe epinephrine may be flawed or, over time, practice has improved. However there are still important knowledge gaps for physicians who treat anaphylaxis.

#7083 : Mom, i hate the fish.

Preferred format : ePoster

Authors:

RAUL FALLOS MARTI (1), Carolina Fernández Palacios (1), Cecilia Carrasco Vidoz (1), Raquel Casero Gomez (2), Patricia Bazan Dominguez (3), Manuel Jesus Ruiz Polaina (4)

1. emergency, HOSPITAL INFANTA LEONOR, MADRID, SPAIN
2. emergency, HOSPITAL UNIVERSITARIO DE GETAFE, madrid, SPAIN
3. emergency, HOSPITAL UNIVERSITARIO DE GETAFE, MADRID, SPAIN
4. emergency, HOSPITAL SANITAS, MADRID, SPAIN

Keywords: Abdominal pain, fishbone, emergency room.

Abstract :

A 52-year-old woman with abdominal pain was admitted to the emergency room (ER). The abdominal pain started 8 hours ago, located in lower abdomen. She didn`t show nausea, vomiting or altered bowel rhythm. No fever was reported.

On physical examination, the patient has a distended abdomen without ascitic semiology, tenderness mainly in lower abdomen. No signs of peritonitis. No CVAT (Costo vertebral angle tenderness). Laboratory tests were normal except for C-reactive protein (CRP) 24.9 mg/L. Abdominal Xray was reported as normal.

Examined by Gynecology with vaginal ultrasound: annexes were normal and no free periotenal fluid was detected. She was discharged from gynecology department and referred to our ER again.

Kept under observation for 6 hours without any changes. The analytical examination remains normal except for the CRP was increasing (60.5 mg/L). Ultrasonography revealed distended gallbladder, which several pictures of cholelithiasis. No free fluid in the abdomen and pelvis. Appendix not displayed, but not indirect ultrasound signs suggestive of acute appendicitis were identified.

24 hours after the arrival of the ER, patient was reevaluated without locating changes in physical examination but continuous increase in acute phase reactants (CRP 111 mg/L). Since the physical examination and the analytics findings were not correlated, abdominal CT scan was performed. The findings were: in left hemipelvis a loop of small intestine distended with discrete mural thickening circumferential identified, hyperdense linear image of approximately 4 cm in length through the right wall and goes to the fat path extra luminal mainly by contacting another segment of the small intestine and the posterior wall of the rectum, compatible with foreign body (FB), probably fishbone.

The patient was operated infraumbilical laparotomy: bowel resection with mechanical latero-lateral anastomosis. No postoperative complications are described, being discharged from hospital a week later.

DISCUSSION

FB ingestion is usually encountered in children. It`s rare in adults, (about 1%) and is usually caused by long, sharp objects, such as toothpicks, fish bones or needles. The most of the ingested FB move through gastrointestinal tract without causing complications, especially if they get through the esophagus. Perforations are more common in segments with a closed angulation, as the pylorus, the angle of Treitz, the distal ileum and recto sigmoid junction.

Clinical presentation is usually insidious and difficult to diagnose unless occurs a complication of drilling itself as abscess formation, colorectal fistulas, colovesical and enter vascular, pseudo tumor of omentum, bacteremia and endocarditis. Patients often do not remember the history of intake fish and may take months between intake and drilling.

The utility of abdominal radiography is limited, and depends on the density of the fish bone. CT is superior to radiography and it can identify the cause, detect pathological intestinal complications area and drilling itself. The fish bones are typically displayed as images linear density calcium inside an inflammatory area. Nevertheless, there are a significant number of cases diagnosed intraoperatively.

In summary, intestinal perforations by fish bones are rare, but should be kept in mind in an adult patient admitting with a longstanding, nonspecific abdominal pain.

#7084 : Diabetic control and risk of colon cancer: a population-based cohort study

Preferred format : ePoster

Authors:

Chiou Ping Chen (1)

1. Nurse, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi County , TAIWAN

Keywords: diabetes, hyperglycaemic crisis episode, colon cancer

Abstract :

Introduction: The relationship between diabetes and colon cancer has been discussed. However, the effects of glycemic control on colon cancer have never been evaluated. We evaluate the possible relationshipo between glycemic control and colon cancer.

Methods: One million patients from National Health Insurance beneficiaries in Taiwan were sampled. There were 46,804 diabetic patients and 651,759 unexposed subjects. Among patients with diabetes, 1108 had been admitted for hyperglycemic crisis episodes and were defined as diabetes with poor control. All adult patients were followed from 1 January 2005 to 31 December 2013 to evaluate if colon cancer was diagnosed. Cox regression models were applied to compare the hazards adjusted for potential confounders.

Results: After controlling for age, gender, urbanization level, socioeconomic status, chronic liver disease, hypertension, coronary artery disease, hyperlipidemia, malignancies, smoking, chronic obstructive pulmonary disease, obesity, history of alcohol intoxication, chronic renal insufficiency, Charlson Comorbidity Index score and high-dimensional propensity score, the adjusted hazard ratio of colon cancer was 1.90 (95% confidence interval, 1.68—2.15) in patients with diabetes. In diabetic patients with poor control, the hazard ratio of colon cancer was not significant. (hazard ratio, 1.39; 95% confidence interval, 0.72—2.68)

Conclusions: This cohort study reveals a possible relationship between diabetes and colon cancer. However, poorly-controlled diabetes did not seemed to be associated with a higher risk of colon cancer

#7085 : Evaluation of age related d-dimers in determining the presence of Pulmonary Embolism and rationalising the use of CT Pulmonary Angiograms in a Brisbane Hospital.

Preferred format : ePoster

Authors:

Amit Chacko (1), Tim Haina (1)

1. Princess Alexandra Hospital, Queensland Health, Brisbane, AUSTRALIA

Keywords: D-Dimer, Pulmonary Embolism, CT Pulmonary Angiogram

Abstract :

Purpose:

The d-dimer is a breakdown product of crosslinked fibrin and occurs coincident with activation of the coagulation cascade. The d-dimer level may be elevated in the presence of a clot that embolises to the lungs causing a pulmonary embolism (PE). The d-dimer level is used in patients with a low to moderate pretest probability for PE. [1]

There is increasing evidence that in patients over 50 years of age; the steady state level of the d-dimer increases. [2] This study investigates the possibility of increasing the standard cutoff for patients over 50 years without losing the sensitivity of the d-dimer test. [3] This will reduce the need for a CT Pulmonary Angiogram (CTPA) with a resultant cost saving to the hospital; reduced exposure to ionizing radiation and the risk of contrast reactions.

Methods and Materials:

A retrospective audit of CTPAs over an eight month period was undertaken. All patients who had a CTPA to exclude a pulmonary embolism had their d-dimers reviewed. Patients who did not have a d-dimer were excluded from the review.

Age stratified D-Dimer cut offs were:

Age 0 - 49 0.243

Age 50 - 64 0.4

Age 65+ 0.45

Values were compared to the new age adjusted cut offs and CTPA results to determine if increasing the standard cut off value in patients over 50 may be possible without missing the presence of PE.

Results:

A total of eight months of data (1/1/2015 - 31/8/15) was acquired, in which 900 CTPAs were performed. 106 examinations had a d-dimer requested and these examinations were analyzed.

68 (63.6%) of the patients were over the age of 50. 8 (11.8%) patients above the age of 50 had a CTPA positive for PE.

Implementing the age-adjusted d-dimer cut-off resulted in no missed pulmonary embolisms. Of the 68 patients over 50; 35 (52.5%) patients age

adjusted d-dimers would have been negative. 22 (55%) of the 65+ age group could have also avoided radiation with the new cut-offs.

Conclusion:

This study demonstrated that one in two patients over 50 could be spared a CTPA using the age adjusted d-dimer levels. The number of scans avoided could have saved $17850 in just eight months. [4] The radiation burden in this study that could have been avoided combined to a 105 years of background radiation (245msV). [5] In view of these results, a prospective multicenter study has been commenced to validate these findings.

#7086 : Metformin and Risk of Pancreatic Cancer in Diabetic Patients: A Population-based Cohort Study

Preferred format : ePoster

Authors:

Shu Ping Chou (1)

1. Nurse, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi County , TAIWAN

Keywords: metformin, pancreatic cancer, diabetes

Abstract :

Background: It is known that metformin has been found to have survival benefits on patients with pancreatic cancer. However, the reports regarding risk of pancreatic cancer in metformin users are conflicting.

Objectives: We investigated the incidences of pancreatic cancer among patients with diabetes prescribed with metformin to evaluate if there is lower risk.

Methods: We utilized a sampled National Health Insurance (NHI) claims data containing one million beneficiaries. We followed all adults with diabetes from January 1, 2005 till December 31, 2013 to see if they had diagnosed with pancreatic cancer. We further identify patients prescribed with metformin and compared their risk of pancreatic cancer with those who had never taken metformin. Metformin use was treated as a time-dependent variable. The Cox regression model was applied to compare the adjusted hazards for potential confounders.

Results: There are 46973 diabetic patients without pancreatic cancer before January 1, 2005. We identified 32024 (68.2%) patients prescribed with metformin and 14949 (31.8%) without. After controlling for age, gender, urbanization level, socioeconomic status, chronic liver disease, hypertension, coronary artery disease, hyperlipidemia, malignancies, smoking, chronic obstructive pulmonary disease, obesity, history of alcohol intoxication, chronic renal insufficiency, biliary tract disease, chronic pancreatitis and Charlson Comorbidity Index score, the adjusted hazard ratio of pancreatic cancer was 1.003 (95% confidence interval, 0.57—1.78) in patients with metformin use.

Conclusions: Metformin prescription did not seem to be associated with lower risk of pancreatic cancer in patients with diabetes.

#7088 : "Yound patient with right sided blindness: a case report"

Preferred format : Oral presentation

Authors:

Mahdi Alosert (1), Srikrishna Vempaty (2), Dan Ghiurluc (1)

1. Accident and Emergency, Northwick Park Hospital NHS Trust, London, UK
2. Consultant maxillofacial , London Northwest Hospitals, London, UK

Keywords: Periorbital swelling, Orbital compartment syndrome, Orbital USS.

Abstract :

"Young patient with right sided blindness: a case report"

Authors: [1] Dr. Srikrishna Vempaty, [1] Dr. Mahdi Alosert, Dr. Dan Ghiurluc,

Sources: Hospital records.

Keywords: Periorbital swelling, Orbital compartment syndrome, Orbital USS.

Method: electronic engine research using Pubmed, Embase and Medline databases.

Introduction:

Orbital Ultrasound [USS] provides quick and non-invasive evaluation of the orbit. It allows the clinician to assess structures that may not be visible with routine ophthalmic examination of the swollen eye when swelling makes direct visualisation difficult.[1]

The use of ultrasound is well established in localisation and characterisation of orbital lesions, it provides a detailed cross sectional anatomy of the entire globe with excellent topographic visualisation and real time display of the moving organ.[2]

Although this is a routine procedure, missed ocular pathology could be detrimental to a patient's vision. Gross swelling of the Peri-Orbital tissues can make examination of the eye difficult.

Case:

28-year-old male, has no significant past medical history. Attended our emergency department [ED] for right orbital swelling, redness and pain. Symptoms developed 48-hours post right maxillary sinus elective polypectomy.

After a thorough physical examination by the ED and ENT teams, a management plan has been established to treat it as post-operative peri-orbital/ orbital cellulitis for inpatient IV antibiotics. ED bedside orbital USS showed "Pre-septal and orbital collections with sonographic hyperaemia suggestive of orbital cellulitis"

He remained clinically stable, waiting having orbital CT-scan and joint-assessment by ophthalmology team. 3 hours after the 1st ED bedside-orbital-USS, he developed right-sided blindness that required a 2nd ED bedside-orbital-USS [by the same operator] which revealed "a significant retrobulbar collection in comparison with the previous orbital USS"

He was moved to the resuscitation-area where an emergency lateral-Canthatomy under local anaesthesia has been done then he was transferred to theatre for further surgical management as orbital compartment syndrome.

Discussion:

Ten patients presenting to ED with peri-orbital swelling were assessed using bedside-USS. They included patients with trauma, retrobulbar haemorrhage and Peri-Orbital cellulitis. Two patients were diagnosed with retrobulbar pathology, one with retrobulbar haemorrhage and another with a retrobulbar collection. Post-treatment and follow up scans were used to monitor progress. The remaining patients had preseptal cellulitis and orbital floor fractures. These motion scans were recorded and analysed.

Conclusion:

Assessment and diagnosis of orbital pathology is both clinical and radiological. Acute retrobulbar pathology may not allow the luxury of time to organise computed tomography. This non-invasive procedure could be performed by ED doctors and frontline maxillofacial doctors following adequate training. Bedside-Orbital-USS is helpful in detecting and addressing ocular pathology. Use of ultrasound as an immediate investigation in the ED will help delineate and rationalise the treatment planning.

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2 Nagaraju RM, Gurushankar G, Bhimarao, Kadakola B. Efficacy of High Frequency Ultrasound in Localization and Characterization of Orbital Lesions. Journal of Clinical and Diagnostic Research : JCDR. 2015; 9(9):TC01-TC06.

#7089 : Increased Risk of Ischemic Stroke in Patients with Venous Thromboembolism: A Nationwide Cohort Study

Preferred format : ePoster

Authors:

Shih-Kai Lan (1)

1. attending physician,, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi County , TAIWAN

Keywords: ischemic stroke, venous thromboembolism

Abstract :

Background: Conflicting results have been obtained by studies attempting to assess the risks of ischemic stroke in patients with venous thromboembolism, while the long-term risk of stroke in survivors of venous thromboembolism remains unexplored.

Objective: We evaluated whether the risk of ischemic stroke in patients hospitalized with venous thromboembolism is higher when compared to the general population.

Methods: One million patients from National Health Insurance beneficiaries in Taiwan were sampled. There were 2,145 patients who had been hospitalized with diagnosis of venous thromboembolism and 727,607 unexposed subjects. All adult patients were followed from 1 January 2005 to 31 December 2013 to evaluate if ischemic stroke was diagnosed. Cox regression models were applied to compare the hazards adjusted for potential confounders.

Results: After controlling for age, gender, urbanization level, socioeconomic status, diabetes, hypertension, coronary artery disease, hyperlipidemia, history of alcohol intoxication, malignancies, congestive heart failure, atrial fibrillation, smoking, peripheral artery disease and Charlson Comorbidity Index, the adjusted hazard ratio of ischemic stroke was significantly increased in patients with venous thromboembolism (2.47; 95% CI, 2.16–2.83). A subgroup analysis based on patients who survived longer than 12 months in the cohort also revealed higher hazard ratio in the patients with venous thromboembolism. (1.32; 95% CI, 1.05–1.66).

Conclusion: The possible risk of ischemic stroke is significantly higher in patients hospitalized with venous thromboembolism than in the general population.

#7090 : Increased risk of psychiatric diseases in patients with mild traumatic brain injury: a nationwide cohort study

Preferred format : ePoster

Authors:

Yung-Cheng Su (1)

1. attending physician,, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan, Chiayi, TAIWAN

Keywords: psychiatric diseases; traumatic brain injury

Abstract :

Background: It is known that psychiatric disorders after traumatic brain injury are frequent. However, the relationship between mild traumatic brain injury and psychiatric diseases has never been established. We conducted a study of patients with mild traumatic brain injury to evaluate if they had a higher risk of psychiatric diseases compared with the general population.

Methods: We utilized a sampled National Health Insurance claims database containing one million beneficiaries. We followed all beneficiaries from January 1, 2005 to December 31, 2013 to determine if they were diagnosed with psychiatric diseases. The definitions of psychiatric diseases in our study are schizophrenia, bipolar disorders and major depression. We further identified patients with mild traumatic brain injury and compared their risk of psychiatric diseases with the general population.

Results: We identified 76,991 patients with mild traumatic brain injury and 881,511 patients without mild traumatic brain injury. After controlling for age, gender, urbanization level, socioeconomic status, liver cirrhosis, chronic obstructive pulmonary disease, diabetes, hypertension, coronary artery disease, hyperlipidemia, history of alcohol intoxication, malignancies, smoking, obesity, chronic renal insufficiency and Charlson Comorbidity Index score, the adjusted hazard ratio for psychiatric diseases was 1.46 (95% confidence interval, 1.29—1.64).

Conclusion: Mild traumatic brain injury may be associated with diagnoses of psychiatric diseases.

#7091 : Appropriate use of CT Pulmonary Angiography at a Brisbane Hospital - An analysis of ordering D-Dimers in the Emergency Department and the potential for improvement.

Preferred format : ePoster

Authors:

Amit Chacko (1), Carl Dux (1)

1. Princess Alexandra Hospital, Queensland Health, Brisbane, AUSTRALIA

Keywords: CT Pulmonary Angiography, D-Dimers, Healthcare safety and quality

Abstract :

Purpose:

The symptoms and signs of a pulmonary embolism (PE) are extremely varied and thus a clinical diagnosis of PE can be unreliable. A robust way to stratify a patient's risk of PE is to use one of the validated clinical decision tools such as the Wells score. [1] Using these tools, a patient can be stratified into a low, moderate or high pretest probability of PE. The addition of a d-dimer test provides a pathway to determine if a patient requires imaging to exclude a PE. [2]

The d-dimer is a breakdown product of crosslinked fibrin and occurs coincident with activation of the coagulation cascade. The d-dimer level may be elevated in the presence of a clot that embolises to the lungs causing a pulmonary embolism (PE). The d-dimer level should be used in patients with a low to moderate pretest probability for PE. [3]

Methods and Materials:

A retrospective audit was performed of patients who underwent CT Pulmonary Angiography (CTPA) for suspected PE from the emergency department in January 2016. IMPAX search parameters:

Study Dates = 01/01/2016-01/03/2016.

Study Description = "CT Pulm"

Request = ED Clinician and/or location ED.

Using these studies a more detailed review of the available documentation including d-dimer result, a recent chest x-ray, vital signs and clinical history were used to produce a retrospective Wells PE probability score.

Results:

The first 100 CTPAs performed were analyzed. 13% of the patients had a positive CTPA for PE. 98% of patients were of low to moderate pretest probability for PE. 15% of these patients had a d-dimer requested prior. 12 (92%) of the patients who had a confirmed PE were of low or moderate pretest probability. It was noted, one patient with low pretest probability of PE, who had a negative d-dimer, still continued to have a CTPA which was also negative.

Conclusion:

The positive CTPA rate for PE was 13% - less than the rate recommended by the Royal College of Radiologists of 15.4-37.4%. [4] Only 15% of the low and moderate pretest probability patients had a d-dimer requested. If the d-dimer test was utilized appropriately, it could have conceivably avoided

up to 71% of the CTPAs. . Education sessions and emphasis on the diagnostic imaging pathway would save cost, reduce exposure of patients to ionizing radiation, the risk of contrast complications and would improve patient turn over in the emergency department.

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#7092 : 10-point plan to increase patient safety in A&E departments

Preferred format : ePoster

Authors:

Bernhard Flasch (1)

1. Emergency Department, KH Agatharied, Hausham, GERMANY

Keywords: patient safety, Emergeny Department, quality, geriatric patients,

Abstract :

10-point plan to increase **patient safety** in A&E departments, particularly for **geriatric patients** - directly integrated SOPs and other procedures for each patient.

Agatharied Hospital, in Germany, has significantly improved A&E patient safety by successfully implementing the 10-point plan. The hospital's primary care unit deals with 27,000 patients per year, with the largest age group being 70 to 79 year olds. The review and optimisation of processes and the implementation of supporting software using the 10 point plan, have resulted in improved patient safety, including areas such as the timely detection of a heart attacks to early identification of geriatric patients.
The measures taken related to both structural and technical and changes. The measures were developed in collaboration with the company ClinPath, and the SOPs and other procedures were integrated with the new software ERPath (ClinPath's A&E Patient-management Software). The 10 points were directly integrated and implemented in the software's pathway solution, based on patient-oriented diagnosis of symptoms and treatment pathways. The system is now deeply integrated into the A&E department's workflow processes and the hospital's IT infrastructure, including API's to relevant systems.
The following 10 points were implemented:
1.) Issue: Undetected levels of treatment urgency
2.) Issue: Insufficient patient documentation
3.) Issue: Forgotten treatment steps or unknown side diagnosis
4.) Issue: Lost or forgotten patients in case of overload
5.) Issue: Uncertainty in the on-boarding of new employees
6.) Issue: Needs of elderly patients are missed under stress
7.) Issue: Medication errors due to misinterpretation of handwritten documentation
8.) Issue: Lack of use of SOPs/guidelines and uncertainty about the up-to-dateness of these
9.) Issue: Mortality and morbidity planning and management - lack of case discussion
10.) Issue: Resource scarcity during unpredictable peak loads

#7093 : Increased risk of pyogenic liver abscess among patients who receive upper gastrointestinal endoscopies within 90 days: a nationwide cohort study

Preferred format : ePoster

Authors:

Ming-Jen Tsai (1), Chin-Li Lu (2), Ying C. Huang (1), Solomon Chih-Cheng Chen (3)

1. Department of Emergency Medicine, Ditmanson Medical Foundation Chia-Yi Christian Hospital, Chiayi, TAIWAN
2. Department of Public Health, College of Medicine, National Cheng-Kung University, Tainan, TAIWAN
3. Department of Medical Research, Ditmanson Medical Foundation Chia-Yi Christian Hospital, Chiayi, TAIWAN

Keywords: pyogenic liver abscess, gastrointestinal endoscopy

Abstract :

Background: Pyogenic liver abscess (PLA) is a potential lethal disease with known pathogeneses including ascending biliary tract infection (BTI) and hematologic bacterial spreading from portal systems or systemic circulation. Gastrointestinal (GI) endoscopies are commonly performed procedures with complications of mucosa trauma, local infection and even bacteremia. There has been no population-based large-scale study on the relationship between gastrointestinal (GI) endoscopies and subsequent pyogenic liver abscess (PLA).

Objective: The aim of this study was to investigate the risk of PLA following recent GI endoscopies.

Methods: Using Taiwan National Health Insurance Research Database, 2,135 patients with first diagnosis of PLA were identified from 1998 to 2011 (International Classification of Disease, 9th Revision, Clinical Modification, code 572.0). 10,675 patients without PLA matched by age and sex were selected from the same database as reference controls using incidence density sampling method. We identified and compared the known or possible risk factors for PLA and GI endoscopies performed during the recent 90 days before the index date (the diagnosis date of PLA) between the two cohorts.

Results: Patients with history of diabetes [adjusted odds ratio (aOR), 2.65; 95% confidence interval (CI), 2.09-3.36], end-stage renal disease (aOR, 2.35; 95%CI, 1.50-3.68), BTI (aOR, 7.03; 95%CI, 5.30-9.31), liver cirrhosis (aOR, 3.20; 95%CI, 2.30-4.44), appendicitis (aOR, 5.01; 95%CI, 1.80-13.95) and diverticulitis (aOR, 3.95; 95%CI, 1.44-10.79) were significantly associated with the risk of PLA. After adjusting the above risk factors, and the frequency of outpatient department visits and abdominal ultrasound during the recent 90 days before the index date, upper GI endoscopy (aOR, 2.89; 95%CI, 2.16-3.85) but not lower GI endoscopy (aOR, 1.05; 95%CI, 0.61-1.81) was significantly associated with PLA.

Conclusion: Patients who received upper GI endoscopy during the recent 90 days were associated with an increased risk of PLA compared to patients without receiving upper GI endoscopy.

#7094 : CPR RsQ Assist compared with Hands-only CPR in manikin model

Preferred format : Oral presentation

Authors:

Chaiyaporn Yuksen (1)

1. , Ramathobodi hospital , Bangkok, THAILAND

Keywords: hands-only chest compression, CPR RsQ Assist device

Abstract :

Background : Chest compression quality is a determinant of survival from sudden cardiac arrest. The CPR RsQ Assist is a new cardiopulmonary resuscitation device for hand-only chest compression.The aim of this study is to compate the CPR RsQ Assist with the standard hand-only compression in term of chest compression quality in manikin model.

method : 80 participants were included from medical student, emergency resident, nurse and paramedic in Ramathibodi hospital. Each participants were performed maximum 4 minutes hand-only compression with or without the CPR RsQ Assist device.During chest compression, quality parameters from manikin were recorded: compression rate, depth and incorrect hand position.

Result : Time to stop chest compression was significantly increased in CPR RsQ Assist device user compared with standard hand-only compression(222.93±36.53 VS 179.67±50.81 seconds; P < 0.001). The mean compression depth was not statistically significant different between standard compression with CPR RsQ Assist compression (56.42±6.42 VS 54.25±5.32; P=0.052). At the first and second minutes, compression rate was higher in standard compression (133.21±15.95 VS 108±9.45; P< 0.001 and 127.41±27.77 VS 108.5±9.93; P<0.001). No statistically significant different in percent of too shallow compression and incorrect hand position.

Conclusion : CPR RsQ Assist can help to reduce the fatique of rescuers to chest compression.The quality of the compression is similar to manual chest compression.

#7095 : Use of “urgent” Electroencephalography in the ED: a retrospective study

Preferred format : ePoster

Authors:

Hakim Slimani (1), Pierrick Le Borgne (1), Amish Seeruttun (1), Charles-Eric Lavoignet (1), Céline Renfer (1), Laura Dascalu (1), Philippe Kauffmann (1), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE

Keywords: EEG, Status epilepticus

Abstract :

Introduction: Electroencephalography (EEG) has a special place in the further investigations to host emergency department (ED). Although, it has been suggested that the use "emergency" EEG was abusive and that most applications could be remotly programmed, several studies have highlighted the significant contribution diagnostic and therapeutic impact of this exam.

Methods: We present here a retrospective and monocentric study over a six month period (01-07/2014). We analyzed all the EEG realized in ED taking into account the clinical parameters but also pattern and the relevance of the request. The main objective of this work was to evaluate the use of EEG in an urban ED.

Results: We collected 343 patients for statistical analysis. The sex ratio was 1.15. The average age of patients was 63+/-12 years. 20% of patients had a history of epilepsy. Indications were varied: 23% of focal neurological signs, 22% for generalized seizures, 19% for impaired alertness or behavior, 18% and 15% for confusion or discomfort. Ultimately, 33% (95% CI: [28-38%]) EEG objectified an epileptic syndrome, 11% diffuse slowing and only 2% a status epilepticus. 54% (95% CI: [49-59%]) of the EEG performed were normal.

Discussion: The contribution of the EEG in the diagnosis of transient focal deficits or made be noted, in fact 46% were abnormal and suggestive of brain damage (vascular 65%). In confusional syndrome, EEG has its own place, in fact 35% of EEG was pathological in our series. In front of a simple first crisis, the EEG is not recommended in the ED. The French Society of Neurology recommends performing the distance of the episode. In our study, only 30% of EEG realized in the ED for a first seizure were pathological. Regarding discomfort, the contribution of the EEG (91% normal) has been assessed as very low due to the lack of specificity of objectified anomalies.

Conclusion: Although indications from the get an "emergency" EEG are clearly established in the guidelines, its use in ED remains to be clarified. Thus, more than half of the requests made by our department are considered inappropriate and could be carried out offline. Non-invasive, inexpensive and correct accessibility, the EEG still remains a valuable tool for emergency physicians.

#7098 : Acute myocardial infarction related Duchenne disease. How usseful are STEMI guideline?

Preferred format : Oral presentation

Authors:

Luciana Rotaru (1), Cristian Boeriu (2), Letitia Bojin (3), Virginia Armega (4)

1. ED - SMURD, University County Hospital, Craiova, ROMANIA
2. ED, County hospital, -, Targu Mures, ROMANIA
3. emergency department, University County Hospital, Craiova, ROMANIA
4. ED, County Hospital Craiova, -, Craiova, ROMANIA

Keywords: Muscular dystrophy, Acute coronary syndrome, Cardiomyopathy, CMR, Cardiac events, Biomarkers, Prognosis, LGE

Abstract :

Background. Cardiac impairment and events are common to muscular dystrophy (Duchenne) patient, left ventricular remodeling and dilatation, heart failure, arrhythmias, but vascular disease in cardiac damage determinism is not a leading cause.

The aim of the paper are, firstly, to present an exceptional rare event in DMD – acute myocardial infarction, with atypical presentation in context and related diagnostic and therapeutic strategies implemented.

The second intention are to analyze how useful are STEMI guideline for pediatric patient with particular disease causing this event

Finally, we targeted obtaining the best explanation of the phenomenon determinism, how to differentiate aspects of myocardial damages and interpret clinical and paraclinical findigs.

Case presentation. We are presenting a 11 years old boy case with confirmed muscular dystrophy Duchenne, no history of cardiac events, moderate mental retardation, with beta – blockers and corticosteroids treatment, addressed in ED University County Hospital Craiova for upper abdominal pain and vomiting from 8h.

ECG -typical STEMI changes - postero inferior MI, minor RBB.

Troponin T initial level – 2000ng/ml, increasing to 17000 – 30000 ng/ml, decreasing later

NT – pro BNP – 1585pg/ml

Echocardiography –basal septum, posterior and inferior wall hypokinesis, reconnected after 3 days

Emergency coronarography - coronary artery with normal flow, no obstruction, no AMI confirmed

LVEF – under 35%

RMI - multiple cicatricial zones, specific DMD aspect cardiomyopathy

As therapeutic decision – with no guideline recommendation about trombolytic therapy regarding pediatric patient, primary PCI performed after immediate air evacuation to a reference pediatric cardiac center, under heparine subcutaneous administration.

ACE inhibitors (lisinopril) added to treatment

A double dosage of corticosteroids decided for medium period of time

Taking into account acute heart failure – beta blockers withdrawal

Conclusions

Some hypothesis where taken under consideration:

Accelerated apoptosis associate to maldistribution due to cardiomyopathy and decreased LVEF– the most possible hypothesis, well sustained by DMD stage of evolution, age of patient, RMI aspects

Arrhythmia event inducing hipodyastolic insufficiency – not documented

Long term corticosteroids therapy, collateral effects on vessels – not excluded as associate factor

Vasculitis - no founding inflammatory elements or coronarography evidences

Lerning points

Very rarely an acute myocardial infarction cited as a cardiac event related DMD. Evan when ACS confirmed, highly probability it that is not a coronary artery disease involved but, apoptosis events are commonly unpainfull

Cardiomyopathy, ubiquitary in DMD and associate with myocardial fibrosis, are not usually related to CAD

In that circumstances primary PCI strongly indicated

Special investigation (CT angiography, cardiac RMI, eventually Myocardial Late Gadolinium Enhancement MRI), inflammatory tests needed

No any arrhythmic events in this context.

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#7101 : Intraosseously administered antibiotics in experimental septic shock.

Preferred format : Oral presentation

Authors:

Gunnar Strandberg (1), Anders Larsson (2), Miklós Lipcsey (1), Joel Michalek (3), Mats Eriksson (1)

1. Dept. Anaesth. & Crit Care, Uppsala University Hospital, Uppsala, SWEDEN
2. Dept. Clin. Chemistry, Uppsala University Hospital, Uppsala, SWEDEN
3. Dept. Epidemiol. & Biostatistics, University of Texas Health Science Center, San Antonio, TX, USA

Keywords: Intraosseous, antibiotic, shock, sepsis, emergency

Abstract :

Background:

Intraosseous (IO) access is proven useful when vascular access is difficult to achieve. IO options apart from fluid administration are drug delivery, blood sampling, blood transfusion, injection of contrast dye as well as induction of hypothermia for cerebral protection after cardiac arrest and resuscitation.

However, it is not known whether antibiotics administered IO reach sufficient plasma levels during shock.

Thus, we designed an experiment in order to compare the plasma levels of two antibiotics commonly used in severe infections, i.e. gentamicin and cefotaxime, during experimental septic shock.

Animals and Methods:

Eight apparently healthy pigs were anesthetized. Arterial, central venous and pulmonary arterial catheters were inserted. An EZ-IO® (Teleflex Medical Europe, Athlone, Ireland) was introduced into the proximal tibia. The Animal Ethics Committee of Uppsala University, Sweden approved the experiment.

An infusion of endotoxin at 4 microg/kg/h was started to induce experimental septic shock. 75 mg/kg of cefotaxime and 7 mg/kg of gentamicin were randomly administered intravenously (IV) or IO at the onset of endotoxemic shock. Cefotaxime in plasma was determined by reversed-phase high-pressure liquid chromatography separation coupled to mass spectrometry. Gentamicin was analyzed on an Architect Ci8200 analyzer.

Venous samples were taken at 5, 15, 30, 60, 120 and 180 minutes from the pulmonary artery catheter.

Area under the curve (AUC; mg/h/L) was determined and the confidence interval for the ratio of means was computed. Values are given as median (range).

Results:

The endotoxin infusion induced expressed circulatory derangements. Both mean arterial pressure (MAP) and cardiac index were reduced, whereas mean pulmonary arterial pressure (MPAP) increased. Due to the reduced cardiac performance and increased right-sided filling pressure, seven out of the eight pigs received norepinephrine, which was administered at the investigators discretion, in order to keep MAP > 60 mm Hg and/or MAP > MPAP.

At 5 minutes after the IV and IO injections of cefotaxime, the plasma concentrations were 183 mg/mL (161 – 201) and 200 mg/mL (135 – 260), respectively. The corresponding values for gentamicin injected IV was 29.2 mg/mL (27.5 – 34.8) and when administered IO 34 mg/mL (28.8 – 38.2).

AUC for cefotaxime administered IV was 116.5 + 11.1 and when given IO it was 108.1 + 19.5. The kinetics of elimination for both antibiotics were similar regardless of injection site.

Conclusion:

Cefotaxime and gentamicin are commonly used in severe infections e.g. meningitis or septicemia. In septic shock, expressed circulatory derangement, is one of the clinical manifestations. When venous access is difficult to achieve, which may be the case in pediatric patients, especially in the pre-hospital setting, and rapid administration of antibiotics is urgent, the IO approach may be considered.

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Acta Anaesthesiol Scand. 2015 59:346-53

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#7103 : Medical history of adult septic patients in the prehospital setting: what do septic patients say?

Preferred format : Oral presentation

Authors:

Ulrika M Wallgren (1), Katarina Bohm (1), Lisa Kurland (1)

1. Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, none, Stockholm, SWEDEN

Keywords: Emergency Medical Services, Prehospital Care, Emergency Care, Sepsis

Abstract :

OBJECTIVE: To diagnose sepsis is often difficult due to non-specific presentations. Existing screening tools rely on vital parameters, which are however normal in one third of patients with serious infections. There is a need to include variables other than vital parameters to identify sepsis. Our primary aim was to explore the documented presentations of septic patients in the prehospital setting, and to identify and quantify keywords related to the patients´ medical history. A secondary aim was to compare the prevalence of keywords between subgroups of septic patients. **METHODS:** Mixed methods analysis of a sequential exploratory design, starting with a content analysis of presentations of septic patients as documented in Emergency Medical Services (EMS) records (n=80) during 2012, to identify keywords related to sepsis presentation. Second, the identified keywords were quantified among 359 septic patients during 2013. All patients were adults, admitted to Södersjukhuset and discharged with an ICD-10-code compatible with sepsis. **RESULTS:** The most common keywords related to the patients' medical history were: abnormal, or suspected abnormal temperature (64.1.%), pain (38.4%), acute altered mental status (38.2%), weakness of the legs (35.1%), risk factors for sepsis (30.6%), breathing difficulties (30.4%), loss of energy (26.2%) and gastrointestinal symptoms (24.0%). Presentations differed between age categories, survivors and deceased and between patients with severe and non-severe sepsis.
CONCLUSIONS: Keywords related to the patients' medical history recur in EMS records of septic patients in the prehospital setting. This information is not included in current sepsis screening tools but may be used to increase the identification of sepsis.

#7104 : Evaluation of a management tool for fever of unknown origin in infants younger than 3 months in the Emergency Department.

Preferred format : Oral presentation

Authors:

Andy De Leeuw (1), Gerlant van Berlaer (1), Dominique Bulckaert (1), Ives Hubloue (1)

1. Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Brussels, BELGIUM

Keywords: Infants, emergency department, fever without source, guideline.

Abstract :

BACKGROUND AND PURPOSE

Management of infants younger than three months old presenting to the Emergency Department (ED) with fever of unknown origin remains a difficult challenge for clinicians. Prenatal Group B Streptococcus screening and recently developed vaccinations changed the occurrence and epidemiology of serious bacterial infections (SBI) in this population. An evidence-based guideline was developed for use in the Paediatric ED of a tertiary university hospital in Brussels.

The purpose of this study is to examine the accuracy of this guideline to detect SBI, to search for the infectious agents in this population, and to analyse physicians' compliance to the guideline.

PATIENTS AND METHODS

All infants younger than three months old who presented to the ED with fever without clinical source, between January 1, 2012 and November 15, 2013 were eligible to include. All anamnestic and clinical data, laboratory test and culture results, chest X-ray findings, treatments and clinical outcomes were obtained from digital medical records, and retrospectively analysed.

RESULTS

From 31713 paediatric patients who presented to the Paediatric ED over 23 months' time, 1592 (5%) were under three months old, of whom 287 (18%) had fever of unknown origin. Median age was 42 days (range 6–90 days), 159 were boys (55%), and 16 (5.5%) had a history of prematurity.

Diagnostic screening categorised 143 infants (49.8%) as high-risk for SBI, of whom 26 (18%) had confirmed SBI. In 144 infants (50.2%) categorised as low-risk, no SBI was detected.

In 122/287 infants (42%), a microbiological source was found: 96/287 (33%) had a viral infection, 16/287 (5.5%) had a urinary tract infection (UTI), and 10/287 (3.5%) had a bacterial pneumonia. In the majority of infants (n=165/287; 58%), no pathogen was detected. The most frequently detected pathogens were Escherichia coli (mostly in urine) and Enterovirus (mostly in cerebrospinal fluid).

Most infants (n=279/287; 97%) were admitted to the hospital, of 8 patients (3%) parents refused admittance. In 62% (n=178/287), empiric antibiotherapy was initiated. In the high-risk group, all infants were treated; in the low-risk group 35/144 (24%) infants received intravenous antibiotics. In 11 cases (3.8%) acyclovir was added.

One infant died following septic shock after peritonitis due to bowel perforation.

Many non-adherences to the guideline were detected: in 14 infants (5%) no blood culture was obtained, only 35/287 urine samples (12%) were obtained in a sterile collection, 19% (n=56) did not undergo lumbar punction, and 3% (n=8) did not have a chest X-ray. Most infants (n=185/287 or 64%) were not screened for Bordetella pertussis. In the low-risk group, 20% (n=35/178) received antibiotics although the guideline recommended differently.

CONCLUSIONS

This study indicates that in 9% of infants presenting to the ED with fever without source an SBI was detected. Most common infections were of viral origin, most common SBI were UTI. Adding standard screening for Bordetella pertussis to the guideline is recommended. Given these results, the compliance of physicians to the evidence-based guideline should be improved, and attention is needed regarding sterile urine collection and antibiotic policy in the low-risk group.

#7106 : Diagnostic value of presepsin for sepsis in the new definitions

Preferred format : ePoster

Authors:

Tomonori Yamamoto (1), Yamamoto Hiromasa (2), Tetsuro Nishimura Tetsuro (2), Shinyama Naoki (2), Noda Tomohiro (2), Shinichiro Kaga (2), Takahumi Terada (2), Kenichiro Uchida (2), Takasei Morioka (2), Hiroharu Takesada (2), Maiko Esaki (2), Hoshi Himura (2), Yasumitsu Mizobata (2)

1. , none, Shijyonawate, JAPAN
2. , none, Osaka, JAPAN

Keywords: sepsis, new definitions, presepsin

Abstract :

Background: The third international consensus presented the new definitions for sepsis and septic shock, but there is little discussion about exactly how to determine whether infection is suspected. Presepsin is currently under investigation in clinical practice as a biomarker of bacterial infections.

Objective: The aim of this study was to investigate the diagnostic value of presepsin compared to other diagnostic makers of sepsis in the new definitions.

Methods: Ninety one patients with SOFA score of 2 or more were included. We divided patients into three groups based on their clinical features: non-sepsis group (n=29), sepsis group (n=29) and septic shock group (n=33). Blood samples for biomarker measurements of presepsin, procalcitonin (PCT), C reactive protein (CRP) and white blood cells (WBC) were collected at days 1, 3 and 7 after clinical onset of a SOFA score of 2 or more.

Results: Both PCT and presepsin concentrations were significantly higher in both sepsis and septic shock groups compared to non-sepsis group [PCT (median, ng/mL): 0.6 vs. 1.4 vs. 11.0□p<0.001; presepsin (median, pg/mL): 349 vs. 817 vs. 1217□p<0.001; non-sepsis vs. sepsis vs. septic shock group]. Since the area under the curves (AUC) of the presepsin to distinguish sepsis including septic shock or non-sepsis at day1 was 0.88, and significantly higher than that of PCT, CRP, or WBC, indicating that presepsin levels have valuable capacity to diagnose of sepsis or non-sepsis in the early phase. The cutoff value for presepsin was 508 pg/ml with the 87% sensitivity and 86% specificity. On the other hand, the cutoff value for PCT was 1.5 ng/ml, corresponding to 68% sensitivity and 86% specificity. In addition, the logistic regression analysis revealed that high presepsin levels (≥500 pg/ml) were significantly associated with diagnosis of sepsis (odds ratio: 68.89, 95% CI: 12.05- 393.98, p<0.001).

Conclusion: Presepsin is useful in diagnosis of whether sepsis or non-sepsis patients with 2 or more than SOFA points.

#7110 : Infectious spondylitis as a differential diagnosis in acute low back pain

Preferred format : ePoster

Authors:

David Núñez Castillo (1), María Eugenia Reyes García (2), José Ignacio Valero Roldán (2)

1. Emergency department, Malaga Regional University Hospital, Malaga, SPAIN
2. Emergency department, Malaga Regional University Hospital, Málaga, SPAIN

Keywords: spondylitis, osteoarticular, back pain

Abstract :

Case Report:

Patient 70 years old who has back pain with several days of evolution accompanied by deterioration of general condition in the last few hours.
He has consulted in his health centre and emergency unit for this reason where he has been diagnosed with low back pain and prescribed usual analgesic treatment and benzodiazepines. Given the persistence of the symptoms finally it is decided to treat him with short course of corticosteroids.
Despite the different treatments, the patient complained of an increase of the pain and in the last hours a further deterioration of general condition and cognitive level.. They deny the presence of another clinic condition.

Personal history:
No known alergies to drugs. Morbid obesity. Limited mobility. Bronchial asthma. Hashimoto's thyroiditis. Anxious-depressive syndrome. Fecal and urinary incontinence.

Physical examination:

Generally poor condition. Poorly perfused. Dry skin and mucous membranes. Morbid obesity. Unresponsive to stimulation. Glasgow 3.
ACR: weak but rhythmic tones, no murmurs or extrasistoles appreciated. Breathing sounds conserved without pathologic sound except mild hypoventilation in bases.
Abdomen globular, not tender to palpation without peritoneal irritation Preserved peristalsis. Distal neurovascular unchanged.

Investigations:

In analytical highlights platelet 75000, 23700 leukocytosis with neutrophilia, PCR 456, 3.34 creatinine, altered liver profile.

Rx thorax and abdomen without obvious alterations so they decided to perform an abdominal CT which shows degenerative changes in dorsal-lumbar spine with decreased height and irregularity of D12 disc with an increased soft tissue and associated gas bubbles inside, diagnosis of spondylitis.

Patient is admitted to the ICU. Antibiotic therapy and resuscitative measures despite which the patient has just presented multiorgan failure and died.

Conclusions: Although the osteoarticular pathology is common in the elderly, we must be cautious in situations that do not show good performance and influence possible differential diagnoses.

#7112 : Rash as a manifestation of secondary LUES

Preferred format : ePoster

Authors:

Manuel Aguilar Casas (1), María Victoria Alarcón Morales (1), José Ignacio Valero Roldán (1)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN

Keywords: Syphilis, rash, Benzathine Penicillin

Abstract :

Case Report

22 year old male drinker weekend, stable partner.He came to the emergency box generalized rash for 4 days with musculoskeletal pain, fatigue, feeling feverish not have measurable and some vomiting at night; concerned that your partner has similar symptoms

Browse:

Upon arrival to the emergency department presents a blood pressure 110/63. Heart rate 76 beats per minute (bpm) and temperature 37.5 ° C.

The skin presents small lesions, large raised without vesicles, erythematous, pruritic spread widely, striking vasculitic lesions on palms and soles.

Investigations:

Chest x-ray: No pictures of pneumonic infiltrates are seen.

Blood test: 13.92 leukocytes with 75% neutrophils, creatinine 0.79, normal liver profile and PCR 56

Evolution:

The case was discussed with the attending physician for review at outpatient clinics of infectious diseases, analytical control is requested with liver maracadores and HIV and Syphilis serology and subject to revision in consultation and treatment Rickttsia empirically with doxycycline dose is established 100 mg every 12 hours

In this analytical 1/64 RPR positive, total antibody positive Syphilis, Syphilis Elisa IgM positive, negative rest appear.

Definitive treatment is started with Benzathine Penicillin 2.4 mill units a week for three weeks.

Conclusions:

Think of sexually transmitted infections in febrile rash in susceptible people risk sex

#7113 : Bilateral pneumoperitoneum in patient with vomiting

Preferred format : ePoster

Authors:

Manuel Aguilar Casas (1), María Victoria Alarcón Morales (1), José Ignacio Valero Roldán (1)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN

Keywords: bilateral pneumoperitoneum, pyloric perforation, stomach ulcer

Abstract :

Case Report:

50 year old male, smoker 1.5paquetes / day, benign prostatic hypertrophy

The patient comes to the emergency department with vomiting for two days of evolution, has barely tolerated referred liquids and abdominal discomfort right upper quadrant and right flank,

Exploration / Development

Upon arrival to the emergency department presents a blood pressure 125/63. Heart rate 95 beats per minute (bpm) and temperature 36.5 ° C.

Signs of dehydration in mucosal disease strikes, skin pallor, abdominal examination to tenderness in abdomen RH signed Murphy + and voluntary muscular defense; When thinking about possible disease of the bile duct or kidney disease, blood test request, urine, abdominal radiography and peripherally administering channeled Pantoprazole + Metamizol IV.

After 40 minutes of arrival, Nursing warns us for worsening of the patient, which is rescanned and presents an abdominal palpation with widespread pain, belly "on board" with signs of peritoneal irritation; he moved to radiology and abdominal radiography in which dilated small bowel loops and absence of distal gas and chest radiography in principle is performed in supine for patient comfort in which no pathological images are seen seen is performed, but in the diagnostic impression drilling is performed seated chest, appreciating imgen of "bilateral pneumoperitoneum."

It contacts the service of Digestive Surgery and treatment is initiated with antibiotics (piperacillin / tazobactam 4 mg).

Then they proceed to surgery and they appreciate a sharp stomach ulcer with pyloric perforation 3 cm long axis and chemical peritonitis with involvement of the 4 quadrants

Investigations:

Chest x-ray: No pictures of pneumonic infiltrates are seen.

Blood test: 13.92 leukocytes with 75% neutrophils, creatinine 0.79, normal liver profile and PCR 56

Evolution:

After surgery, the patient is admitted to plant antibiotics Surgery

Conclusions:

It is important to the successful completion of certain diagnostic tests in suspected acute abdominal pathology

#7115 : Is capnometry helpful in children with bronchiolitis?

Preferred format : Oral presentation

Authors:

Ron Jacob (1), Lea Bentur (2), Itai Shavit (3), Fahed Hakim (2), Riva Brik (1)

1. Departments of Pediatrics, Ruth Rapport Children's Hospital, Rambam Health Campus, Haifa, Israel, Haifa, ISRAEL
2. Pediatric Pulmonary Institute, Ruth Rapport Children's Hospital, Rambam Health Campus, Haifa, Israel, Haifa, ISRAEL
3. Pediatric Emergency Medicine Department, Ruth Rapport Children's Hospital, Rambam Health Campus, Haifa, Israel, Haifa, ISRAEL

Keywords: Capnometry, Bronchiolitis, EtCO2

Abstract :

Background: Acute bronchiolitis is the most frequent lower respiratory tract infection in infants. Only small subsets of patients develop severe disease resulting in hospitalization despite having no identifiable risk factors. There is still a debate as to the role of capnometry in assessing ventilation in children with acute respiratory distress, and bronchiolitis in particular.

Methods: This was a prospective, single blind cohort study in which children younger than two years presenting to the emergency department (ED) with bronchiolitis were included. Our primary outcome was the correlation between the end tidal CO2 ($EtCO_2$) and the clinical decision of hospital admission and discharge. Our secondary outcome measure was the correlation of $EtCO_2$ upon arrival to the ED and clinical measures of bronchiolitis severity. Finally, by using multivariate models, we looked for other parameters that could contribute to the prediction of illness severity.

Results: One hundred and fourteen children with bronchiolitis were evaluated. Their median $EtCO_2$ upon arrival to the ED was 34 mmHg (range 24-65 mmHg). $EtCO_2$ values upon admission or discharge were not statistically different among patients who were hospitalized and among those who were discharged from the ED. Among admitted patients, we found no correlation between capnometry readings at admission and number of oxygen desaturation days, nor with the length of hospitalization. Wang clinical respiratory severity score was found, by using multivariate models, to predict nasogastric tube need, oxygen desaturation days, and length of hospitalization.

Conclusion: Capnometry readings upon arrival to the ED did not predict hospital admission or hospital discharge eligibility. Among hospitalized patients, $EtCO_2$ did not correlate with the evaluated disease severity measures. Wang score was found to be the most consistent predictor of significant outcomes.

#7116 : Anal abscess in a patient after multiple Emergency Room assists

Preferred format : ePoster

Authors:

María del Pino Salinas Martín (1), María Eugenia Reyes García (2), Iván Villar Mena (3)

1. Emergency department, Malaga Regional University Hospital, Malaga, SPAIN
2. Emergency department, Malaga Regional University Hospital, Málaga, SPAIN
3. Emergency department, Malaga Regional University Hospital, malaga, SPAIN

Keywords: anal abcess, rectal pain, ischiorrectal

Abstract :

Case Report:

MAle Patient 80 years old with personal antecedents of atrial fibrillation, hypertension, benign prostatic hyperplasia and chronic obstructive pulmonary disease is treated with digoxin, Sintrom, doxazosin and inhalers.

He Comes to the emergency room for intense rectal pain one year of evolution that has intensified since one month that prevents the seated accompanied by fear of defecation and emission of liquid stools per day ago.

He Goes to the emergency room several times where he was diagnosed with hemorrhoids syndrome continuously with no evidence of hemorrhoids thrombosed and not relieved after multiple treatments prescribed.

Exploration

Affected by pain.

DRE with hypertonic sphincter. Ischiorectal red zone at 3 in the lithotomy position. No cracks or fistulas. Palpation endo-rectal mass, well defined, warm, fluctuating in the left posterior perianal area.

Complementary tests

Blood tests: highlights leukocytes: 14700 with neutrophilia and lymphopenia, thromboplastin time: 22%. INR: 3.2. Creatinine: 1,29. Remaining unchanged.

X-Ray: unchanged.

Pelvic CT: abscess with accumulation of purulent content of 4.7 x 1.5 cm and increasing your wall, located in the left and posterior perianal region affecting Ischiorectal left fossa and partially the ipsilateral levator ani muscle.

Diagnosis: anal abscess

Evolution:

It is discussed in General Surgery for evaluation and transfer is done at the university Regional Referral Hospital, for performing abdomino-pelvic CT scan which shows an anal abscess and testing for elective surgery is decided. We proceed to general ward with antibiotics and analgesia until the date decided.

During surgery, extraction is performed and emptying anal abscess without incident.

#7117 : Polymyositis secondary to hypothyroidism unknown

Preferred format : ePoster

Authors:

María TEresa Valle Gil (1), María Eugenia Reyes García (2), José Ignacio Valero Roldán (2)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN
2. Emergency department, Malaga Regional University Hospital, Málaga, SPAIN

Keywords: Polymyositis, hypothyroidism autoinmune, creatine phosphokinase

Abstract :

Polymyositis secondary to hypothyroidism unknown

MEDICAL HISTORY:

37 year old woman who comes to the emergency department with pain, oppression and feeling knots in upper and lower limbs that vary in intensity throughout the day from one week ago. Also refers yellowish vaginal discharge and pain since last night urination.

Medical history: allergy to acetylsalicylic acid,

No disease of interest, no regular medication

Browse:

Hemodynamically stable throughout.

Conscious, oriented and collaborative; well hydrated and perfused, normo-colored, eupneic.

Head, neck, thorax, abdomen and upper and lower limbs without alterations in exploration.

Complementary tests:

Chest radiography without significant alterations

Analytical Urine leucocituria

Analytical blood: blood count, coagulation, blood gas and chemistry, except for creatine phosphokinase 1643 U / L (normal range: 20-300 U / L), with no alterations.

Evolution ansd trealtment:

We proceed to discharge home with a diagnosis of urinary tract infection after urinalysis with evidence of leukocytes with home treatment.

Besides usual analgesic treatment regimen myopathy after conducting blood tests showing only creatine values of 1643 U / L (normal range: 20-300 U / L) and is derived Rheumatology preferentially to continue study.

In patient monitoring performed by Rheumatology, additional tests are made more and analytical values of TSH were observed: 204 mIU / L (Normal: 0.2 to 4.2 mIU / L) and free T4: 0.28 ng / dL (Normal values: 0.7 to 1.55 ng / dL) with anti-TPO anticuerpos-: 1300. She was diagnosed with Hypothyroidism autoinmuine and secondary polymyositis; establishing Levotiroxina.125 mcg treatment.

Clinical Trial: Hypothyroidism autoimmune etiology. Polymyositis.

#7118 : Presentation of a case of an intraocular straign material

Preferred format : ePoster

Authors:

Manuel Aguilar Casas (1), María Eugenia Reyes García (2), David Núñez Castillo (3)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN
2. Emergency department, Malaga Regional University Hospital, Málaga, SPAIN
3. Emergency department, Malaga Regional University Hospital, Malaga, SPAIN

Keywords: intraocular, vitreous

Abstract :

MEDICAL HISTORY:

Patient of 28 years without drug allergies and relevant medical history presented to the emergency by pain and redness of the left eye after having the feeling jump on something as he fixed a picture on the wall. The patient has no alteration in vision as regards

Assessment requested by Ophthalmology at the sight of foreign body deep after fluorescein staining associated with corneal erosion.

Browse:

Visual acuity preserved, isochoric and normoreactivas pupils. Preserved eye movements.

Erosion superior linear full-thickness corneal but sealed spontaneously.

Fundus with some bleeding rounded supratemporal area with small whitish rounded picture size adjacent suspected intraocular straign materialforeign vitreous.

After the physical examination by the specialist, CT is performed orbital

Complementary tests:

Blood tests unaltered

Electrocardiogram showed sinus rhythm at 80 bpm.

TAC orbital: Straign material in superior temporal level rounded

Clinical Trial: Intraocular straign material

Evolution and Treatment: After Ophthalmology valuation and realization of orbital TAC is reached definitive diagnosis of intraocular foreign body. Preoperative evaluation is performed, is entered in Observation for home intravenous antibiotic treatment and surgery is performed subsequently.

#7119 : Cervical cancer prevention in a family planning consultation of urban health center

Preferred format : ePoster

Authors:

Carolina Garrido CAnning (1), María Victoria Alarcón Morales (1), José Ignacio Valero Roldán (1)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN

Keywords: cervical cancer, prevention, family planning consultation

Abstract :

OBJECTIVES

Evaluate the data record in the clinical records of patients attending family planning consultation according to the integrated cervical cancer care protocol.

DESIGN

Cross-sectional retrospective

POPULATION AND SAMPLE

A total of 97 patients attending family planning consultation during 2010 in a health center, single randomly chosen were assessed. This sample size allowed us to study the main objective of the research with an accuracy of 0.09 with a confidence level of 95%

INTERVENTIONS

The variables age, record of PAI of cervical cancer registry sampling, communication record results, anamnesis, physical examination and compliance with the timing of cytology as risk factors were evaluated.

RESULTS

Of the 97 patients evaluated, 16 did not attend your appointment cytology. Of the remaining 81 the average age was 38 years. Only 5% were derived gynecology by pathological cytology. The largest deficit record occurred in variables anamnesis (not registered in 37% of cases, if 63%), physical examination (not collected in 47% of cases, if 53%). The sequential implementation of smears according to PAI was correct in 75.3% of cases.

CONCLUSIONS

Despite the decline in the incidence of cervical cancer, a deficit in medical uptake (16%), especially in people over 65 with FR, with little awareness on the part of patients still persists. The collection of data on clinical history is scarce, mainly in the anamnesis (FR) and physical examination.

If we improve the recruitment and data collection will improve the quality of the care process.

#7120 : Idiopathic thrombocytopenic purpura after onset of skin lesions in young patient

Preferred format : ePoster

Authors:

María Victoria Alarcón Morales (1), María Eugenia Reyes García (1), José Ignacio Valero Roldán (1)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN

Keywords: Idiopathic thrombocytopenic purpura, thrombocytopenia,Vascular punctate

Abstract :

MEDICAL HISTORY:

25 years old male patient without drug or interest personal medical history presented to the emergency with skin lesions on both legs of 3 days of evolution allergies. He regards the possibility of an allergic reaction.

Feeling feverish not have measurable in the last 15 days.

Subsequently the patient indicates have mild blood remains in nasal and gingival graves from the onset of symptoms. No box or catarrhal infection associated.

It has not taken any medical treatment or risk behavior lately.

Browse: Vascular punctate, pruritic lesions with negative diascopy (no pressure disappearance of lesions) affecting back and legs as well as palms and soles.

Complementary tests:

Blood analysis in the presence of platelets: 4000 IU / microliter. (Normal range: 150,000 to 450,000 IU / microliter). Rest analysis unaltered.

Blood smears without observing dysplasias or immature cells and erythroid confirms thrombocytopenia without pathology.

Evolution and Treatment:

The case is discussed with Hematology and transfer of patient referral hospital for evaluation in turn is decided.

The specialist in hematology informs the patient of hemorrhagic risk in your case (1-2%) and the patient decides to start home treatment and remain at rest relative slope house preferential appointment to continue study.

In consultation bone marrow biopsy, myelogram, cranial abdominal Ultrasound and CT are scheduled for resistance to treatment, with no evidence of changes in the results.

Analytical protein electrophoresis were performed, autoimmune markers, thyroid hormones and complete serology (HIV, HBV, HCV, CMV, EBV, ...) with negative results

We conclude with a diagnosis of idiopathic thrombocytopenic purpura

Clinical Trial: idiopathic thrombocytopenic purpura

#7121 : Dyspnea and cough secondary to Lymphoma

Preferred format : ePoster

Authors:

José Ignacio Valero Roldán (1), Iván Villar Mena (1), María Victoria Alarcón Morales (1)

1. Emergency department, Regional University Hospital of Malaga, Málaga, SPAIN

Keywords: Lymphoblastic T cell, Lymphoma, dyspnea,

Abstract :

MEDICAL HISTORY:

A 25 years old man , with no medical history of interest , except for smoking , who comes to the emergency service with cough , ribs pain , effort dyspnea ,and low-grade fever ,for a week of evolution , besides he was treated with ibuprofen and acetaminophen.

Familyhistory: 4 asthmatic brothers, motherwith C hepatitis , maternal grandmother with DM. Father´s family history is unknown.

EXPLORATION:

Acceptable general condition. Normal hydrated, paleness of skin and mucous, Straw-colored, Haggard. Non fever.

Head and neck: normal.

AC: rhythmic beat without blowing, 84 beats per minute

AP: vesicular murmur preserved, with 98% O2 saturation

Abdomen: soft, depressible, not painful lyin touching, no masses or megalies. Not inguinal nodes.

COMPLEMENTARY TESTS:

Chest X-Ray: widening mediastinum. Elevation of left hemidiaphragm.

Blood analysis: blood count, biochemistry, venous blood gas and coagulation without alterations, with PCR 14.3

The patient was admitted to internal medicine área in order to study mediastinum mass.

EVOLUTION:

During his permanence in hospital, a neck and abdomen scanner was made without findings, thorax scanner resulted with mediastinum mass that affects all the mediastinum, with anterior predominance and compressing the left main bronchus, with defect of repletion in the right lower lobar artery (acute PTE/SUBACUTE).

Multiple biopsy of anterior mediastinum mass was made, and after that patient starts with pain and tumefaction on right side, relationed with small right pneumothorax and subcutaneous emphysema

Result of the biopsy: LYMPHOBLASTIC T cell Lymphoma

Patient is under responsibility of haematology, with steroid treatment till getting G-6PD results , and then starts treatment with chemotherapy.

#7122 : Arrhythmogenic dysplasia evidenced after food poisoning

Preferred format : ePoster

Authors:

David Núñez Castillo (1), María Eugenia Reyes García (2), José Ignacio Valero Roldán (2)

1. Emergency department, Malaga Regional University Hospital, Malaga, SPAIN
2. Emergency department, Malaga Regional University Hospital, Málaga, SPAIN

Keywords: ventricular tachycardia, arrhytmogenic, palpitations

Abstract :

Case Report

Patient presenting with symptoms of vomiting and diarrhea after dinner last night. He goes on his own picture described referring to hospital and decay.
No known drug allergies. Hypertension, chronic renal insufficiency. Treatment: Olmesartan 20 mg.

Physical Exploration:

Conscious. Oriented. Feeling disease, mucocutaneous pallor, mild dehydration of mucous. Ausculatacion cardiorespiratory: rhythmic tones, 120 beats per minute, no murmurs or extratonos. Preserved vesicular murmur without superadded noise. Abdomen soft and palpable, no palpable masses or organ enlargement, no signs of peritoneal irritation. Increased peristalsis. Preserved distal pulses, no signs of deep vein thrombosis.

Additional tests

Rx thorax and abdomen without interest.
Analytical requested with gases and proceeds to channeling to start intravenous fluid and enters observation for stabilization.

Evolution

On admission observation was continually monitored displayed on TV monitor sustained monomorphic, with hypotension when it comes to electrical cardioversion with 200 J shock after which happens to sinus rhythm.
He turns to interrogate the patient acknowledges occasional episodes of palpitations with exercise dominance for which he had never consulted.
In analytical results highlights decompensation previous renal function (creatinine 3.5 no other findings).
After entering picture stabilization plan of Cardiology. Finally, during admission was diagnosed with arrhythmogenic right ventricular and proceeds to implantation of implantable cardioverter defibrillator (ICD).

CONCLUSION: Sometimes considered banal pathology can afford the casual diagnosis of serious latent disease.

#7123 : DOES THE TYPE OF CARDIAC COMPRESSION CONDITION THE MAINTENANCE OF UNCONTROLLED DONORS AFTER CARDIAC DEATH?. THREE YEARS REVIEW

Preferred format : ePoster

Authors:

Maria Bringas Bollada (1), Nieves de Lucas (2), Sara Domingo MArin (1), Candido Pardo Rey (1), Antonio Trino Salto (3), Francisco Jose del Rio GAllegos (1)

1. Transplant Coordination Unit, Hospital Clinico San Carlos, Madrid, SPAIN
2. SAMUR PROTECCION CIVIL, SAMUR PROTECCION CIVIL, Madrid, SPAIN
3. Transplant Coordinator Unit, H.Clinico San Carlos, Madrid, SPAIN

Keywords: mechanical compression,transplant, donors

Abstract :

INTRODUCTION.
Our hospital has settled from 1989 a specific protocol to obtain donors from people who die in the street or at home from sudden or unexpected death. Even this program is established, the improve procedures for the CPR have change the maintenance of the potential donor. These new variables need to be studied.
OBJECTIVES.
To evaluate the quality of cardiocompression in uncontrolled donor after cardiac death (uDCD) as preservation maneuvers
METHODS: After 30 minutes of unsuccessful CPR maneuvers, death is declared through cardiovascular criteria. The only preservation method until ECMO is cardiac massage and mechanical ventilation. In addition to general procedure we analyze the cardiac massage (manual versus mechanical) as preservation maneuver
RESULTS. 122 donors were included during 2013-2014-2015. 157 kidneys were desestimated for transplant. We analyze cuantitative variables through t student and cualitative through squared chi .We found that kidneys from patients younger than 45,6 years with manual compression were desestimated 7,1% vs the ones that were reanimated with mechanical compression (45,2%) p=0,002. We found

association between age and discharged kidneys (51,3 years for discharge(IC 95% 1,5 a 5,7) and for warm ischemia time (118 minutes for discharged kidneys, p=0,004. Among real donor 87 kidneys were transplanted. Eight were explanted (7 because ischemia reperfusion injury, 1 due to surgical incident) . The rest remains normofunctional and free of complications
CONCLUSIONS.

1. uDCD program constitutes 40% of the total donor amount of Madrid (35,1 d.p.m.p)and more than the 11% of the total amount of donor in Spain
2. There is a trend type of cardiac compression (manual versus mechanical), being favorable to manual in the group of patients younger than 45,6
3. There is association between age, warm ischemia and discharged kidneys

#7126 : Major incident triage: the civilian validation of the Modified Physiological Triage Tool (MPTT).

Preferred format : Oral presentation

Authors:

Jason Smith (1), James Vassallo (2)

1. Academic Department of Military Emergency Medicine, Royal Centre for Defence Medicine, Birmingham, UK
2. Division of Emergency Medicine, University of Cape Town, Cape Town, SOUTH AFRICA

Keywords: triage, physiological triage, resource prediction, trauma, major incidents

Abstract :

Introduction:

Triage, the process of categorising patients based on clinical acuity, is a key principle in the effective management of a major incident (MI). There are at least three different triage systems in use worldwide, and previous attempts to validate them have demonstrated limited performance.

Using a military cohort and regression analysis, the Modified Physiological Triage Tool (MPTT) was developed and when compared to existing triage methods, demonstrated an improved performance at predicting need for life-saving intervention and yielded the lowest rate of under-triage (30.1%). Within the adult civilian population, where blunt trauma predominates and there is an older population, no such work has been undertaken to develop an improved system of triage.

The purpose of this study was to perform a comparative analysis and initial validation of the MPTT within a civilian environment.

Methods:

A retrospective review of the Trauma Audit Research Network (TARN) database was performed for all adult patients (>18 years) presenting to a UK Emergency Department (ED) between 1 January 2006 and 31 December 2014. Patients were defined as Gold Standard Priority One if they had received one or more life-saving interventions from a previously defined list. Only patients with complete physiological data and who received treatment at a single hospital were included in the analysis.

Using first recorded physiological data (HR/RR/GCS/SBP), patients were categorised as Priority One or Not Priority One by the newly derived MPTT ($12 > RR < 22$, $HR > 100$, $GCS < 14$) and existing major incident triage tools (START - ST, CAREFLIGHT - CF, Modified Military Sieve – MMS and Triage Sieve – TS). Performance characteristics of all triage tools were evaluated using sensitivity, specificity and AUROC, and rates of over and under-triage were compared. AUROC were compared for triage tools with similar performance.

Results:

The TARN registry held records for 218,453 adult patients during the study period, of which 129,647 (59.3%) had complete data and were included in the analysis. 55% of patients were male, with a median age of 61 (range 18-111). 25,452 patients (19.6%) were defined as Priority One, with a median ISS of 9. Blunt trauma predominated (96.5%), with falls < 2m the most common injury mechanism (53.9%).

The MPTT outperformed all existing triage methods with the highest sensitivity (58.1%) and demonstrated an absolute reduction in under-triage of 44.5% when compared to the existing MIMMS Triage Sieve. With an AUROC increase of 1.3, ROC comparison demonstrated significance between the MPTT and MMS ($c^2 = 83.91$, $p < 0.001$), statistically supporting the use of the MPTT.

Conclusion:

This study has defined the performance of the MPTT (a tool derived using a military cohort) in a civilian environment, where it has been shown to outperform all existing MI triage systems in its ability to predict need for life-saving intervention. As a result of this validation, its use within a civilian major incident context is recommended.

#7127 : An Evaluation of Patients with Carbon Monoxide Poisoning Using the TEMPS-A Temperament Scale

Preferred format : Oral presentation

Authors:

Oğuz Eroğlu (1), Orhan Murat Koçak (2), Şadiye Visal Buturak (2), Figen Coşkun (1), Turgut Deniz (1)

1. Department of Emergency Medicine, Kırıkkale University, Kırıkkale, TURKEY
2. Department of Psychiatry, Kırıkkale University, Kırıkkale, TURKEY

Keywords: Carbon monoxide poisoning; TEMPS A; Temperamental characteristics; Neuropsychiatric disorders; Emergency department

Abstract :

Aim: The purpose of this study was to determine whether patients diagnosed with carbon monoxide poisoning (COP) would differ in terms of temperament in the early and late periods using the “TEMPS-A temperament questionnaire.”

Materials and methods: Patients presenting to our emergency department with carboxyhemoglobin (COHb) levels of 10% or above and diagnosed with COP by our clinic, with no neuropsychiatric disease and aged over 18 were included in the study. Subjects presenting to the emergency department with nonspecific symptoms, with no neuropsychiatric disease and aged over 18 were enrolled as the control group. All patients’TEMPS-A temperament scale results were recorded.

Results: When the results of the TEMPS-A temperament scores of patients diagnosed with COP at first presentation to the emergency department were compared with the scores of the healthy volunteers, DT type scores were 7.5±3.96 and 5.69±3.39, respectively,**(p=0.016)**, ST type scores7.01±4.29 and 6.71±4.19 (p=0.72), HT type scores 11.75±3.81 and 11.26±3.03 (p=0.484), IT type scores 5.16±4.07 and 3.73±3.36 (p=0.06), andAM type scores 6.52±5.72 and 3.88±4.09 **(p=0.01)**. On the basis of these data, comparison of TEMP-A temperament scale scores performed when patients diagnosed with COP first presented to the emergency department with the results from the healthy volunteers revealed statistically significant differences between the two in terms of DT and AT types.

Conclusion: Illumination of the mechanisms behind the relationship between COP and temperamental characteristics, which are affected by the factors of low socioeconomic level and female gender, will be important in terms of preventive measures aimed at reducing the risk of encountering COP.

#7128 : Intelligent Assistance Services and Personalized Learning Environments for Support of Knowledge and Performance in Interdisciplinary Emergency Care

Preferred format : Oral presentation

Authors:

Sabine Blaschke (1), Bjoern Sellemann (1), Carsten Ullrich (2), Michael Schmucker (3), Katrin Wedler (4), Sabine Rey (5), Stefan Roede (1), Markus Roessler (6), Otto Rienhoff (5), Felix Walcher (7), Martin Haag (3), Christoph Igel (2)

1. Interdisciplinary Emergency Care Department, University Medical Center Goettingen, Goettingen, GERMANY
2. Educational Technology Lab, German Research Center for Artificial Intelligence, Berlin, GERMANY
3. GECKO-Institute, Heilbronn University, Heilbronn, GERMANY
4. Staff Unit Care Research, University Medical Center of Halle, Halle, GERMANY
5. Institute of Medical Informatics, University Medical Center Goettingen, Goettingen, GERMANY
6. Dept. of Anaesthesiology, University Medical Center Goettingen, Goettingen, GERMANY
7. Dept. Trauma Surgery, University Medical Center Magdeburg, Magdeburg, GERMANY

Keywords: Interdisciplinary Emergency Care, Information Technology, Artificial Intelligence, Mobile Devices

Abstract :

Background:

During the past decade emergency medicine evolved to an increasing challenge for clinics of all stages of patient care due to a substantial and continous change of medical knowledge, limits of time and health care economics as well as an enormous rise of patient cases. Thus, continuous medical education for all employees involved in the preclinical or clinical phase of emergency care represents an essential prerequisite for high quality patient-centered care to overcome these problems. However, in this special setting of rush, stress and highly intense workload conventional learning techniques do not allow for continous training on the job. To address this problem we developed novel learning and teaching strategies based on digital technologies for both academic and non-academic staff members within interdisciplinary emergency care departments (ED).

Methods:

For medical students and trainees we created a podcast and an emergency care software for simulation of emergency cases in order to prepare for the work within the ED in comparison to control groups without access to these learning tools. Acceptance, frequency of usage and effects of these techniques were assessed prior to and after the occupation within the ED by standardized questionnaires and tests. For nurses and paramedics we first assessed the information demands during all processes of emergency patient care in the preclinical and clinical phase. Based on these needs intelligent assistance services were established in cooperation with two technological partners to support daily workflow via web-based services.

Results:

Introduction of the podcast and the emergency care software prior to the start within the ED resulted in a significant improvement of skills and expert knowledge for both medical students and trainees in comparison to the control groups ($p < 0.002$). Both innovative tools were widely accepted and frequently used by each proband. Analysis of processes within the preclinical and clinical phase of emergency care revealed information demands for paramedics and nurses especially with respect to invasive/non-invasive techniques, first aid standard operating procedures, medications and medical devices. Content for these assistance services was developed and subsequently digitalized for web-based usage via mobile devices (tablets). Preliminary results of these applications will be demonstrated and evaluated in a pilot study.

Conclusions:

Introduction of novel learning and teaching strategies within the ED allows for a continuous medical education and training on the job in the special setting characteristics of emergency care. Results of our studies revealed a significant improvement of technical skills and medical expertise thus leading to a better performance of the academic staff within the ED. Further studies with non-academic employees now have to evaluate the effects of these innovative strategies within the preclinical and clinical phase of emergency care.

#7130 : Implementation of the emergency department model improves justified hospitalizations and hosptial efficiency in St. Petersburg, Russia

Preferred format : ePoster

Authors:

Sergey Bagnenko (1), Alexandr Miroshnichenko (2), Ruslan Alimov (3), Anthony Rodigin (4), Dmitry Korbut (3)

1. , First Pavlov State Medical University, St. Petersburg, RUSSIA
2. , North-Western Mechnikov State Medical University, St. Petersburg, RUSSIA
3. , Dzhanelidze Emergency Medical Care Research Institute, St. Petersburg, RUSSIA
4. , none, San Ramon, USA

Keywords: emergency department, emergency medicine administration, hospital efficiency

Abstract :

Relevance: Today, effective utilization of healthcare resources is crucial anywhere. In Russia, introduction of the emergency department (ED) model is an important step towards improving in-hospital emergency care. **Goal**: To analyze outcomes of a pilot ED at a multi-specialty hospital. **Methods**: We analyzed ED performance at the Dzhanelidze Institute of Emergency Care (St. Petersburg) for the period 2002-2012. **Results**: The need to improve the metric of justified hospitalizations expanded the use of diagnostics by the ED by 62.7% compared with the prior "Receiving Department": from 316.7 (2004) to 515.4 (2012) studies per 100 patients. EKG use increased by 123.3%, US by 203%, XR by 137.9%, blood chemistry by 2629.8%, urine analysis by 103.9%. CT use increased from 0 cases to 13 per 100 patients. The overall rate of medical interventions increased by 316.5%, including a 2265.2% increase of syndrome-based treatments. The latter led to a five-fold increase in the proportion of patients considered "ambulatory": from 8.6% (2004) to 45.4% (2012), or 53.4% if counting ED-observation beds. Total percentage of incorrect or discrepant diagnoses fell from 37.6% to 15.4%. There was a 23.8% decrease in length of stay for short-stay patients (< 3 days). Above outcomes improved percent of justified hospitalizations to specialized departments, e.g. shifting the relative weight of stays of over 14 days from 10.9% to 16.9%. Overall hospital mortality decreased from 3.8% to 3.7%, in parallel with a 24.9% increase in the annual patient volume (45,389 to 56,691). **Conclusion**: The ED model improved justified hospitalizations by aligning inpatient resources with sicker patients, preserved overall quality of care and allowed to accommodate yearly rise in hospital throughput.

#7131 : Agreement of Point-of Care Test and Laboratory Lactate

Preferred format : ePoster

Authors:

Jean Lee (1), Siti Fatimah Ismail (2), HM Kang (3)

1. POCT, Sengkang Health, Singapore, SINGAPORE
2. , Sengkang Health, SINGAPORE, SINGAPORE
3. POCT, Singapore General Hospital, Singapore, SINGAPORE

Abstract :

Lactate is a useful prognostic marker in both sepsis and trauma. Point of Care Testing(POCT)for lactate is now readily available in many emergency departments. This study aimed to examine the agreement of the results of 23 blood specimens for POC lactate with the laboratory values in the Singapore General Hospital. Agreement between the 2 assays were analysed and showed good agreemnt of POCT vs lab lactate.

Hence we conclude that POCT for lactate can be considered for further use in the emergency department to help in instituting early agressive reasuscitation of critically ill patients .

#7132 : Asthma is not the only cause of dyspnea in young patients.

Preferred format : Oral presentation

Authors:

Patricia Bazan (1), Elena Aznar (1), Marta Merlo (1), Raquel Casero (1), Virginia Alvarez (1)

1. A&E, Hospital universitario de Getafe, Madrid, SPAIN

Keywords: asthma, dyspnea, cough

Abstract :

Objective: The description of this case is due to the rarity of this clinical entity and its semiotic diversity that implies a high level of suspicion for a correct and quick diagnosis.

The case describes a 17-year-old male who presented to the A&E department complaining of odynophagia and cervical pain from 2 days ago. He also complained of haemoptysis in the last 24 hours. He started with shortness of breath, mild in severity, and several bouts of intense cough 5 days ago after touching a rabbit His GP doctor prescribed him antihistaminic and dry powder inhalers, which didn't improve his respiratory symptoms. No fever, no shivering. He denied any similar symptom in the past.

Past medical, social, surgical and family history

He also denied any use of illicit drugs or any history of trauma. He had a history of asthma but he was on no prescription medications and participated in sports without any difficulty. He did not smoke or drink alcohol.

Physical examination

Blood pressure was 133/79 mmHg, HR 95 bpm, temp. 36.4ºC and RR was 24/min, SpO2 97% on room air.

He was well developed but in mild respiratory distress.

HEENT: crepitance felt in the right supraclavicular area. Otherwise unremarkable. Trachea was in the middle.

Chest: clear to auscultation bilaterally. No stridor

Heart: No murmurs, rubs or gallops. Regular rate and rhythm.

Abdomen: no remarkable

No pedal edema was appreciated.

No focal findings of neurological deficits.

Next step in the management of this patient

A PA chest X-ray (posteroanterior and lateral view) was done, which showed a slight layer of air surrounding the cardiac silhouette, right chest wall and extensive subcutaneous emphysema in supraclavicular area.

Diagnosis

Spontaneous pneumomediastinum

Development

He was admitted to the hospital, followed up of a chest X-ray within 12-24 hours to detect any progression or complications. Treatment included analgesia, rest, and initial oxygen therapy. He was discharged on the 5th day of hospitalization and there were no signs of recurrences.

Summary

The diagnosis of spontaneous pneumomediastinum in an acute hospital setting can present as a challenge. Pneumomediastinum should not be confused with other pathological conditions such as interstitial emphysema, pneumothorax and pneumopericardium, which mostly require specific types of management. Spontaneous pneumonedistiinum is rare in adults, with young male being the most frequently affected, with a male/female ratio of 8/1. Based on previous studies, the prevalence of spontaneous pneumomediastinum ranging from 1 per 800 to 1 per 42,000 patients presenting to a hospital emergency department. Of these cases, approximately 1% has a history of asthma. The natural course is for the pneumomediastinum to spontaneously resolve.

#7133 : Dorsal elevation and peep for catheterization of internal jugular vein in critically ill patients in emergency departments (DECIZIVE) - many patients do not tolerate the recommended position

Preferred format : ePoster

Authors:

Cornelia Mareike Burghold (1), Christian Hohenstein (1), Hendrik Rüddel (2)

1. , none, Jena, GERMANY
2. , none, Jen, GERMANY

Keywords: central line - trendelenburg position - contraindication

Abstract :

Introduction

Some patients in emergency departments (ED) need a catheterization of internal jugular vein (IJV. The application of a central venous catheter is typically performed while the patient is in Trendelenburg-Position (TP). The main cause for this purpose is the benefit of increasing the IJV – diameter, which results in a securer application of the central line wire.

However, in the daily practice the TP poses a challenge in the ED since many patients do not tolerate the head tilt position or have contraindications.

The aim of the study is to determine how many critically ill patients in an emergency department do not tolerate the Trendelenburg position.

Methods

From October to December 2015 we enrolled 108 non intubated patients >18 years admitted by EMS with a ESI score <4. We allocated the patients either to the TP-group (trendelenburg position possible) or non-TP-group (trendelenburg position impossible).

Using a goniometer participants without any contraindications for Trendelenburg-position were tilted 15° head down while lying in bed for 10 consecutive minutes. When the patient perceived any discomfort like dyspnea, vertigo, nausea, pain or a consultant of the ED decided that there is a contraindication for the head down position, the patient was allocated to the non-TP-group.

Results

23,8 % of all enrolled patients could not be positioned in TP because of contraindications, such as cardio-pulmonary deficits (61,9%) or in condition of CNS-pathologies (28,6%). Furthermore, 23,8% did not tolerated this position – 8 patients stopped the procedure during positioning and 14 within the 10 minutes of head tilt due to various reasons (exact numbers will follow).

Conclusion

To secure a safe central vein catheterization, TP is seen as the gold standard according to the guidelines. This survey is the first which reveals the limitations of this positioning for critically-ill patients. Almost 50% of the patients were not able to be tilted 15° head-down as the gold-standard requests. A previous survey of our working group already showed that 30° head-up elevation combined with non-invasive ventilation demonstrates a safe and well-tolerated alternative to the head-down-tilt. This will be reviewed in the context of our study.

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#7134 : JUVEX PEPPER Trial - pilot study (jugular vein expansion by positive end expiratory pressure positioning in emergency department patients)

Preferred format : ePoster

Authors:

Claudia Ehrlich (1), Christian Hohenstein (2), Johannes Winning (2), Hendrik Rüddel (3)

1. , none, Je, GERMANY
2. , none, Jena, GERMANY
3. , none, Jen, GERMANY

Keywords: central venous access - positive end expiratory pressure - non invasive ventilation - cross sectional area jugular vein

Abstract :

Background

Guidelines recommend central venous access in Trendelenburg position. Critically ill patients in the emergency department (ED) often show contraindication for this positioning. Non-invasive ventilation (NIV) with positive end-expiratory pressure also increase the caliber of the internal jugular vein. We hypothesize that the cross sectional area (CSA) of the right internal jugular vein (RIJV) in Trendelenburg is equal to the CSA in 30° elevation position with PEEP by NIV in critically ill patients in ED.

Materials and Methods

91 critically ill adult patients in ED were examined between 08/2014 and 05/2015. The CSA was measured by ultrasound in 3 different positions: 30° elevation, supine and Trendelenburg position. We repeated measurements with a continuous application of NIV (PEEP of 6.9mBar). Patients without being able to give informed consent or relative/absolute contraindications for NIV were excluded. We defined critical illness by an emergency severity index >4 in combination with the necessity to lie on a stretcher or bed.

Results

The increase of the CSA of the RIJV in Trendelenburg position was the largest (0.99±0.66cm²) compared to the supine (0.57±0.58cm²) and 30° elevation position (0.25±0.41cm²). 30° elevation positioning with PEEP (0.62±0.70cm²) was significant larger than without PEEP. NIV was a well-tolerated procedure (98%).

Conclusion

30° elevation positioning with PEEP via NIV is an alternative procedure for central venous access, especially for critically ill patients in ED unable to remain in Trendelenburg position. Based on the results, a successful cannulation of the RJIV seems viable in patients who need to move to the 30° elevating position for whatever reason. The current guideline about patient positioning during central venous access should consider these findings for critically ill patients in the emergency department. In the 30° elevation positioning with PEEP in 68.1 % a safe puncture (≥0.4cm²) could be expected.

#7135 : Lactate and CRP levels in unselected emergency department patients: Association with hospital admission, intensive care unit admission and hospital length of stay

Preferred format : ePoster

Authors:

Maria Bernhardt (1), Christian Hohenstein (1)

1. , none, Jena, GERMANY

Keywords: Lactate - CRP - emergency department - hospital admission - hospital length of stay

Abstract :

Introduction

Increasing interest has been given to lactate levels in acute ill patients. Especially septic patients are described to have elevated lactate levels, although it is unclear whether high lactate in emergency department patients helps to distinguish those with high risk from low risk patients. Furthermore, neither the prognostic nor the diagnostic value of lactate levels is clear in unselected patients of the emergency department. There is growing evidence that lactate levels in the emergency department might serve as a screening method for patients at higher risk for mortality, but it is still unclear under which circumstances and which symptoms or diagnoses they are really useful for. The aim of our study was to analyze the lactate levels of unselected patients in the emergency department and look for possible correlations of certain patient characteristics as well as their possible prognostic value in different diagnosis groups.

Methods

We retrospectively analyzed all patient data, were blood samples were drawn during a 2-week period (March 2014), excluding patients <18years, no lactate levels available, no documentation. Analyzed patient characteristics were age, sex, type of allocation (walk in, family physician, EMS with and without physician, other), symptoms, diagnosis, hospital admission, ICU-admission, 30-day mortality, vital signs, blood samples (CRP, leukozytes, thrombozytes, creatinine, hemoglobin, lactate).

Results

1157 visited the emergency department during the study period, of which 587 were included into the study. The mean age was 60,4 years (sd 20,8), 313 patients were admitted to hospital with an average length of stay of 11,9 days (sd 11,9). 80 patients were admitted to the ICU (25,6%) with a mortality rate of 2,6%. The main diagnostic groups were cardiovascular (24,5%), infections/sepsis (21,5%), orthopedic/trauma (18,6%) and other (35,4%) with some differences in distribution between hospital admissions and ambulatory management. Average lactate levels were 2,08mmol/l (sd 1,51, p<0,001 Kolmogorov-Smirnov). Univariate regression analysis showed a significant (p<0,05) influence on hospital admission of the variables age, HR, saturation, type of allocation, lactate, CRP, leukozytes, hemoglobin and creatinine. Multivariate regression analysis showed a significant (p<0,05) influence on hospital admission of the variables HR, allocation, lactate and CRP. Multivariate regression analysis disconfirmed lactate as a factor for ICU-admission (OR,1,154, p=0,117). The multivariate regression analysis also showed no influence of lactate for length of hospital stay (regression coefficient B 0,273; p=0,471) whereas only CRP levels show an influence (regression coefficient B 0,045; p=0,003).

Discussion

Lactate levels in unselected patients in the emergency department on average are low. Increased lactate levels mean higher risk for hospital admission, although it does not influence admission rate to the ICU or length of hospital stay. The prognostic value of lactate levels in unselected patients of the emergency department without a pretest-probability seems to be low.

#7136 : Lactate levels in different diagnostic groups of unselected patients in the emergency department

Preferred format : ePoster

Authors:

Maria Bernhardt (1), Christian Hohenstein (1)

1. , none, Jena, GERMANY

Keywords: lactate level - emergency department - diagnostic groups

Abstract :

Introduction

Increasing interest has been given to lactate levels in acute ill patients. Especially septic patients are described to have elevated lactate levels, although it is unclear whether high lactate in emergency department patients helps to distinguish those with high risk from low risk patients. Furthermore, neither the prognostic nor the diagnostic value of lactate levels is clear in unselected patients of the emergency department. There is growing evidence that lactate levels in the emergency department might serve as a screening method for patients at higher risk for mortality, but it is still unclear under which circumstances and which symptoms or diagnoses they are really useful for. The aim of our study was to analyze the lactate levels of unselected patients in the emergency department and look for possible correlations of certain patient characteristics as well as their possible prognostic value in different diagnosis groups.

Methods

We retrospectively analyzed all patient data, were blood samples were drawn during a 2-week period (March 2014) as described in an earlier abstract.

The classification of symptoms and diagnoses was based on similar studies and included a systemic category (infection, trauma, intoxication, shock, hypovolemia, allergic, neoplasm) or involvement of an organ system (cardiovascular, orthopedic, neurologic, gastrointestinal, pulmonary, ENT, eye, skin, urogenital, gynecological, psychiatric/psychological, hematological, other). Statistical analysis was done with SPSS, multivariate regression analysis, determination of Kolmogorov-Smirnov-Test, Kruskal-Wallis-Test and Mann-Whithney-U-Test in order to determine the influence of lactate in different diagnostic or systematic groups and the comparison between admitted versus ambulatory patients.

Results

Only in the orthopedic/trauma group lactate levels show a normal distribution (Kolmogorov-Smirnov-Test 0,111). The lactate levels within the different diagnostic groups do not differ significantly (Kruskal-Wallis-Test p=0,111). Within the ambulatory patient group, lactate levels show a normal distribution in the neurologic as well as cardiovascular group (Kolmogorov-Smirnov-Test 0,2 and 0,063, resp.). No difference of lactate levels is observed among the diagnostic groups (Kruskal-Wallis-Test p=0,678). Within the patient group admitted to hospital, lactate levels are not normally distributed in any diagnostic group (Kolmogorov-Smirnov-Test always <0,05). No difference of lactate levels is observed among the diagnostic groups (Kruskal-Wallis-Test p=0,033). The Mann-Withney-U-Test showed significant lower lactate levels in patient with neurological disease (p<0,05).

Within the group infection/sepsis the Mann-Whithney-U-Test showed no difference of lactate levels in comparison with the overall patient population, in contrast to HR, temperature, CRP, leukozytes, creatinine (all higher), arterial pressure, saturation and hemoglobin (all lower).

Discussion

It seems to be unclear, which patient population would benefit from lactate sampling. This study does not confirm the notion, that high lactate might be more frequent in certain diagnostic groups like infection/sepsis than in other but is equally distributed regardless of symptoms or diagnosis. The value of lactate levels in risk stratification and diagnostic and prognostic clinical support has yet to be determined.

#7137 : Evaluation of the safety of an accelerated discharge protocol for low risk chest pain in the Emergency Department

Preferred format : Oral presentation

Authors:

Cheryl Davies (1), Sanjay Ramamoorthy (2)

1. , University Hospitals Southampton, Southampton, UK
2. Emergency Medicine, University Hospitals Southampton, Southampton, UK

Keywords: Accelerated discharge protocol. Low risk chest pain.

Abstract :

Chest pain is one of the commonest reasons for presentation to Emergency Departments (EDs).Current estimates suggest that up to 6% of all attendances to UK EDs are due to a primary complaint of chest pain. In our ED this equates to approximately 6000 patients a year.

Whilst the vast majority of these patients do not have a myocardial infarction, there is good evidence to show that relying on the history and ECG of patients in isolation will lead to clinicians missing these conditions. Myocardial infarction (MI) is a potentially fatal condition, and the mortality for patients with MI who are wrongly discharged is much higher than those who are admitted to hospital.

In order to improve our diagnostic accuracy, in accordance with national guidelines from the National Institute of Clinical Excellence (NICE), our previous practice was to risk stratify patients with potential MI into low, moderate or high risk of having an MI.This was done using an evidence based clinical risk stratification tool (TIMI score), and the ECG. Intermediate and high risk patients were admitted for further assessment, and low risk patients were managed in the ED through our short stay ward.

The previous pathway for low risk patients involved performing a serum troponin at 10 hours after the patient's worst symptoms.

There has been an increasing evidence base around the usage of high sensitivity troponin tests in the last few years. These differ from the troponin assays that we were previously using as they can detect much smaller levels of troponin in a patients blood than previously.

There has been research conducted into whether the time interval for testing in low risk patients using the high sensitivity assays can be shortened. The conclusion from several well-conducted studies is that in low risk patients, high sensitivity assays can be used to safely discharge patients at 3 hours after their arrival in the ED.

We introduced an accelerated discharge pathway using a high sensitivity troponin assay in June 2014.

Results

From the 18/6/14 to 29/6/15, a total of 1327 patients went through the low risk chest pain pathway, with a median of 25 a week.

What was the rate of major adverse cardiac events at 30 days after discharge?

New pathway= 0 patients (0%)

Old pathway based on 10 months data= 0.16%

What was the total length of stay for low risk patients in the ED?

New pathway=6 hours 46 minutes (median LoS from arrival to discharge)

Old pathway=8 hours 24 minutes (median Los from arrival to discharge)

Reduction in median length of stay by 1 hour 38 minutes.

Conclusions

On the basis of over a years' data for 1327 patients, the new pathway has resulted in a reduction in length of stay by approximately 100 minutes per patient, with no significant compromise in patient safety. There have so far been no adverse cardiac events at 30 days pre-discharge.

This represents a total reduction in length of stay over the year of approximately 92 bed days, or 2212 hours.

#7138 : Unscheduled return visits in the emergency department within 7 days - rate and analysis of initial diagnostic error

Preferred format : Oral presentation

Authors:

Felix Ludwig (1), Steffen Herdtle (1), Christian Hohenstein (2)

1. , none, je, GERMANY
2. , none, Jena, GERMANY

Keywords: unscheduled return visit - emergency department - diagnostic error

Abstract :

Introduction:

Unscheduled return visits in the emergency department (ED) lead to utilization of resources. Different circumstances and factors may contribute to these visits, some of them might be preventable. Studies suggest that many patients among those who revisit the ED got a wrong diagnosis at their first visit.

The aim of the study was to identify the factors that lead to unscheduled return visits within 7 days in an emergency department.

Methods:

Retrospectively, we analyzed all patients that visited the ED during four months in the year 2014. Those, who used the ED service twice or more within 7 days were included into the study. Our study group developed an arbitrary classification. Two consultants independently allocated the patients to the different classes. In case of different allocations, a third consultant decided which allocation suited best.

Results:

239 patients revisited the ED unscheduled within 7 days of their first visit. We identified 5 different main categories for bounce back cases. a) patient related (243%), b)illness related (35,1%), c) physician related (18,4%), d) system related (5%), e) other (20,5%). Furthermore, we identified several subcategories inside the main categories, a) wrong diagnosis (15%), b) illness persistence (18%), c) no correlation (18%), d) other (49%).

Detailed subcategories will be presented.

Conclusion:

We speculate that nearly 25% of all unscheduled return visits could be preventable. Many patients got wrong instructions by the doctor or system failures contributed, like difficult specialist follow up. Previous studies suggest a high rate of misdiagnosis among the bounce back patients, which this study confirms. There seem to be some typical high risk symptoms and physician behavior that can be discussed.

#7141 : Knowledge and preparedness of the emergency department nursing staff for a mass casualty radiation event

Preferred format : ePoster

Authors:

uri aizik (1), yaniv peretz (2)

1. Assaf Harofeh Medical Center, none, tel aviv, ISRAEL
2. Assaf Harofeh Medical Center, none, beer taakov, ISRAEL

Keywords: Mass casualty radiation event, nursing staff, department of emergency medicine, knowledge, staff fear, preparedness

Abstract :

Background:

The medical response to radiation remains one of the least taught among all disciplines within medical education[(1)].Recent world events have increased concern that hospitals must be prepared for radiological emergencies, Especially Emergency departments[(2)].

objective:

The main purpose of this study is to examine the level of knowledge of registered nurses who work in emergency departments, regarding a mass casualty radiation event, by comparing the level of knowledge between nursing staff at a medical center which is designated to receive victims of radiation and the nursing staff at a medical center which does not receive radiation victims. Other objectives are to examine the relationship between the level of knowledge and the level of staff fear of treating the victims of a radiological incident and to examine the relationship between the staff's fear and its preparedness to report to work in a radiological format.

Methods:

This cross-sectional study included 83 registered nurses, male and female, in emergency departments at three medical centers in Israel, where one of the centers is designated for intake of radiation victims. The sampling method used was cluster sampling.

Results:

The findings revealed a low score (46.25%) on the questionnaire about knowledge, with no significant difference between the medical centers, including the one designated for the intake of victims of radiological injury. Fear of a high probability that this scenario will become a reality ranges from 10% to 29%. Fear of the four scenarios which were presented to respondents was high, ranging from 55.4% to 83%. The rate of preparedness to report for work ranged from 48.2% in an oral poisoning scenario to 54.2% in the event of the explosion of a "dirty bomb".

Conclusions:

The present study demonstrated that the level of knowledge among the nursing staffs in emergency departments is low. This is regardless of whether the medical center is one designated to treat radiation victims or one that is not. The study demonstrated a link between the level of knowledge and the sense of risk, fear, and willingness to report for work. In other words, increasing the level of knowledge of the staff regarding a mass casualty radiation event will have a significantly positively impact on all the factors mentioned above. We recommend the institution of programs at all the medical centers to increase knowledge, by incorporating contents based on the 'all hazard' approach and including the unique features of a mass casualty radiation event through lectures at staff meetings, executive team-building games, the creation of courseware, and the like. In addition these subjects should be added to professional in-service training.

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#7142 : Hospital preparedness in respect of terrorist attacks: a comparison between Italy and Finland

Preferred format : Oral presentation

Authors:

Francesco Filippone (1), Maaret Castrén (2), Pierluigi Ingrassia (3), Marta Caviglia (3), Ahmadreza Djalali (3)

1. , Center for Research and Education in Emergency and Disaster Medicine - CRIMEDIM, Università degli Studi del Piemonte Orientale, Novara, Italy / University of Helsinki, Kotka, FINLAND
2. , University of Helsinki, Helsinki, FINLAND
3. , Center for Research and Education in Emergency and Disaster Medicine - CRIMEDIM, Università degli Studi del Piemonte Orientale, Novara, Italy / University of Helsinki, Novara, ITALY

Keywords: Finland, Italy, terrorism, hospital, preparedness

Abstract :

Background: Hospitals are included in health critical infrastructures, which must continue daily function in the case of terrorist attacks. The objective of the study was to evaluate and compare the security and preparedness condition of eight hospitals in Italy and in Finland, in respect of terrorist attacks.

Material and methods: This cross-sectional observational study was conducted from November 2014 to November 2015. A convenience sampling method was applied to perform this study. A questionnaire, consisted of 74 questions, was validated through the experts' consensus. The questionnaire was categorized into three main topics: 1) Information about the hospital structures, 2) Information about the emergency/crisis management plan and 3) Information about resources. For general results dichotomous questions were applied. One point was given to positive answers, zero points to negative ones.

Results: The study showed that, up to 88 possible points, Finnish hospitals got 53 points, while Italian hospitals got 23 points. In addition we found lack of communication between the governments and the hospitals regarding terrorist attacks. Furthermore, the study demonstrated that the hospitals had low availability of funding to improve the level of preparation and the shortage of the hospital managers, whose responsibility is to prepare against terrorist threats.

Conclusions: The level of preparedness in respect of terrorist attacks is higher among the Finnish hospitals than the Italian hospitals. Moreover, the governments and the hospitals had shortage in the communication regarding terrorist attacks. Furthermore, the hospitals had minor funding for improvement of the preparation.

#7143 : The Efficieny Of Ultrasonography For Reduction of Distal Radial Fractures In The Emergency Deapartment

Preferred format : Oral presentation

Authors:

Ozgur Bozkurt (1), Murat Ersel (1), Funda Karbek Akarca (1), Sercan Yalcinli (1), Sadiye Midik (1), Levent Kucuk (2)

1. Department of Emergency Medicine, Ege University School of Medicine, İzmir, TURKEY
2. Deaparment Of Orthopedics, Ege University School of Medicine, İzmir, TURKEY

Keywords: ultrasonography, distal radius, fracture, emergency department

Abstract :

Introduction: Distal radius fracture is the most common fracture of the wrist. Adequacy of reduction is evaluated through two-way post-reduction graphies. In the event that inadequate reduction is ascertained in the wake of the evaluated graphies, sedation and reduction procedures are performed on the patient once again. Ultrasonography (USG) can be used in the management of the patients with distal radius fractures, however, there are no adequate number of studies suggesting the efficiency of USG alone in showing the status of reduction success. The aim of the study is to evaluate the efficiency of the use of bedside USG for determining reduction success distal radius fractures and to investigate the detecttability of the possible causes leading to unsuccessful reduction when using USG.

Methods: Consecutive patients applied to the emergency department of the Faculty of Medicine of Ege University between the period, April 2013–September 2013, were incorporated into this prospective double-blind cross-sectional study. The patients aged over 18, who had wrist trauma and distal radius fracture and on whom reduction was performed were included to the study. Pre- and postreduction ultrasonographic images were recorded by a research asistant trained in extremity ultrasonography, images were recorded in longitudinal and horizontal axes.

Separately, emergency medicine specialist (EMS)also, by examining the ultrasonographic images, evaluated the angulation of the distal fragment towards the dorsal or volar part, and whether or not there was any shortening in the radius, and whether there were any multiple fragments in the dorsal part of the distal fragment. The post-reduction graphies were re-evaluated in terms of reduction success by another orthopedic surgeon uninformed about the performed procedures. The orthopedic surgeon evaluated the reduction success and, the radial height: ≥5mm, radial angulation: between 15^0-25^0 , and the volar tilt angle: between 0^0-20^0 were considered as normal values. Evaluation of orthopedic surgeon was accepted as gold standart and compared with EMS. Sensitivity, specificity, and positive and negative predictive values were measured.

Results: Ulltrasonography was 97,5% sensitive and 95% specific in determining the reduction success, the positive predictive value (PPV) was found as 97,5%, whereas the negative predictive value (NPV) was found as 95%. When direct graphy was accepted to be the golden standard, the direction of the distal fragment was determined with 100% sensitivity and 100% specificity through ultrasonography (PPV:100%, NPV:100%). The number of the multiple fragments was determined with 86% sensitivity and 73% specificity with use of ultrasonography (PPV: 84%, NPV: 77%), while the presence of radial shortening was ascertained with 67% sensitivity and 65% specificity (PPV: 79%, NPV: 50%).

Both ultrasonography and direct graphy was determined that distal fragment located towards the volar and presence of multiple distal fragments had negatively affected the reduction success significantly. However ultrasonography was failed to determine reduction success in the presence radial shortening (p=0,582) when direct graphy succesfully determined the reduction success (p=0.008).

Conclusion: Ultrasonography can be helpful in determining the reduction success for distal radius fractures which needs reduction. In the future, using ultrasonography may boost reduction success prominently in the ED.

#7144 : Effects of Momordica Charantia In A Burn Wound Healing Rat Model

Preferred format : Oral presentation

Authors:

Fatih Tepe (1), Murat Ersel (1), Emel Oyku Cetin (2), Yigit Uyanikgil (3), Turker Cavusoglu (3), Fatih Karabey (4), Selahattin Kiyan (1), Yigit Tiftikcioglu (5), İlhan Uz (1)

1. Department of Emergency Medicine, Ege University School of Medicine, İzmir, TURKEY
2. Department of Biopharmaceutics and Pharmacokinetics, Ege University Faculty of Pharmacy, İzmir, TURKEY
3. Department of Histology and Embryology, Ege University School of Medicine, İzmir, TURKEY
4. Department of Biotechnology, Ege University Graduate School of Natural and Applied Sciences, İzmir, TURKEY
5. Department of Plastic and Recontructive Surgery, Ege University School of Medicine, İzmir, TURKEY

Keywords: momordica charantia, burn, wound healing, rat model

Abstract :

INTRODUCTION: Momordica charantia (bitter gourd) is a herb, whichs leafs and fruits are used for production of the antibacterial, antiviral, larvacidal and chemotherapeutic drugs. M. charantia has also antioxidant effects. Its ripe fruits were used for wound healing and as antiulcer in traditional Turkish medicine. The literature review shows only a few animal experimental studies designed to evaluate wound healing effects of M. charantia. None of those studies were designed to investigate healing effect of M. charantia in burn wounds. It is aimed to determine whether M. charantia has an effect on healing of experimental contact type burn models and to compare its effects on burn healing with silver sulfodiazine (SSD) which is accepted as a commonly used topical treatment agent for burns.

METHODS: This study is started after approval of Ege University Animal Experiments Ethics Board. Thirty-five Sprague –Dawley breed rat from female sex which reached sexual maturity weighing 200-220 gr were separated into 5 groups. After intraperitoneal xylazine and ketamine anaesthesia, a standartized burn model applied previously shaved solid skin areas of the rats. Any procedure or treatment was applied to Group I, in group II only normal saline, in group III 1% SSD, in group IV 2% M. charantia extract containing gel and in group V a placebo gel (7.5 % Na-carboxymetylcellulose) were applied to the burned skin area at the hours 0, 6, 12 and 18. Full-thickness skin biopsies, which are taken from three burned areas of the rats at the hours 4, 8 and 24 were examined under a light microscope with hematoxylin and eosin (H&E) staining. RESULTS: Epidermal thickness was increased in M. charantia group in comparision with burn, SSD and placebo groups. Similarly, number of degenerated hair roots was decreased in M. charantia group in comparision with all groups. The number of intact vessels was found to be as increased in M. charantia group in comparision with burn, placebo and SSD groups at 4th, 8th and 24th hours while SSD has any positive effects in comparision with placebo.

In histological evaluation which was made with Modified Verhofstad Score; scores for edema in 4th, 8th and 24th hour were distributing at lower scores in M. charantia group in comparision with SSD and placebo groups, and also all scores for PMNL infiltration were found to be as lower than SSD and placebo group in 4th, 8th and 24th hours. In terms of collagen discoloration, M. charantia group has significantly lower scores in all hours than SSD and placebo. Scores of M. charantia were markedly distributing in lower stages for vascular damage, hair root damage and glandula sebacea damage in comparision with SSD and placebo groups in 4th, 8th and 24th hours.

CONCLUSION: M. charantia has protected epidermis, hair roots and vessels better than SSD and placebo and reduced gl. sebacea damage in acute contact termal burns. M. charantia has reduced tissue edema and PMNL infiltration with application on burned skin more effectively in comparision with conventional burn topical agent SSD and also placebo gel.

#7146 : Chest pain, syncope, hypotension and left hemiparesis, all in one diagnosis: aortic dissection

Preferred format : ePoster

Authors:

Vasile Gavrila (1), Alexandru Nicolae Carstea (1), Rodica Daniela Gavrila (2), Gabriela Filip (1)

1. Emergency Department, Clinical Emergency County Hospital, Timisoara, ROMANIA
2. Department of Family Health Care Providers, , Romanian National Society of Family Medicine, Timisoara, ROMANIA

Keywords: aortic dissection, chest pain, hypotension

Abstract :

Acute aortic dissection (AD) is a surgical emergency with a high mortality rate, that requires quick diagnosis and emergency surgical intervention. This disease was first described by Morgagni in 1761. Aortic rupture is catastrophic and has an 80% mortality. We present a 58-year-old woman with history of chronic hypertension, brought to ED by ambulance with a one-day history of chest pain and syncope. Shortly after presenting to ED, the patient developed a transient episode of left hemiparesis and aphasia. On physical examination her blood pressure in the right arm was 95/55 mmHg and in left arm was 70/40, pulse 110/per minute. She had tenderness on palpation over the upper abdomen, especially in the epigastrium. Electrocardiogram showed minor transient right bundle branch block, but no acute ischemic changes. Abdominal ultrasound did not detect free fluid in the abdominal cavity, no cardiac tamponade, but echocardiography showed enlargement of the ascending aorta. CT angiography of thorax was performed which showed a Stanford type A aortic dissection, with doubled lumen extending from ascending aorta to aortic bifurcation. Emergency physicians must be aware of atypical presentations of acute aortic dissection. Association of chest pain, syncope, hypotension and neurological signs may be suggestive of aortic dissection.

#7147 : Unilateral congenital cystic adenomatoid malformation of lung in adults: case report

Preferred format : ePoster

Authors:

Vasile Gavrila (1), Gabriela Filip (1), Rodica Daniela Gavrila (2), Alexandru Nicolae Carstea (1)

1. Emergency Department, Clinical Emergency County Hospital, Timisoara, ROMANIA
2. Department of Family Health Care Providers, , Romanian National Society of Family Medicine, Timisoara, ROMANIA

Keywords: congenital cystic adenomatoid malformation, pulmonary cysts, CCAM

Abstract :

Congenital cystic adenomatoid malformation of the lung (CCAM) is characterized by an adenomatoid proliferation of bronchiole-like structures and cyst formation. CCAM is most commonly found in newborns and children, although it has been described in adults in rare cases. Ch'in and Tang described this disease for the first time in 1949 and Stocker made the actual classification in 2002, including five different types regarding to the size of the cysts and their histological characteristics. We present the case of a 63 years-old-women, who denied any prior history of pulmonary illness, transferred from another hospital for shortness of breath. ECG showed left bundle branch block. Haemogram and biochemical tests, including troponin T, were normal. Postero-anterior chest radiography showed multiple cavities in the left lung and contra-lateral compensatory hyperinflation. CT scan of thorax revealed mediastinal shift to the left and elevation of the left hemidiaphragm, suggestive of volume loss in the left hemithorax. Multiple thin-walled, air-filled cavities of varying sizes were seen almost completely replacing the parenchyma of both lobes of the left lung. After admission, the patient's evolution was favorable, being subsequently transferred to a pneumology service. This is a typical presentation for an adult with undiagnosed CCAM that was asymptomatic for a long period of time and only picked up once the diases has progressed sufficiently to involve a large portion of the lungs.

#7148 : Can risk factors predict the likelihood of successful reduction of displaced wrist fractures in the emergency department?

Preferred format : ePoster

Authors:

Alyza Gossat (1), Amar Winayak (1), Klim Sharon (1), Jenny Cooper (1), Peter Ritchie (1), wei Lim (2), Anne-Maree Kelly (3)

1. JECEMR, Western Health, St Albans, AUSTRALIA
2. radiology, Western Health, St Albans, AUSTRALIA
3. ECCN , Department of Health and Human Services, Victoria, Australia, St Albans, AUSTRALIA

Keywords: fracture, reduction, risk factors

Abstract :

Background: The majority of displaced isolated wrist fractures in Australia are reduced in the Emergency Department (ED) and followed up as outpatients. Previous research has identified a number of risk factors for fracture instability. Our aim was to describe the prevalence of instability risk factors, the rate of successful fracture reduction according to previously defined radiological criteria and whether the number of risk factors was associated with success of fracture reduction.

Participants and methods: This was a retrospective study performed by medical record review. All adult ED patients coded as having an isolated wrist fracture in 2014 were screened for eligibility. Data collected included demographics, history of osteoporosis, mechanism of injury and radiological features on initial and post-reduction x-rays. Outcomes of interest were the prevalence of previously defined risk factors, the proportion of patients with good radiological outcome according to pre-defined criteria and any association between the number of risk factors and successful reduction.

Results: 2048 patients were screened for eligibility; 319 met inclusion criteria and had full data. Median age was 62 (IQR 48-74) and 77% were female. Most fractures (73%) resulted from a fall from level ground or height <30cm. The median number of instability markers was 4 (IQR 3-5); 63% of patients had ≥4 risk factors. Good radiological position according to pre-defined criteria was achieved in 206 patients (65%; 95% CI 59-70%). The number of instability markers was associated with success of reduction – the higher the number the less likely successful reduction (AUC 0.66, 95% Ci 0.59-0.72; p<0.0001). The previously suggested cut-off for number of risk factors to predict poorer outcome (≥4) had sensitivity of 67%, specificity of 57% and negative predictive value of 52%.

Conclusion: Instability markers are common in patients undergoing fracture reduction in ED. The number of risk factors is only moderately associated with successful reduction however the previously suggested cut-off of ≥4 risk factors had poor sensitivity, poor specificity and negative predictive value for successful fracture reduction in ED.

#7149 : NO MORE ABGS, PLEASE!

Preferred format : ePoster

Authors:

Raquel Casero Gomez (1), Patricia Bazan Dominguez (2), Virginia Álvarez Rodríguez (2), Marta Merlo Loranca (2), RAUL FALLOS MARTI (3), Manuel Jesus Ruiz Polaina (4)

1. emergency, HOSPITAL UNIVERSITARIO DE GETAFE, madrid, SPAIN
2. emergency, HOSPITAL UNIVERSITARIO DE GETAFE, MADRID, SPAIN
3. emergency, HOSPITAL INFANTA LEONOR, MADRID, SPAIN
4. emergency, HOSPITAL SANITAS, MADRID, SPAIN

Keywords: COPD, ABG, tenosynovitis

Abstract :

A 68-year-old man was seen in the Emergency room with a diagnosis of hand pain. 15 days previously, he had been hospitalized with a respiratory infection. The patient believes the simptoms started when he had an arterial blood gas analysis (ABG) just before he was admitted. No fever. Nor constitucional symptoms. Nor previous history of arthritis.

We present the case of a patient with past medical history of severe COPD (chronic obstructive pulmonary diseases), bronchiectasis, severe obstructive sleep apnea(OSA), solitary kidney with chronic kidney disease , diabetes mellitus, hypertension, hypercholesterolemia, hyperuricemia and hypogammaglobulinemia. Allergies: Sulfonamides, pyrazolones.

Social history: He is totally independent in terms of activity of the daily living. Long-term supplemental oxygen therapy (LTOT)1.5l/16h per day. No dementia

Physical exploration: Vital signs stable. Blood pressure: 143/76 mmHg, heart rate: 80 bpm, SpO2 air room: 92%. Tª 36.9ºC

Erythema, warmth, severe pain and tenderness in wrist and hand. No other affected joints.

Laboratory test: Glucose 146 mg/dl, PCR 58 mg/L, Leukocyte 17.98 10E3/µL, Creat 2.04mg/dL

Ddímero 0.31mg/dL (<0.50)

Wrist Xray: no bone injury

Eco-doppler: No DVT

Echography : hematoma doubtful postpuncture

Traumatologist discharged him and he was referred to our ER again. With the diagnosis of infectious tenosynovitis he was admitted in internal medicine department.

Wrist RM: significant effect/injury of common flexor digitorum

Final diagnosis : septic tenosynovitis

Antibiotics were administrated during 8 days, piperazilin-tazobactam + linezolid while he was at the ward. Surgery was not necessary.

INFECTIOUS TENOSYNOVITIS

Tenosynovitis refers to inflammation of a tendon and its synovial sheath; It is most frequently in the hands and wrist but can occur in any joint.

Three mechanism:

-Trauma with direct inoculation (laceration, puncture or bite)

- Contiguous spread from infected adjacent soft tissues

- Hematogenous spread

The most common pathogens implicated in tenosynovitis due to trauma are skin flora: eg, gram- positive cocci such as Staphylococcus aureus and streptococci.

Clínical manifestations range from pain with passive extension to tenderness along the tendon sheath. Fever may or may not be present. Findings of advanced infection may include subcutaneous purulence, tissue necrosis, and/or compartment syndrome.

Risk factors associated with poor outcome included: age>43; presence of diabetes mellitus, peripheral vascular disease or renal failure;

subcutaneous purulence; digital ischemia; polymicrobial infection

The diagnosis is confirmed by microbiological and histopathological evaluation. In most cases, aspiration and/or biopsy is required for diagnostic and therapeutic purposes. Ultrasonography and magnetic resonance imaging may also be useful to confirm the presence of tendon sheath abnormalities.

The management includes surgical intervention and antibiotic therapy. A reasonable approach(tenosynovitis associated with trauma) is to combine vancomycin with ciprofloxacin or third cephalosporin such as ceftriaxone. In general, 7 to 10 days of therapy is appropriate for uncomplicated bacterial infection.

CONCLUSION

ABG is a routine test in the emergency room but is not without complications. Septic tenosynovitis is a rare but serious complication.

#7150 : Thrombophlebitis of the facial vein: A case report

Preferred format : ePoster

Authors:

Lauri Keskpaik (1), Liis Ilmet (1)

1. Emergency Medicine Centre, The North Estonia Medical Centre, Tallinn, ESTONIA

Keywords: venous thrombosis, facial vein

Abstract :

Introduction

Although venous thrombosis and thromboflebitis are commonly encountered in clinical practice, thrombophlebitis of the facial vein is rarely seen in our times and there is little data in the english language literature. We found two cases dating back to 1999 and 2009 describing this condition associated with the facial area infection. This case report summarises the presentation of a 69-year-old female with signs and symptoms characteristic of facial vein thrombophlebitis.

Case presentation

Patient was presented to emegency department with swelling and tenderness of the left side of her face. Her medical history revealed neurofibromatosis, ulcerative colitis and hypertension. Two weeks before admission to the hospital she had neurofibromatosis skin lesion excision located behind the right ear.

Physical examination showed painful induration along the course of the facial vein, multiple dermal neurofibromas, normal dental status and body temperature. Further investigation revealed normal primary laboratory findings. CT scan of the face showed enlargement of left facial vein filled with thrombus 4.5x2.9cm in diameter measured axillary. A Doppler ultrasound was performed and showed up to 2cm expanded hypoechoic non-compressible thrombosed left facial vein, with no flow seen on color flow Doppler imaging.

Subsequent studies revealed no common predisposing factors for venous thrombosis sush as malignancies etc. The only laboratory finding was UTI and E. Coli growth in urine culture, without signs of systemic infection.

The patient was managed with anticoagulant medications with full-dose low molecular weight heparin (Enoxaparin) during hospitalisation days and continued with full-dose NOAC (Rivaroxaban) for three months. UTI was teated with sulfamethoxazole/trimethroprim antibiotics. During the first days of treatment swelling and tenderness subsided. A repeat ultrasound was performed after five weeks and showed facial vein enlargement without thrombus findings.

Conclusion

Genesis of facial vein thrombosis remains unclear in our case. The cause may be recent procedure of facial area. There is no evidence of neurofibromatosis being risk factor for venous thrombosis. Rather agressive anticoagulant therapy was initiated considering its valveless connection with cavernos sinus. No adverse events were seen during drug therapy.

#7151 : Impact of Early Coronary Angiography on the Survival to Discharge after Out-of-Hospital Cardiac Arrest

Preferred format : ePoster

Authors:

JiKyoung Shin (1), Eunsil Ko (1), Won Chul Cha (1), Tea Gun Shin (1), Min Seob Sim (1), Ik Joon Jo (1), Jin-Ho Choi (1)

1. , Samsung medical center, Seoul, KOREA, REPUBLIC OF

Keywords: Early Coronary Angiography, ealry CAG, Survival after OHCA

Abstract :

Background Acute myocardial infarction is a major cause of out-of-cardiac arrest (OHCA). Coronary angiography (CAG) would enable diagnostic confirmation of coronary artery disease subsequent revascularization, which might improve the prognosis of OHCA. However data showing the impact of CAG on the clinical outcome or the optimal timing of CAG are limited.

Methods Clinical outcome of 607 OHCA patients who were registered in Cardiac Arrest Pursuit Trial with Unique Registration and Epidemiologic Surveillance (CAPTURES), a nationwide multicenter registry consisting 27 hospitals, were analyzed. Early CAG was defined by within 24 hours of arrival to emergency department (ED). Primary outcome was survival to discharge with neurologically favorable status defined by cerebral performance categories ≤2.

Results Compared to patients without CAG (N=469), patients who underwent early CAG (N=138) were younger, more likely to be male to underwent bystander cardiopulmonary resuscitation (CPR), prehospital defibrillation, and revascularization ($p<0.01$, all). Analysis of 115 propensity score - matched pairs showed that early CAG is associated with 2.3-fold increased survival to discharge with neurologically favorable status ($p<0.001$, all). Survival to discharge increased consistently according to the interval between ED visit to CAG ($p<0.05$).

Conclusions Early CAG of OHCA patients was associated with better survival and favorable neurologic outcome at discharge. There was no clear threshold of CAG time associated with survival to discharge.

#7156 : Factors associated with acute bacterial prostatitis reconsultation in the emergency department

Preferred format : ePoster

Authors:

Ferran Llopis (1), Carles Ferre (1), Javier Jacob (1), Elena Fuentes (1), Concepcion Martinez (1), Ignasi Bardes (1)

1. Emergency Department, Hospital Universitari de Bellvitge, Barcelona, SPAIN

Keywords: acute prostatitis, reconsultation, emergency department

Abstract :

Aim of the study:

To analyze the factors associated with reconsultation in the Emergency Department (ED) of patients with acute bacterial prostatitis (ABP).

Methods:

Design: Descriptive and retrospective study. Setting and period: ED of a 650-bed tertiary-care teaching hospital in the metropolitan area of Barcelona, Catalonia, Spain, during 1 year. Patients: All patients with ABP. Data were collected for demographic variables, comorbidities, previous episodes of ABP, signs and symptoms, microbiological findings, antibiotic treatment, admission to the hospital, outcome and return to the ED in the 30 days following discharge. Statistical analysis: a univariate analysis was undertaken to evaluate the factors associated with reconsultation in the ED. Chi square test was used for qualitative variables (or Fisher's exact test when the expected values were less than 5) and a t Student test for quantitative variables. Statistically significant differences were considered for p value < 0,05. The statistical program used was SPSS 19.0.

Results:

During the study period 241 episodes of ABP were included for analysis. Mean age was 62,9 ± 16 years, a history of prostate adenoma was reported in 54 cases (22,5%), prior manipulation of the lower urinary tract in 40 (17%) and diabetes *mellitus* in 47 patients (19,5%). Mean symptoms duration was 3.38 ± 4.04 days, voiding symptoms were present in 176 cases (73%) and fever in 154 (64%). From 216 urine cultures, 128 were positive (59%) and 24 (17,6%) out of 136 blood cultures. *Escherichia coli* was the main pathogen (58.6% of urine cultures and 64% of blood cultures) with resistant strains to fluorquinolones, cotrimoxazole and amoxicillin/clavulanic in 27.7%, 22.9% and 27.7% of cases respectively. Other pathogens isolated were *Enterococcus faecalis* (10 episodes), *Klebsiella* spp (8, 4 with bacteremia), *Proteus* spp (5, 1 with bacteremia) and *Pseudomonas aeruginosa* (4). Seventy patients (29%) were admitted to the hospital and 3 died. At 30-day follow-up, 29 patients (12%) returned to the ED. In the univariate analysis, reconsultation to the ED was significantly associated only to prostate palpation (p=0,045) and bacteremia (p=0.037). Revisits appeared to be more frequent in patients with diabetes *mellitus* (p=0,052) and prior immunosuppressive therapy (p=0,050) although not reaching statistical significance.

Conclusions:

1. In our series, prostate palpation and bacteremia were the only variables found to be related to reconsultation in the ED among patients with ABP.
2. Patients with ABP discharged from the ED need clinical follow-up and monitoring of microbiological findings in order to assure an adequate antibiotic treatment.

#7157 : Should we recommend the implementation of emergency department short-stay units to alleviate emergency department overcrowding?

Preferred format : Oral presentation

Authors:

Carles Ferre (1), Ferran Llopis (1), Antoni Juan (2), Francisco Javier Martin-Sanchez (3), Gonzalo Sempere (4), Pere Llorens (5), Carmen Navarro (6), Mikel Martinez (7)

1. Emergency Department, Hospital Universitari de Bellvitge, Barcelona, SPAIN
2. Gerencia, Institut Catala de la Salut, Barcelona, SPAIN
3. Emergency Department, Hospital Clinico San Carlos, Madrid, SPAIN
4. Short-stay unit, Hospital Dr Peset, Valencia, SPAIN
5. Emergency Department, Hospital General de Alicante, Alicante, SPAIN
6. Emergency Department, Hospital Virgen de la Macarena, Sevilla, SPAIN
7. Emergency Department, Hospital de Basurto, Bilbao, SPAIN

Keywords: Short-stay units, emergency department, overcrowding

Abstract :

Aim:

To describe the general characteristics and evaluate the activity of Emergency Department short-stay units (EDSSUs) in Spanish hospitals.

Methods:

This is a cross-sectional study based on a subanalysis of the REGICE database (Spanish abbreviation for Short-stay Unit Registry) focussing specifically on short-stay units functionally depending on the Emergency Department (ED). A questionnaire was sent to coordinators responsible for the EDSSUs identified among all Spanish hospitals appearing on the Ministry of Health web page. Data regarding structure, caseloads and clinical management practices were collected. Observation units for ED patients staying less than 24 hours and specialized units designated to treat one specific condition were excluded from the analysis.

Results:

A total of 591 hospitals appearing on the web page of the Spanish Ministry of Health were contacted and 35 EDSSUs (5.9%) were identified. Of these, 23 participated in the study reporting the 12-month activity registered in 17 EDSSUs and between 5 and 10.5 months in the remaining 6 through 2011. On average, the EDSSUs had 14 beds (range 5-30) and a mean physician/bed ratio of 1:6 (range 1:2-1:10). A total of 25,568 patients with a mean age of 67.2 ± 9.8 years were admitted during the study period. Seven EDSSUs (30.4%) admitted between 1000 and 2000 patients each and four EDSSUs (17.4%) more than 2000 patients each. In the latter group, patients admitted to the EDSSU accounted for 12% to 16.3% of all admissions from the ED. The most frequent diagnoses were acute heart failure, chronic obstructive pulmonary disease exacerbation, urinary tract infection and respiratory tract infection (DRG codes 127, 088, 321 and 541). On average, the LOS was 2.6 ± 1.1 days (range 1.2-5.3) varying between 2.2 and 3.54 days for the 10 most frequent DRG considered separately, the 30-day readmission rate after discharge from the EDSSU was 6.7% (range 0-14.6%) and in-hospital mortality was 0.59% (range 0-2.68%).

Conclusions:

1. To date, only a few Spanish hospitals have implemented EDSSU.
2. Prevalent infections and exacerbation of chronic conditions are the most frequent causes for admission.
3. Considering the results in terms of LOS, and the mortality and readmission rates after discharge, EDSSU appear to be safe and effective.
4. Specific indicators should be developed in the near future to monitor and assess activity, patient outcome, quality of care, costs and resource use of EDSSUs.
5. Given the important number of admissions, both absolute and relative, EDSSUs may be a useful tool to alleviate ED overcrowding although studies to assess the specific impact of such units are lacking.

#7158 : Does Priapism Etiology Significantly Change Outcomes in Those Patients Presenting to the Emergency Department?

Preferred format : ePoster

Authors:

Fred Fiesseler (1), Dave Salo (1), Brian Walsh (1), Renee Riggs (2)

1. , Morristown Medical Center, Morristown, USA
2. , Rutgers Medical School, New Brunswick, New Brunswick, USA

Keywords: priapism, emergency medicine, erectile dysfunction

Abstract :

Introduction: Priapism is a sporadic disease, which requires prompt evaluation/treatment to avoid significant sequelae. Treatment of this disease is highly variable and is dependent upon the etiology.

Objective: To determine the outcomes of patients (pts) presenting to the emergency department (ED) with priapism based upon the suspected etiology.

Design: Retrospective cohort study utilizing an electronic database. Charts were extracted using ICD9 diagnosis over 2 yrs. Enrolling hospitals (N=15) represent urban, suburban, academic, and community settings. Charts were de-identified and reviewed for predetermined data points by blinded study personnel. Exclusion criteria: non-priapism diagnosis or chart unavailability. Pediatrics included those < 21 yrs old. Intrapenile procedures included any bedside aspiration/injection of medication. Statistics: Chi-square test, with a significant P-value of <0.05.

Results: During the study period 236 charts were analyzed. Exclusion: unavailability(N=8) and non-priapism diagnosis(N=6), leaving 222 charts. Median age overall was 39 yrs(IQR 22-52). Pediatrics comprised 4%(N=9). Multiple visits occurred in 8%(N=18). Regarding etiology: erectile dysfunction medications(EDM) involved 23%(N=52) with 75%(N=39) being intrapenile, sickle cell comprised 20%(N=45), antipsychotic medications 14%(N=30), cocaine utilization in 2% of cases(N=4), and 41%(N=91) had no identifiable etiology. Admission occurred in 15%(N=34) overall. Admission rates of those on EDM was 2%(N=1)(p=0.009), sickle cell comprised 20%(N=9)(p=0.43), antipsychotic medications 13%(N=4)(p=0.77), and in 50%(N=2)(p=0.06) of cocaine associated cases. Intrapenile procedure occurred in 56%(N=125) overall. With regards to this 15%(N=8)(p<0.009) were on EDM, 42%(N=19)(p=0.08) with sickle cell, 67%(N=22)(p=0.7) on antipsychotic medication, and 50%(N=2)(p=0.06) of cocaine users underwent ED intrapenile treatment. Emergent operation occurred in 7%(N=16): EDM were implemented in 2%(N=1)(p=0.38), antipsychotic 10%(N=3)(0.59), and cocaine/sickle cell 0%.

Conclusion:Priapism caused by EDM, the most common etiology, were associated with significantly less admissions and need of emergent intrapenile procedures.

#7159 : Press Ganey scores do not improve for emergency medicine residents as they proceed through training.

Preferred format : ePoster

Authors:

Fred Fiesseler (1), Paul Szucs (1), Dave Salo (1), Renee Riggs (2)

1. , Morristown Medical Center, Morristown, USA
2. , Rutgers Medical School, New Brunswick, New Brunswick, USA

Keywords: Press Ganey, Residents, emergency medicine

Abstract :

Press Ganey scores are often used as an administration marker for bonuses and job security. Certainly this application has its drawbacks, but nonetheless this evaluation tool has become an important instrument for accessing physician capabilities and patient satisfaction. Residents at our facility are actively trained with regards to patient contentment and ways to improve this metric.

We sought to determine if Press Ganey scores would improve during emergency medicine residency training.

This was a retrospective cohort study of emergency medicine residents. Population: Only those resident with three years of Press Ganey scores were utilized. Only those scores known to be associated with a specific resident were tabulated and the “doctors score” component of Press Ganey evaluation was employed. Scores were separated for analysis into two time segments, first 1.5 years of residency and second 1.5 years of training. Statistics: A paired student T-test with a significant P value of 0.05 was utilized. In cases of blank data for any specific resident the average score for that time period was calculated and used for that data point. This study was approved by our IRB. RESULTS: Three-hundred and sixty-two individual Press Ganey scores were available for analysis for ten different residents fitting inclusion criteria. Eighty percent (N=8) were male residents. Mean overall Press Ganey doctor’s score was 88.4 and overall Press Ganey score was 87.3. The average score for the first half of residency was 88.3 while the second half was 86.9. Mean difference was 1.3 (95% CI -2.4 to 5.3) P=0.48. The highest mean score occurred in third year and lowest score was in year two (p=0.29). Regarding gender, female residents mean Press Ganey was 88.3 and compared to the males 88.4 (p=NS) score.

Though overall Press Ganey scores were very good, no significant improvement occurred during resident training.

#7160 : Internal Management as a key lever to retain experienced nurses in the ED

Preferred format : ePoster

Authors:

Claire Kam (1), Pierrick Le Borgne (1), Claude Geronimus (1), Charles-Eric Lavoignet (1), Sarah Ugé (2), Sophie Hatsch (1), Pascal Bilbault (1), Pierre Vidailhet (3)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. SAMU-SMUR, CHU Strasbourg, Strasbourg, FRANCE
3. UNISIMES, Faculté de Médecine de Strasbourg, Strasbourg, FRANCE

Keywords: nurses, internal managment

Abstract :

Introduction:

Building up nurses' loyalty to their work place is a strategic stake in the Emergency Department (ED). However, in our teaching hospital, the turnover remains over 20% each year. The nurses are key actors in the effective and smooth running of the department. The quality of care they deliver is affected by the work environment. They often feel conflicted between their roles as an ED nurse and the internal organization of the department (i.e. between quality of care and performance requirements). Our aim was to analyze staff satisfaction in the ED in order to identify the best actions suitable for their needs. This approach is known as internal marketing. Concepts such as Magnet hospitals have been recently developed and a significant literature is there to demonstrate their effectiveness [1].

Methods:

All nurses were invited to fill in a questionnaire in order to assess their satisfaction, their autonomy, their beliefs and their training needs.

Results:

A total of 43 nurses returned the questionnaire (73% response rate). Our nurses get along well together and are happy to help each other. They would like to be more involved in the Emergency Department. They have various learning needs and ask for appropriate training. However, there are several negative points; firstly a lack of strategic vision for the department. They also feel that their teamwork is not valued. Sometimes the relationship between physicians and nurses is troubled leading to an inefficient organization. The nurses with more than 3 years of experience are paradoxically the least satisfied. They feel that their value and qualifications are not recognized and that they cannot express their concerns, this in turn generating frustration.

Conclusion:

From this analysis a strategic plan has been developed with 3 priorities:

- Maintain a sense of belonging.
- Set up a training program for staff.
- Improve the relationship between physicians and nurses.

We have initiated a short track plan for patients, which was requested by 42% of nurses, leading to improved and faster emergency care. Internal marketing is a powerful lever creating a meaningful work environment as well as a more unified and well-trained team. Our aim is to become a great place to work with a focus on quality of care, in other words to become a hospital with magnet status. It has been proven that this kind of department attracts and retains the most qualified nurses while also being preferred by patients, as well as having the highest quality of care.

[1]Aiken L, Havens D, Sloane D. The Magnet nursing services recognition program: a comparison of two groups of Magnet hospitals. J Nurs Adm. 2000;39 suppl 7/8:S5–S14

#7162 : Practice study on the use of Gamma-OH in pre-hospital emergency medicine

Preferred format : Oral presentation

Authors:

Amandine Abriat (1), Michael Lemaire (2), Daniel Jost (1), René Bihannic (2), Michel Bignand (1), Jean-Pierre Tourtier (1)

1. Service médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris , FRANCE
2. Service médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE

Keywords: Gamma-OH, pre-hospital emergency medicine, anesthetic drug, disaster medicine

Abstract :

Introduction: Nearly 50 years after its discovery, Gamma-OH (GOH) is used less and less in pre-hospital emergency medicine. Yet it offers good hemodynamic tolerance, is not much of a respiratory depressant and is easy to use in extra-hospital situations. In the absence of recent practice studies, we determined reporting its most frequent indications in the current pre-hospital setting as the main objective. Secondary objectives were to assess compliance with proper use, associated anesthetics and the occurrence of complications.

Material and methods: Retrospective monocenteric practice study in a pre-hospital emergency medical service with 6 mobile intensive care units (MICU). Inclusion criteria: all patients who received GOH administration in a pre-hospital situation. Data collected from medical observation sheets were epidemiological, clinical, therapeutic (indication and dose of Gamma-OH administered, associated hypnotic and/or analgesic treatments) and safety (adverse events, complications from anesthetics).

Results and Discussion: From 01/01/2015 to 12/31/2015, 111 patients were included, with a mean age of 51 years [3-91] and 81 (73%) men. Prescription of GOH was related to: in 61 (55%) cases, return of spontaneous circulation (ROSC) after cardiac arrest; in 19 (17%) cases, coma; in 17 (15.3%) cases, severe trauma, including 9 associated with severe head trauma (SHT); in 7 (6.3%) cases, an isolated SHT; in 6 (5.4%) cases, acute respiratory distress with reduced consciousness; and in one case, a burn patient. Note that among the severe trauma patients there were 4 victims of multiple ballistic wounds in the November 13 attacks that received maintenance dose of GOH after tracheal intubation using rapid sequence induction.

After tracheal intubation, maintenance of sedation was performed by GOH alone in 26 (23.4%) cases; by GOH associated with sufentanil in 27 (24%) cases and GOH+midazolam+sufentanil in 54 (48.6%) cases. In adults (n=109), the initial dose was 60 mg/kg in the majority of cases (85%) as recommended, and 30 mg/kg in 10% of cases. This administration was followed by a second half-dose injection in 16 (14%) cases. No anaphylactic complications were reported. Only 2 episodes of hypotension were observed in patients who received it with midazolam.

Conclusion: Because of its ease of use and a low complication rate, Gamma-OH proves even today to be a relevant product in pre-hospital situations or in disaster medicine. Gamma-OH remains in favour with our MICU physicians, particularly in cases of ROSC after cardiac arrest or severe trauma. These preferences are explained by facilitating the management of anesthesia, especially during long and difficult transportation by stretcher. A prospective study should be started to compare it to other products.

#7163 : Syncope teenage footballer

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Mixoma, syncope, fibrillation

Abstract :

Syncope teenage footballer

An 16 years old man without medical or family history that while playing a football game sincope suffers cardiac massage maneuvers starting by spectators of the party, until the arrival of emergency equipment .After 18 minutes beginning 2 monitoring ventricular fibrillation defibrillation and initiating endotracheal intubation was recovering from cardiac arrest after 15 minutes of resuscitation sinus heart rate and electrocardiogram ST elevation in inferior territory .During transfer to our hospital magnesium sulfate, amiodarone, administered and induction sedation began to cardiorespiratory postparada hypothermia.

On arrival TA 107/58 normotensive 100% saturation assisted breathing. Neurological, under the influence of sedation, symmetric and reactive pupils prone spontaneously mobilizing mydriasis and upper extremities. Net cardiac auscultation tones without audible murmurs, without pathological respiratory sounds. depressible soft abdomen and no palpable masses and symmetrical central pulses are palpated ..

Analytical Htc 44.4% 77.6% N leukocytes Platelets 18,500 286,000 66% dimer D TP 2.182 Creat 1.39 K ions, Mg normal, troponin 0.288 at 3 o'clock curve positive cardiac biomarkers CK-MB Troponin 2.46 12.30.

Rx thorax without findings.

EKG: RS 85 pm with ST elevation significantly lower territory.

Differential diagnosis:

1. arrhythmogenic heart disease where the heart is structurally normal but has electrical faults as Brugada syndrome and long QT syndrome.

2. possible structural heart disease such as hypertrophic cardiomyopathy, dilated cardiomyopathy or arrhythmogenic right ventricular to make this screening laptop Echocardiography was requested.

3. With the analytical data and electrocardiographic myocardial possible at the expense of right coronary infarction.

4. screening of pulmonary embolism

After completion of portable mass Echocardiography finding suggestive of left atrial myxoma.

Within 24 hours of admission persisted with elevated biomarkers CK-MB 675 peak maximum. catateriSmo heart was dismissed due to the impossibility of revascularization or aspirating embolic material may myxomatous origin and at all times the overall ventricular contractility was preserved.

They intervened opening left atrium and reliable mass resection and anchored in foramen ovale compatible with myxoma appearance.

Excellent postoperative evolution. It was extubated 10 hours after surgery and was discharged from the service of cardiovascular surgery at 12 days of cardiac arrest.

Discussion:

Primary cardiac tumors represent 5% of all tumors and cardiac myxoma is the most common type of primary cardiac tumor in adults. Its most common presentation is in the left atrium. They may clinically present with various forms: asymptomatic incidental finding on echocardiographic examination, auscultation can clearly reveal one mitral murmur, with neurological symptoms and cardioembolígenos pictures because of the embolic potential presented with detachments small portions emboli in small vessels.

In conclusion reflect useful in emergency areas availability portable echocardiography.

#7164 : Staphylococcal community-acquired urinary tract infection in the emergency department: a sign for acute infective endocarditis?

Preferred format : ePoster

Authors:

Lafon Thomas (1), Philippe Vignon (2), Thomas Daix (2), Lucie Lavaud (3), Alexandra Appert (3), Vincent Bigrat (3), Vincent Legarçon (3), Olivier Barraud (4), Bruno François (5)

1. Emergency Department and Inserm CIC 1435, Limoges University Hospital, Limoges, FRANCE
2. Intensive Care Unit, Limoges University Hospital, Limoges, FRANCE
3. Emergency Department, Limoges University Hospital, Limoges, FRANCE
4. Microbiology Department and Inserm UMR-S1092, Limoges University Hospital, Limoges, FRANCE
5. Intensive Care Unit and Inserm CIC 1435, Limoges University Hospital, Limoges, FRANCE

Keywords: Infective endocarditis; Saphylococcus aureus; bacteriuria

Abstract :

Introduction: Urinary tract infection is a frequent cause of admission at the Emergency Department (ED). Most prevalent bacteria are usually gram-negative bacilli and *Staphylococcus aureus* (*Sa*) is rarely evidenced (2.5%) except in hospital-acquired infections due to urinary catheter (Ekkelenkamp, Clin Infect Dis Off Publ Infect Dis Soc Am 2007;44(11):1457–9). Bacteriuria can be observed in *Sa* infective endocarditis (IE) because of the metastatic properties of *Sa*. We hypothesized that presence of *Sa* in the urine could be related to Staphylococcal bacteremia associated with unsuspected IE and not only the expression of a "usual" urinary tract infection.

Methods: This is a descriptive single-center study conducted over a 10-year period in the Teaching Hospital of Limoges. All patients admitted to the ED with *Sa* (both MSSA and MRSA) isolated from their urine cultures were retrospectively analyzed. Data were collected from the database of the microbiology department and the patient medical charts. We secondarily searched if a *Sa* IE had been documented in patients with *Sa* isolated from their blood cultures in order to establish a link between IE and presence of *Sa* in the urine. We used modified Dukes criteria as diagnostic criteria of IE (Li, Clin Infect Dis Off Publ Infect Dis Soc Am 2000;30(4):633–8).

Results: Between 2005 and 2015, 420 000 patients were admitted in the ED. Out of the 204 records analyzed, 174 patients whose urine culture grew *Sa* were excluded because they had a urinary catheter (n=75) or sterile blood cultures (n=99). Finally, 30 patients were studied (17 men; median age: 73 years; diabetes: n=7; mitral valvular disease: n=2, aortic valvular disease: n=2). Reasons for admission were markedly heterogeneous and fever accounted for 14 cases. Echocardiography was performed in 25 patients with a median delay of 6.5 days (range: 0-23 days) and IE was confirmed in 21 of them. Only three cases of IE have been diagnosed in the ED because of a fever and valvular murmur (n=2) but no patient was admitted to the ED for IE suspicion. Other initially suspected diagnoses were prostatitis, pneumonia or appendicitis and not related to any type of infection in 26% of the cases. The origin of *Sa* bacteremia was cutaneous in 67% of the cases. During the hospital stay, 70% of the patients presented secondary sites of *Sa* infection in addition to the urinary tract (arthritis, splenic abcess, cerebral hematoma). Among 21 patients presenting with an IE, 8 died within 7 days, and total hospital mortality reached 50 %.

Conclusion: This case series suggests that IE should be ruled out when *Sa* bacteriuria is evidenced, irrespective of the clinical presentation. This could question the reality of isolated community-acquired urinary tract infections due to *Sa*.

#7165 : Gripal syndrome in January will not always be Gripe

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: sepsis, rickettsia, influenza

Abstract :

A 15 years old man student with no medical history. He consultation in February with 3 days of evolution in artromialgias, weakness in the lower limbs, 38C fever, decreased appetite and altered behavior.

Physical examination: agitation and nervousness, feeling of illness, fever, hypotensive and tachycardic , Saturation 98%, tachypneic.

Oropharynx normal, no lymphadenopathy. Cardiopulmonary auscultation without findings. Abdomen: soft and depressible with no signs of peritoneal irritation, discreet hepatosplenomegaly. Neurologic: moderate nuchal rigidity and lower limbs decreased sensitivity. A skin level, maculopapular rash on the legs and trunk with erythematous ulcerated lesion in the right edge of inner side knee. The patient tells us that since it appeared to three weeks skin lesions attributed to flea bites from your hamster.

Tests: leukocytosis neutrophilia 33,320, TP 48.9%, Creat 3.66, PCR 354. Thorax Radiography: without findings. Given these results he entered expand analytical observation with suspected septic process (Ph 7.29 Lactate 4.5) and TAC prior skull puncture (high pressure liquid crystalline) was performed. Blood cultures were extracted throat swab H1N1 (seasonal influenza peak A), urine, and CSF culture Serology (Rickettsia, Coxiella, Borrelia, Brucella).

We begin empirical treatment: ceftriaxone, clarithromycin, doxycycline and acyclovir. Tras10 hours under observation, began with tachypnea, hypoxemia, alveolar infiltrates ray Thorax where bilateral interstitial were observed repeated.

Serology negative H1N1. Due to respiratory distress proceed to orotracheal intubation: Septic Shock Distributive associating renal failure, coagulopathy consumption, lactic acidosis.

After 72 h in ICU serological result was received: Rickettsia agglutination conorii positive Ig M 1/700 confirming Fever boutonneuse. He evolved well remain high at 6 days.

Discussion:

We have presented this case because full social alarm influenza must be alert to febrile almost all associated artromialgias, malaise, headache and fever, reasons for consultation very common in emergencies, thus highlighting the history and physical examination are very valuable tools in this case, where almost unnoticed boutonneuse the skin lesion spot on leg and February is not exactly the time where the vector, the tick, has increased activity, it usually happens in summer.

Rickettsiae usually live insects such as mites, ticks, fleas or lice. Human infection occurs by the bite of these insects that act as a reservoir. The clinical case corresponds to an infectious disease (boutonneuse fever) caused by Rickettsia conorii and transmitted by the hamster tick with skin sting from this location over the blood occurs, causing a vasculitis widespread. Today it is known that endothelial injury break endothelium-platelet unit, platelet activation, increased thromboxane A2 and endothelin release.

Spotted fever usually has a benign clinical course, but a small percentage of cases (2-3%) has a severe course with significant visceral involvement, resulting in renal failure, disseminated intravascular coagulation with purpuric rash, severe hepatic impairment, infiltrators lung and altered consciousness. Rickettsiae proliferate in the endothelium of small arteries, veins and capillaries causing increased vascular permeability, microthrombi formation, vascular occlusion and microinfarcts. Injuries can affect various organs such as the liver, spleen, lung, kidney, myocardium, muscle, meninges and brain.

#7166 : An Italian version of the Ottawa crisis resource management rating scale: A reliable and valid tool for assessment of simulation performance

Preferred format : Oral presentation

Authors:

Jeffrey Franc (1), Manuela Verde (2), Alba Ripoll Gallardo (2), Luca Carenzo (2), Pier Luigi Ingrassia (2)

1. University of Alberta, Department of Emergency Medicine, Edmonton, CANADA
2. Universita del Piemonte Orientale, Translation Medicine, Novara, ITALY

Keywords: simulation, evaluation

Abstract :

INTRODUCTION: Objective measurement of simulation performance requires a validated and reliable tool. However, no published Italian language assessment tool is available. Translation of a published English language tool: The Ottawa Crisis Resource Management Global Rating Scale (GRS) may lead to a validated and reliable tool.

METHODS: After developing an Italian language translation of the English language tool, the study measured the reliability of the new tool by comparison to the English language tool used independently in the same simulation scenarios. In addition, validity of the Italian language tool was measured by comparison to a skills score also applied independently.

RESULTS: The correlation coefficient between the Italian language overall GRS and the English language overall GRS was 0.82 (Adjusted 95% confidence interval: 0.62 to 0.92). The correlation coefficient between the Italian language overall GRS and the skill score was 0.85 (Adjusted 95% confidence interval: 0.68 to 0.94).

DISCUSSION: This study demonstrated that the Italian language GRS has acceptable reliability when compared to the English language tool, suggesting that it can be used reliably to evaluate performance during simulated emergencies. The study also suggests that the tool has acceptable validity for assessing simulation performance.

CONCLUSION: The study suggests that the Italian language GRS translation has reasonable reliability when compared to the English language GRS, and reasonable validity when compared to the assessment of the skills scores. Data suggest that the instrument is adequately reliable for informal and formative type examinations, but may require further confirmation before used for high stakes examinations such as licensing.

744
757

#7167 : Paget-Schrotter syndrome as a cause of pulmonary embolism

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: thrombosis, venous, Paget-Schrotter

Abstract :

Female 40 years nurse with a medical history of tonsillectomy and anemia in current study, being treated with iron. Practice usually quite sport, including spinning.

Emergency room because pain, paresthesia and right arm size increase progressively from seven days ago. He was treated with anti-inflammatories and benzodiazepine arm pain. Given the improvement not consult us .From made 24 hours shortness of deep inspiration air. No chest pain or palpitations.

Physical exploration. Afebrile, normotensive, 99% saturation eupneic. Right arm increase in diameter compared with contralateral arm smearing biceps and chest vascular redistribution. Pulses present. Normal cardiopulmonary auscultation. nondescript abdomen. normal legs.

Suspicion Diagnóstica: Muscle Injury hematoma, lymphoedema, venous thrombosis, cellulitis in the right arm.

Additional tests: Normal analytical except high D-dimer 2051.EKG: RS 75 pm shaft 60G. Chest radiograph without alterations. Doppler ultrasound arm thrombosis subclavian, axillary vein and right Basilica.

Because deep vein thrombosis right arm and mild dyspnea was referring the patient CT angiography Thorax showing defect segmental repletion level lobar artery lower left was requested lobar artery lower right and at the level of artery middle lobe, all compatible with thromboembolism pulmonary.

Final diagnosis: proximal deep venous thrombosis and in the right forelimb (Basilica veins, axillary and subclavian), Paget-Schrotter syndrome. Pulmonary embolism in segmental level.

Evolution: the patient was admitted in Internal Medicine with anticoagulant treatment and study of negative thrombophilia high .It was after 7 days in hospital, receiving treatment with warfarin.

Discussion:

Deep vein thrombosis of the upper limb is rare, accounting for 10%, but should be taken into account by the emergency physician because of the risk of pulmonary embolism (6-9% of deep Thrombosis may be complicated by pulmonary thrombosis) .The upper limb thrombosis are divided into primary and secondary. The primary can be idiopathic, compression of subclavian vein with adjacent musculotendinous structures during exercise (Paget-Schrotter syndrome). Secondary relate to catheters (venous or pacemakers), cancer, thrombophilia, trauma, shoulder surgery or hormonal.

The Paget-Schrotter syndrome is an underdiagnosed disease, which mainly affects young individuals in their dominant limb. Its incidence is 2 per 100,000 inhabitants, average age 32 years being the male-female ratio 2: 1.A 80% of patients report significant previous physical activity, although the first rib and clavicle hardly move, the vein is located at the point of maximum compression on passing between the anterior scalene and subclavian muscle tendon.

There is no consensus regarding the treatment of this disease. Today, most of the authors seem to agree that anticoagulation alone offers poor results so it is recommended to associate to fibrinolysis and surgical treatment (first rib resection) or endovascular.

#7168 : Flutter ic case of proarrhythmia

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Atrial flutter, flecainide, ventricular tachycardia

Abstract :

Clinic history:

73 years retired plumber man with active life medical history of hypertension, dyslipidemia, paroxysmal atrial fibrillation and neoplasia treated with radiotherapy prostate. His flecainide 100 mgr medication every 12 hours, bisoprolol 5 mgr, enalapril 5 mgr, acenocumarol and tamsulosin.

Before to receive radiotherapy, suffers box with sweating dizziness, general malaise which leads him to the emergency contact. He had breakfasted and taken his dose of bisoprolol and flecainide morning. electrocardiogram objectifying wide QRS regular tachycardia at 195 bpm, why it passes critical area is performed. He showed no chest pain or palpitations or dyspnea.

Physical examination on admission: conscious and oriented, hipotenso TA 80/40, taquicárdico190 lpm, pale skin with sweating and feeling sick.

No jugular venous distension

rhythmic cardiac auscultation tones to 190pm no murmurs, no pathological lung sounds.

nondescript abdomen, lower extremities without edema or signs of venous thrombosis.

Due to hemodynamic instability and evidence of wide QRS regular tachycardia proceeds to synchronized electrical cardioversion after sedation with a single download reverting to sinus rhythm 100 joules.

After cardioversion, ECG RS 65 pm shaft 45 Gº Signs Hypertrophy

Left ventricular. all antiarrhythmic medication was discontinued.

Complementary tests: analytical INR 3. Chest radiography: cardiomegaly discreet, parenchymas without findings. Echocardiography moderate and LVH prevalence of basal aortic stenosis.

Differential diagnoses:

- Ventricular tachyarrhythmia wide QRS

- Acute Coronary Syndrome

- QRS tachyarrhythmia secondary IC antiarrhythmic width (flecainide, propafenone)

Final diagnosis: Flutter wide QRS tachyarrhythmia IC.

Evolution: The patient remained stable for 20 h under observation entering cardiology study, where catheterization were performed which showed normal coronary arteries, Holter with frequent premature ventricular contractions and ventricular tachycardia episode Non-Hold (4 beats). electrophysiological study without induction of ventricular tachycardia and ventricular pacing after showing aberrant after atrial stimulation suggestive of supraventricular paroxysmal tachycardia aberrated.

Discussion: the first case of pro-arrhythmia (ie induction antiarrhythmic drugs or change worsening arrhythmia treated well with the development of a new bradyarrhythmia or tachyarrhythmia) dates from 1922.

There was a before and after in terms of proarrhythmias following the publication in 1991 of the study CAST (The Cardiac Arrhrythmia Suppression Trial) showing an increase in mortality with the use of flecainide and encainide versus placebo in patients with previous myocardial infarction. In our case was a patient with paroxysmal atrial fibrillation treated with flecainide (pocket pill) he developed atrial flutter. Flecainide is an antiarrhythmic 1C group that acts by blocking the channel sodio.La flecainide or propafenone management, atrial fibrillation can transform into flutter (flutter called 1C). The result will be lent flutter with 1: 1 conduction to ventricles and wide QRS.

It is useful to prevent co-administration of beta-blockers.

The incidence of this type of IC Flutter is low, about 3%.

#7169 : Comparison of simple stylet versus lighted stylet for tracheal intubation with direct laryngoscopy

Preferred format : ePoster

Authors:

KIM JIN HEE (1), PARK SEONG JOO (1), LEE YEA JI (1)

1. , Department of Anesthesiology and Pain Medicine, Seoul National University Bundang Hospital, Seongnam, KOREA, REPUBLIC OF

Keywords: lighted stylet, tracheal intubation, direct laryngoscopy

Abstract :

Background: The purpose of this study was to investigate the effectiveness of lighted stylet during tracheal intubation with direct laryngoscopy.

Methods: Two hundred eighty four patients undergoing general anesthesia were randomly assigned to either simple stylet (group S) or lighted stylet group (group L). In both groups, stylet-assisted tracheal intubation was performed with direct laryngoscopy. In group S, simple stylet was used. During intubation, the stylet was removed when the tip of the endotracheal tube was supposed to pass the larynx. In group L, lighted stylet was used and removed after confirming transillumination of soft tissue above the suprasternal notch. The success rate at the first attempt, total intubation time, the incidence of mucosal bleeding and the degree of postoperative sore throat were compared.

Results: Compared with simple stylet, lighted stylet significantly increased in the success rate of tracheal intubation at the first attempt (128 [90%] *vs.*142 [99%], $P < 0.001$, Group S and L, respectively). The incidence of mucosal bleeding was significantly lower in Group L (35[25%] *vs.* 19[13%], P: 0.011, Group S and L, respectively). Total intubation time and the degree of postoperative sore throat were not significantly different between the two groups.

Conclusions: Lighted stylet increases in the success rate of tracheal intubation during stylet-assisted tracheal intubation with direct laryngoscopy.

References: Götz Serocki,, et al. (2010). “Management of the predicted difficult airway: a comparison of conventional blade laryngoscopy with video-assisted blade laryngoscopy and the

GlideScope” European Journal of Anaesthesiology (27): 24–30

Richard M. Levitan, et al. (2011). “The complexities of tracheal intubation with direct laryngoscopy and alternative intubation devices” Ann Emerg Med.(57):240-247

#7170 : Another causes of acute coronary syndrome: Kounis Syndrome

Preferred format : ePoster

Authors:

Alicia Rodríguez (1), Virginia Lozano (1), Fátima Fernadez Salgado (1), Guillén Irene (1), Rico Raquel (1)

1. A&E Department, Hospital Universitario de Móstoles, Madrid, SPAIN

Keywords: Allergic angina and myocardial infarction, coronary vasoespasm, kounis syndrome

Abstract :

Clinic history:

63 years old woman with hypertension and osteoporosis that after eating a chocolate begins with erythema and itching in upper extremities and oppresive chest pain accompanied by sweating. On physical examination, the patient has blood pressure 174/98, heart rate 85 and temperature 36º; erythema and wheals on trunk and upper extremities, lip edema. The blood count and biochemestry have no notable changes. In the initial electrocardiograma ST is decreased in V4, V6 and II. After treatment with nitroglycerine and antihistamines drugs, improves the pain and the ECG changes. At 12 hours the patient begins again with chest pain and LBBB in ECG then activating the myocardial code. Catheterism is performed without coronary lesions objectified. The pain improves again after administrataion NTG, metilprednisolone and antihistamines drugs. At no time myocardial enzymes rise.

Conclusion:

The association between coronary events and allergic reactions are recognized for years. The first case was described in 1950 after allergic reaction to penicillin. In 1991 Kounis and Zayras describe Kounis syndrome establishing two types: Type I , patients with cardiovascular risk factors and coronary spasm with normal coronary arteries . Type II, with atherosclerotic plaques in the coronary arteries that are broken during the allergic reaction.

In coclusion an allergic reaction can lead to cardiovascular events ACS on arteries with or without angiographic lesions being the pathogenic mechanism vasospasm produced by mediators delivered in anaphylaxis as histamine and leukotrienes that act as a potent vasoconstrictor. Facilating factors are the presence of cardiovascular risk factors and the existence of atherosclerostic plaques.

#7171 : GALL BLADDER VOLVULUS

Preferred format : ePoster

Authors:

Zenab Abdel Rahman (1)

1. Trauma/Critical Care Fellow, Hamad Medical Corporation, Doha, QATAR

Keywords: Abdominal pain, Gall Bladder, Volvulus

Abstract :

Abstract

Case report: GALL BLADDER VOLVULUS

Authors:

Dr Zeinab Abdel Rahman Senior Clinical Fellow

Dr Razana Mohammed PGY3

Emergency department/ HGH

Introduction:

Gall bladder volvulus is a rare entity, with a predilection for elderly women in their 7th or 8th decades of life. The condition results in rotation of the gallbladder on its mesentery along the axis of cystic duct and artery. Presence of redundant mesentery is a prerequisite. The disease is a frequent mimicker of acute Cholecystitis, often difficult to diagnose preoperatively .Till date only about 300 cases have been reported in the literature, with children and adolescent presentations being exceedingly rare.

Case Description:

We report a case of an 18 year old female who presented to Emergency with right upper Quadrant pain for a day associated with repeated vomiting. The patient was stable, had tenderness in right hypochondrium.

Patient was evaluated as a potential case of acute cholecystitis.

Laboratory investigations have shown normal White cell count, Double normal Liver function tests.

Ultrasound showed the gall bladder was out of the fossa with significant edema and wall thickness suggestive of “Gall bladder torsion”.

Further workup with MRCP was done, which have shown “retrohepatic Gall Bladder, with partial volvulus and hemorrhagic acalcular Cholecystitis. The patient underwent laparoscopic detorsion and cholecystectomy and had an intraoperative evidence of gall bladder volvulus with gangrene with an uneventful course of hospital stay.

Conclusion:

We believe that this may be the first documented case of this rare condition from Qatar.

Gall Bladder volvulus mostly occurs in Elderly, but it might occur in young patients as well and should be included in differential diagnosis of abdominal pain.

Ultrasound is safe, feasible diagnostic tool, as sensitive as MRI in diagnosis of Gall Bladder Volvulus.

#7172 : Patient Perceptions of the Emergency Department

Preferred format : Oral presentation

Authors:

Stormy Monks (1), Igor Kushner (2), Alejandro Vargas (2), Raymond Ruiz (1), Radosveta Wells (1)

1. Emergency Medicne, Texas Tech University Health Sciences Center El Paso, El Paso, USA
2. Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center El Paso, El Paso, USA

Keywords: perception, triage, emergent, non-emergent, overcrowding

Abstract :

Background:

From 1992 to 2014, the number of emergency department (ED) visits increased from approximately 91 million to 133 million.[1] ED overcrowding is among the biggest problems in the United States healthcare system, to the extent that ED directors nationwide admit the quality of care of patients is negatively impacted as a direct result of it.[2] While a variety of complex factors are responsible for overcrowding, inappropriate use of the ED is often targeted because it is considered expensive and wasteful. Other factors such as not having a primary care provider (PCP) or overestimating the severity of their condition may also influence their decision to present to the ED. By identifying factors that cause ED overcrowding, ED staff may be able to provide more timely care to the patients who need immediate care.

Purpose:

The purpose of this study was to examine the type of conditions patients are presenting with to the ED and their reasons for choosing to seek care in the ED.

Methods:

This cross-sectional study collected 500 surveys via convenience sampling from emergency department patients at a county hospital. Due to being on the US/Mexico border, surveys and consents were provided in English and Spanish. The survey was used to collect data regarding urgency for the ED visit, triage rating by the ED staff, self reported condition, demographics, and PCP status. Data analysis was completed using IBM SPSS 22.
Results:
Study results showed that 58% of patients reported not having a PCP. A total of 17% of the patients surveyed considered their condition to be life-threatening. Additionally, 9% of patients were rated as emergent and 81% as urgent by the ED triage rating suggesting that a large portion of the patients surveyed could have received care elsewhere. However, only 34% of the patients believed that they could be treated at a clinic. The main influences on seeking care in the ED was being “seen quickly and/or without an appointment” and “allowed them to work around their schedule“.
Conclusions:
These findings suggest that many patients are aware they are using the ED inappropriately or are considering themselves as more in need of urgent care than the ED staff evaluates them to be. Although many patients may not need immediate care, the ED may be their only option for healthcare. The availability and convenience of the ED, along with a lack of access to other sources of care are highly influential factors that the healthcare system should focus on to reduce the overcrowding in EDs in the United States. Addressing these factors will allow EDs to provide appropriate, uncompromised, and timely care to the patients with true emergencies.
References:
1.American Hospital Association. Trendwatch Chartbook 2014: Trends Affecting Hospitals and Health Systems. Washington, DC: Avalere Health; 2014.
2.Derlet R, Richards J, Kravitz R. Frequent overcrowding in U.S. emergency departments. Acad Emerg Med. 2001;8(2):151-155.

#7173 : The multifaceted impact of dying in the emergency department

Preferred format : Oral presentation

Authors:

Rodolfo Ferrari (1), Chiara Lanzarini (1), Annamaria Longanesi (2), Rossella Rapagnani (3), Donatella Rotondo (3), Mario Cavazza (1)

1. Medicina d'Urgenza e Pronto Soccorso, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento dell'Emergenza – Urgenza, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY
2. Logistica Sanitaria, Direzione Sanitaria, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY
3. Medicina d'Urgenza, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento dell'Emergenza – Urgenza, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY

Keywords: Death, impact, emergency room, emergency department

Abstract :

BACKGROUND

Within a project named "Soft Emergency – not only to cure but also to care", one of the main phases concerned "Bad news communication".

To create a specific educational program about communicating bad news in the emergency setting we thought to be necessary to evaluate, both form a quantitative and a qualitative point of view, the impact of dying on our Emergency Department.

METHODS

We retrospectively reviewed every case of death occurred during the year 2015 within the Emergency Department of a University teaching Hospital.

We then analyzed each single case about its peculiar characteristics.

RESULTS

66312 cases were evaluated (media 182 / day);

we recorded 140 deaths in the Emergency Room (11 already dead);

in the different areas of the Ward (brief observation and regular ward; high-dependency medical unit) we documented , 61/10291 (31 in the first 12 hours) and 65/1257 cases (34 in the earlier 12 hours), respectively.

Every single case was unique: from the already dead, to sudden death; from cases with useless long lasting cardio-pulmonary resuscitation efforts, to those with careful palliative measures; from cases with an unexplained cause, to those clearly predictable; from cases in which time made possible to debate and share decisions with both the patient and the family, to those in which family members were neither attending nor aware of the occurring events.

CONCLUSIONS

In the year 2015 266 people died inside our Emergency Department.

Each case represented a peculiar medical management, welfare and olistic committment, and emotional involvement; it is not possible to share any standard recommendation, mainly about times and ways of resuscitation for the patient, and of communications for the family.

Death, and its communication in the emergency setting, are primarily important, both in frequency and significance, on the every-day life of the Emergency Department: the burden of these dramatic issues weigh on Emergency Physicians and Emergency Nurses in the worst moments and conditions, just after useless long-lasting resuscitation efforts, and often with neither a specific education, nor logistics support, nor the chance of an immediate debriefing.

#7174 : Unconventional indications to non-invasive mechanical ventilation in the emergency department

Preferred format : Oral presentation

Authors:

Rodolfo Ferrari (1), Riccardo Voza (2), Daniela Agostinelli (3), Roberto Lazzari (1), Nicola Binetti (2), Mario Cavazza (1)

1. Medicina d'Urgenza e Pronto Soccorso, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento dell'Emergenza – Urgenza, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY
2. Pronto Soccorso ed Emergenza Territoriale, Area Nord, Dipartimento Emergenza, AUSL Bologna, Bologna, ITALY
3. Medicina Interna, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento Medico della Continuità Assistenziale e delle Disabilità, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY

Keywords: Non-invasive ventilation, unconventional indications, acute respiratory failure, emergency department

Abstract :

BACKGROUND

In the last decades Non-Invasive Mechanical Ventilation spread out from the Intensive Care Units to the Emergency Departments, with main evidence in efficacy when treating Acute Respiratory Failure due to Acute Exacerbation of Chronic Obstructive Pulmonary Disease and Acute Cardiogenic Pulmonary Edema.

In the meantime, many different causes, considered as "unusual" indications for NIMV, showed lower levels of efficacy and strength of recommendation, but are increasing in use.

METHODS

We performed an observational prospective study, in the Emergency Department of a University Teaching Hospital, including every non-selected patient treated by NIMV in a 4 months time, to assess the impact and the outcome of conditions considered as unconventional for NIMV.

Failure was defined as in-hospital death or tracheal intubation.

RESULTS

Total: 297 Patients (media 2.43 / day);

pH: (media, median) 7.32, 7.33; P/F: 214, 209;

NIMV as a ceiling treatment: 27.4%;

failure rate: 22.7%.

Unconventional indications:

rate: 51.1%;

ceiling: 32.6%;

failure rate: 26.7%;

ceiling in failures: 52.8%;

failure without tracheal intubation: 80.0%.

CONCLUSIONS

The use of NIMV for unconventional indications is spreading in the Emergency Department: its failure rate is higher than usual cases, as already known in the literature (data usually coming from Intensive Care Units), but in this subgroup the rate of patients with no indication to invasive ventilation in case of failure (“NIMV as a ceiling treatment”) is dramatically high.

We could not find any early predictors of outcome from the lab to help risk stratification in the Emergency Department; in failure cases arterial blood gas data showed some slight abnormalities on the metabolic side (more than the respiratory one); pneumonia and inhalation showed a particularly high failure rate.

VENTILATION / INVASIVE AND NON INVASIVE

Rodolfo Ferrari

#7175 : Non-invasive ventilation in the emergency department: length of staying

Preferred format : Oral presentation

Authors:

Rodolfo Ferrari (1), Roberto Lazzari (1), Daniela Agostinelli (2), Riccardo Voza (3), Mario Cavazza (1)

1. Medicina d'Urgenza e Pronto Soccorso, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento dell'Emergenza – Urgenza, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY
2. Medicina Interna, Policlinico Sant'Orsola – Malpighi di Bologna, Dipartimento Medico della Continuità Assistenziale e delle Disabilità, Azienda Ospedaliero Universitaria di Bologna, Bologna, ITALY
3. Pronto Soccorso ed Emergenza Territoriale, Area Nord, Dipartimento Emergenza, AUSL Bologna, Bologna, ITALY

Keywords: Non-invasive ventilation, timing, length of staying, acute respiratory failure, emergency department

Abstract :

Introduction:

In last decades Non-invasive Ventilation [NIV] (both Continuous Positive Airway Pressure [CPAP] and different modalities of Non-invasive Positive Pressure Ventilation [NIPPV]) has been increasingly applied in the Emergency Department (ED) to treat Acute Respiratory Failure [ARF].

Aims:

Prospective observational study to identify predictors of outcome in Patients with ARF treated with NIV in the ED, and factors related to the needed length of NIV before shifting to standard oxygen therapy (O2tp).

Methods:

We enrolled every Patients treated with NIV for ARF in the ED in a 3 months time.

Criteria to start and stop NIV referred to an institutional protocol.

Attention was focused on diagnostic hypothesis of ARF (Cardiogenic [C], broncho-pulmonary [BP], both or mixed [M], others [O]) and the time to resolution [tR] of the acute phase (min of NIV before shifting to O2tp for almost 48 h).

Results:

One-hundred and fourty-nine patients included (media 1.66/day).

tR significantly higher in case of chronic BP disease (media 1100 vs 377'; CI 95% 744–1453' vs 240–514'; $p<0.01$).

Cases with acidosis or hypercapnia had a slightly higher tR ($p = 0.07$ and 0.08, respectively).

NT-proBNP was not related with tR in any group.

Patients having M or O ARF significantly differed in tR when compared with C and BP groups ($p<0.001$).

tR in C patients was not different with or without chronic BP disease.

Conclusions:

Patients with chronic BP disease and an episode of ARF due to a BP cause should be admitted to a High Medical Dependency Unit capable to ensure a supposable longer NIPPV.

It's possible to consider carrying out in the ED the treatment of the shorter very acute phase of a C ARF, and then admit to a regular ward able to allow at least CPAP.

#7176 : Additional value of d-dimer and the disseminated intravascular coagulation score in predicting outcome after out-of-hospital cardiac arrest

Preferred format : Oral presentation

Authors:

Nina Buchtele (1), Bernd Jilma (2), Andreas Schober (3), Christian Schoergenhofer (4), Fritz Sterz (5), Michael Schwameis (6)

1. Medical Student, Medical University of Vienna, Department of Clinical Pharmacology, Vienna, AUSTRIA
2. Prof. MD, Medical University of Vienna, Clinical Pharmacology , Vienna, AUSTRIA
3. MD, Medical University of Vienna, Emergency Medicine, Vienna, AUSTRIA
4. MD, Medical University of Vienna, Internal Medicine I, Vienna, AUSTRIA
5. Department of Emergency Medicine, Medical University of Vienna, Vienna, AUSTRIA
6. MD, Medical University of Vienna, Clinical Pharmacology , Vienna, AUSTRIA

Keywords: OHCA, DIC

Abstract :

Background: Chances of survival in out-of-hospital cardiac arrest (OHCA) patients decrease with increasing duration of hypoperfusion. The pathophysiological changes after prolonged resuscitation efforts and consecutive hypoperfusion appears comparable to those in severe sepsis leading to post-resuscitation coagulopathy. The occurrence of overt disseminated intravascular coagulation (DIC) is associated with poor outcomes and high mortality risk in various medical conditions. Similarly, the occurrence of DIC in cardiac arrest patients seems to be associated with an unfavorable prognosis.

Objective: Recent data suggest an overt DIC rate of 33% in OHCA patients with sustained return of spontaneous circulation (ROSC). The current study determined the prevalence of overt DIC, its association with outcome, and the predictive value of d-dimer in an Austrian collective of OHCA patients.

Methods: All patients with available coagulation parameters from 2006-2014 were extracted from a prospectively compiled OHCA registry. Primary outcome was the prevalence of overt DIC. Binominal logistic regression analysis was applied to ascertain predictors of overt DIC, 30-day mortality and neurologic outcome. The discrimination of the fitted logistic models was assessed using the area under the receiver-operating-characteristic (ROC) curve.

Results: Out of 1179 OHCA patients, coagulation parameters were available in 410 (72% male; 57years, 48-69). The rate of overt DIC was 10% (95%CI, 7-13; n=39) overall and 7% (95%CI, 5-10; n=30) in the sustained ROSC subgroup. The odds ratio for 30-day mortality (46%, 95%CI 41-51; n=188) increased with the DIC score and was 9.6 (crude OR; 95%CI, 3.7-25) in patients with overt DIC on admission (n=39). The regression model including d-dimer, lactate levels, no-flow interval and initial rhythm ($\chi2(4)=125.1$; $p<0.001$; HLT=0.20) best predicted 30-day mortality (R2= 0.58); The inclusion of d-dimer levels into the model significantly increased the area under the ROC curve from 0.78 (95%CI, 0.73-0.85) to 0.90 (95%CI, 0.85-0.94; p=0.001).

Conclusion: The current study identified increasing no-flow intervals (indicating the extent of non-perfusion), a non-shockable initial heart rhythm and elevated lactate levels (indicating the magnitude of tissue hypoxia) as the main predictors of overt DIC patterns in OHCA. The inclusion of d-dimer levels into a prediction model, however, improved its accuracy, and d-dimer levels may serve as an additional, independent surrogate parameter to assess outcome in OHCA.

#7177 : Is the emergency department a good place to die?

Preferred format : ePoster

Authors:

Alicia Rodríguez (1), Virginia Lozano (1), Maria Villa (1), Ramón Marín (1), Guillén Irene (1), Fátima Fernadez Salgado (1)

1. A&E Department, Hospital Universitario de Móstoles, Madrid, SPAIN

Keywords: Mortality. Place of death. Terminal care.

Abstract :

INTRODUCTION: The mortality rate in the Emergencies Departments is considered an index of hospital quality, their analysis can be derived specific actions aimed at improving certain aspects of the hospital assitance. In recent years it has noticed an increase of patients dying in emergency departments in connection with increasing terminal and chronic patients and with lack of beds in hospital services increasing organizational pressure on emergencies departments. Determinate which patients should not die in the emergency room is difficult because in addiction to clinical factors must be taken sociocultural changes over should deliver the care of dying patients. All this makes essential to establish the necessary measures for these patients

OBJETIVES: To describe clinical and demographic charactersitics of patients who dyed in our emergency department and anylize what points could improve heathcare attention to this group of patients . University Hospital of Móstoles in Madrid with a population of 155.000 habitants

METHOD: Retrospective descriptive study of patients who died en the emergency department between 1st of January and 31st of December of the years 2013, 2014 and 2015, excluding patients who dies in the areas of paediatrics and gynecology. Data were collected: age and sex, death cause, pre-exitus, terminal patients, cardiopulmonary resuscitation initiated, palliative cared were aplied, necropsy was requested, hours spent in the emergency department , medical discharged report and information to relatives of the patient´s current condition.

RESULTS: A total of 54 patients were analyzed. The most frecuent was an elderly patient whose death was expected (80%) with a mean age of 83.7 years, 52% womwn, 40% were terminal patients and 59% were dependant for daily activities.

No relationship was evident the day of the week or the time of death. January was the month with the highest number of deaths.

The average spent in emergency deparment was 8 hours, with 40% pre-exitus patient died in less than 3 hours. 35% received palliative care.

Cardiopulmonar resuscitation were realised in 33%. The cause of death was established in 53% , and no autopsy was requested in any case

In 60% was given information to relatives of the current situation of the patient , in half cases wre registared as no reanimables patients.

CONCLUSIONS: The patients with terminal illnes who die in emrgency services are a significant number of deaths in emergencies. Mostly of the emergency departments are not prepared for these patients making consider devoloping specific protocols for this group of patients.

It is important to deepen the measures necesary in terminal patients covering clinical as non clinical condicions. The majority of deaths were expected (terminal or not) , it would be advisable to have a place with more privacy where they coul be accompanied by their relatives, as well guidelines for sedation in order to facilitate a dignified death.

In conclusion, there is a considerable percentage of patients who die in the emergency department and whose death is expected. Should be improved palliatives care units and home support trying to ease the last moments of life.

#7178 : Re-audit: are dipstick positive urinary tract infections managed appropriately in the Emergency Department?

Preferred format : ePoster

Authors:

Kabir Sandhu (1), Fiona Wisniacki (1)

1. National Health Service, London North West Healthcare NHS Trust, London, UK

Keywords: urinary tract infection, antimicrobial, urine dipstick, culture and sensitivity, catheterised patient, guidelines

Abstract :

A urinary tract infection (UTI) is defined as the presence of symptoms and significant bacteriuria (10^5 colony-forming units per millilitre) along the urinary tract. It accounts for 1-3% of UK consultations in the Emergency Department (ED). An initial audit of the management of UTIs in the ED of Ealing Hospital, London UK, was undertaken in September 2015. It revealed that 94% of UTIs were diagnosed correctly; 56% of UTIs were managed according to National Institute for Health and Care Excellence (NICE) guidelines on antimicrobial prescribing; while all catheterised patients were managed incorrectly in terms of urine dipstick, culture and sensitivity. A re-audit was undertaken 6 months later in March 2016 after presenting findings and holding departmental educational sessions.

The aims were as follows: (I) To ensure antimicrobial prescribing for UTI's in the ED complies with national guidelines. (II) If deviating from the guideline, ensure there is adequate documentation explaining the rationale for choosing an alternative antimicrobial. (III) Ensure adequate knowledge of diagnosing and managing UTIs in catheterised patients.

50 symptomatic patients with dipstick positive urine were retrospectively re-audited. The Symphony patient database was searched. Standards were adapted from the Royal College of Pathologists Medical Microbiology audit template and divided into five standards: (I) management of UTIs follows national guidelines on antimicrobial and treatment duration; (II) valid explanation provided if clinician deviated from guidelines by choosing an alternative antimicrobial; (III) use of Nitrofurantoin in renal impairment (eGFR <45); (IV) correct utilisation of urine culture and sensitivity; (V) management of catheterised patients – dipstick testing not indicated and urine cultured only when clinically septic. The audit target was >95%.

Results are presented below with the first cycle audit findings in parentheses. Symptomatic bacteriuria with positive dipstick treated with an antimicrobial compliant with national guidelines: 72% (56%). Valid justification for deviating from guidelines: 55% (27%). Nitrofurantoin prescribed when eGFR>45: 98% (98%). Urine culture sent only when clinically indicated: 100% (94%). If catheterised; not given antimicrobial prophylaxis: 100% (83%); urine not dipsticked: 25% (0%); urine not cultured unless septic: 63% (0%).

In conclusion, educational sessions have vastly improved outcomes; decreasing risk to patients by improving alignment with established standards of care. The greatest improvement is documenting the rationale for choosing an antimicrobial when deviating from guidelines; co-infection (chest and urosepsis) is the sole reason for this. All culture samples were sent correctly when clinically indicated, highlighting another improvement following educational sessions with the multidisciplinary team. Similarly, staff are now sending urine for culture in catheterised patients only when septic (an improvement of 63%). However, some pertinent errors from the initial audit remain; pertaining to managing UTIs in the catheterised patient. Only 25% of catheterised patients correctly did not have their urine dipsticked as staff members often manage the patient as they would manage non-catheterised patients. Furthermore, 37% of catheterised patients had urine cultured when aseptic. Further multidisciplinary education and the production of a UTI management pathway for the ED are in progress in order to further improve outcomes, particularly in the catheterised patient group.

#7179 : Paint thinner ingestion - an uncommon cause of altered mental status and abdominal pain!

Preferred format : ePoster

Authors:

Shao Hui Koh (1)

1. Department of Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE

Keywords: Thinner ingestion, altered mental status, hydrocarbon poisoning

Abstract :

Paint thinner ingestion - an uncommon cause of altered mental status and abdominal pain!

Case presentation

A 56 year old Malay man was seen at the ED for acute confusion and severe abdominal pain.

His symptoms started following an accidental ingestion of “Paint thinner”. He had hypertension, dyslipidemia and diabetes mellitus but no underlying psychiatric illnesses.

He was tachycardic and hypertensive but afebrile and saturating normally.

On physical examination, he was noted to be very combative and agitated. Examination of his heart, lungs and abdomen were unremarkable. No focal neurological deficits were noted.

No abnormalities were detected on a resting electrocardiogram. He had mild neutrophilia. His renal and liver function tests were normal.

Computed Tomographic scans of his brain, thorax and abdomen did not reveal any evidence of intracranial infarction, bleed, pneumonitis, pneumomediastinum or pneumoperitoneum.

He was given intramuscular Haloperidol and intravenous fentanyl for sedation and pain relief.

His mental state normalised subsequently over time.

An oesophageal-gastro-duodenoscopy showed mild oesophagitis and pan-gastritis/oesophagitis.

He was treated symptomatically and discharged stable after two days.

Discussion

“Paint thinners” are solvents used in the cleaning of oil-based paints. They typically contain a combination of aliphatic and aromatic hydrocarbons, terpenes and oxygenated solvents. [1]

Patients present primarily with CNS symptoms and/or symptoms of pneumonitis after ingestion of aliphatic hydrocarbons. [2]

CNS symptoms include ataxia, confusion and CNS depression. The mechanism of CNS toxicity remains largely unknown but may be related to solvent effects on neuronal membranes or interactions with ligand-gated ion channels. They may also be the result of hypoxemia resulting from displacement of oxygen in the lungs by vapour from the aspirated hydrocarbon.

Pneumonitis may be due to associated aspiration of the hydrocarbon and is likely the result of direct toxicity to pulmonary tissue and lipid surfactant disruption. Patients may present with hypoxemia, haemoptysis or pulmonary oedema.

Following an ingestion, other organ systems that may be affected include the cardiovascular (cardiac arrest, arrhythmias), gastrointestinal (Abdominal pain, nausea, vomiting, haematemesis), haematologic (Leucocytosis, DIC, haemolysis) and hepatic systems (Transminitis)

Management of such patients should follow the steps of containment, decontamination and stabilisation. Forced emesis and use of activated charcoal are not recommended in such patients. Prophylactic administration of antibiotics and/or steroids are controversial but do not appear to be useful. [3]

Patients with respiratory failure may require the use of mechanical ventilation. Extracorporeal membrane oxygenation may be considered for severe pneumonitis or pulmonary failure. [4]

Patients who remain asymptomatic after 4 to 6 hours of observation in the emergency department with a normal chest radiograph can be discharged with the advice to return if respiratory symptoms develop within the next 24 hours. Patients with CNS depression, fever, abnormal chest

x-ray findings, or respiratory distress should be admitted for further inpatient management.

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#7180 : Influence of social insurance statuts on emergency department visits

Preferred format : Oral presentation

Authors:

Jacques Désiré Nkeng Metouké (1), Marc Vranckx (2)

1. Emergency department , ISPPC, CHU Charleroi, Brussels, BELGIUM
2. Emergency department , ISPPC, CHU Charleroi, Mons, BELGIUM

Keywords: emergency, social status, insurance

Abstract :

Introduction

frequentation of emergency departments (ED) is continuously rising. There are several proposals to convince the patients to contact first their general practioner (GP) and even to forbid access to an ED without prior GP consultation.some argue ED are a safety net guarantying access to medical care to everybody.If recent reseach's show that frequentation of ED is rarely due to financial conditions, other studies have shown a limited access to medical care of precarious people.despite a lack of universal definition, lack of social insurance (LSI) is most often an admitted criteria of possible precarity. A recent study of a social insurance compagny have shown that uninsured patients have a six fold higher frequentation rate of ED compared to their insured affiliates.We investigated more deeply the influence of the social insurance status on ED visits.

Material and method

We conducted a retrospective analyse of all the medical records of patients attending our ED in 2013. Data collected were the demographic characteristics (age and sex), social insurance status, time and reason of presentation, length of stay, admission mode, type of investigations and destination at the exit of ED.

Results

After exclusion of 3063 uncompleted or inconsistent rerecords, 32171 visits were analyzed, among witch 2136 LSI (6.64%)

LSI was significantly ($p<0.001$) more prevalent in male 55.4% vs 49.5%) and in younger patients (age 0-14: 33.5% vs 25.8% age 15-65 65.8% vs 64% age >65 :0.7% vs 10.2%). LSI patients were less likely admitted by ambualce (6.9% vs 13.4%, $p< 0.001$), had a shorter length of stay (01:25 vs 0:45 , $p < 0.05$) and a very lower rate of hospitalization (1.7% vs 15.7%, $p< 0.001$). Among LSI patients , we also observed a lower rate of those who left without being seen(1.4% vs 2.4%, $p< 0.001$).Significantly($p< 0.001$) less investigation exams were perfomed in LSI patients (no exam: 63.9% vs 52.9% , 1 exam 17.9% vs 18.1% > 1 exams 18.2 vs 29%).

Discusion and conclusion

Emergency department patients with a lack of social insurance are more likely to be young and male.Spontaneous presentation for consultation, a lower need of investigation exams, a shorte length of stay, a very lower rate of hospital admission and a lower rate of leaving without being seen are all indicators that the emergency departement is effectively the safety net allowing access to medical care of these precarious population before deterioration of their medical conditions.

#7182 : Analysis of Spontaneous Volunteer Response to 2013 Sudan Floods: Changing the Paradigm.

Preferred format : Oral presentation

Authors:

Amin Albahari (1), Carl Schultz (2)

1. , Università degli Studi del Piemonte Orientale , Galway, IRELAND
2. Professor of Emergency Medicine, Center for Disaster Medical Sciences, UCI School of Medicine, Emergency Department UCI Medical Center., Irvine, USA

Keywords: Disaster, Floods, Nafeer, Sudan, Spontaneous volunteer, convergance

Abstract :

Study Objectives:
The role of spontaneous volunteers during the initial response to disasters remains controversial. In an attempt to resolve some of the debate, investigators examined the activities of a spontaneous volunteer group called Nafeer after the Sudan floods around the city of Khartoum in August of 2013.
Methods:
This retrospective descriptive case-study involved: 1) interviews with Nafeer members that participated in the disaster response to the Khartoum floods; 2) examination of documents generated during the event; and 3) subsequent benchmarking of their efforts with the Sphere Handbook. Interviews were held with volunteers who held top administrative positions within Nafeer as well as individual members. Members who agreed to participate were requested to provide all documents in their possession relating to Nafeer. The response by Nafeer was then benchmarked to the Sphere Handbook's six core standards, as well as the eleven minimum standards in essential health services.
Results:
A total of 11 individuals were interviewed (6 from leadership, and 5 from active members). Nafeer's activities included: food provision; delivery of basic healthcare; environmental sanitation campaigns; efforts to raise awareness; and construction and strengthening of flood barricades (Table). Its use of electronic platforms and social media to collect data and coordinate the organization's response proved highly effective. Members of Nafeer came from diverse backgrounds, including employees of corporations and NGOs, medical practitioners, nurses, pharmacists, and university students. Nafeer adopted a flat-management structure, dividing itself into 14 committees. A coordination committee was in charge of liaising between all committees. The Health and Sanitation committee supervised 2 health days which included mobile medical and dentistry clinics supported by a mobile laboratory and pharmacy. A total of 613 patients were seen. The engineering committee managed to construct and maintain flood barricades. Nafeer used crowd-sourcing to fund its activities, receiving donations locally and internationally using supporters outside Sudan. It also received in-kind donations. Nafeer's total budget was $328,097 US; of which 12% was spent on administration. Nafeer completely or partially fulfilled all 6 core Sphere standards but none of the essential health services standards. Nafeer did not set specific objectives for itself based on which data elements would be identified and subsequently measured. Even though the Sphere Handbook was chosen as the best available gold standard to benchmark Nafeer's efforts, it showed significant limitations in effectively measuring such groups. A specific template does not currently exist to evaluate community-led initiatives in disasters.
Conclusion:
It appears that independent spontaneous volunteer initiatives like Nafeer potentially can play a significant role in the humanitarian response. Such organizations should be the subject of increased research activity. Relevant bodies should consider issuing separate guidelines supporting spontaneous volunteer organizations.

Acknowledgment: Dr. Albahari's only financial conflict of interest is his donation of $100 to the Nafeer organization. Dr. Schultz reports no conflict of interest.

#7183 : Emergency Procedures in Isolated, Highly Contagious Patients: A randomized controlled study comparing advanced airway management in different settings in manikins

Preferred format : ePoster

Authors:

Eike Plazikowski (1), Dominic Käser (1), Roland Albrecht (2), Robert Greif (1), Lorenz Theiler (1)

1. Department of Anaesthesiology & Pain Medicine, University Hospital and University of Bern, Bern, SWITZERLAND
2. Swiss Air Rescue, REGA, Zürich, SWITZERLAND

Keywords: Airway Management, Prevention of contagion, Patient Isolation, Portable Isolation Unit, Personal Protective Equipment

Abstract :

Background:
Incidence rates of highly infectious diseases are rising and treatment for patients suffering from diseases, such as Ebola or Tuberculosis, is challenging for emergency personnel worldwide. In these cases, patient isolation is a key component. However, wearing personal protective equipment is both cumbersome for health care personnel and negatively affects medical performance. Alternatively, portable isolation units may be used, but their influence on emergency skill performance such as airway management is unknown. For that reason we compared six airway skills on manikins in three different isolation settings.

Materials/ Methods:
With IRB approval, 20 anaesthetists working in emergency services performed advanced airway management procedures on manikins in three settings:
1) standard setting (gloves and face mask only)
2) participants wearing personal protective equipment (PPE) (Jupiter™, Versaflo™S-605-10,3M™; Tychem C™,DuPont™)
3) manikin isolated in a portable isolation unit (PIU) (VenIONPIU,TB-Safety)
Six devices / skills were used in each setting to secure ventilation:
-Macintosh blade for direct laryngoscopy
-AirtraqSP™ video-laryngoscope
-i-gel™
-ILMA Fastrach™
-Ambu fibreoptic aScope™
-Cricothyrotomy (Cook Melker Catheter Set™)
Order of settings and devices was randomized. Time was measured in seconds. Participants additionally rated the subjective level of difficulty on a 100mm visual analogue scale (VAS) for each device in each setting; “0” representing very easy and “100” extremely difficult.
Results:
In 85% of attempts, regardless of setting or device, participants were able to secure the airway in under 60s. The time-until-ventilation was shorter than 60s in 94% of attempts in standard setting, 90% whilst wearing personal protective equipment and 73% whilst the manikin was isolated in the portable isolation unit. Taking each individual device into consideration, the time-until-ventilation differed significantly in each setting ($p<0.01$). In the *standard setting* mean time-until-ventilation was 31±26seconds (95%CI: 26-36seconds), although time varied considerably between the devices: from fastest (i-gel, 8±2seconds (95%CI: 7-9seconds)) to longest (Cricothyrotomy 62±20seconds (95%CI: 53-72seconds)). Longer times-until-ventilation were observed in the *PIU-Setting:* 65±63seconds (95%CI: 54-76seconds). In the *PPE-Setting* it was 35±30seconds (95%CI: 29-40seconds). The overall level of difficulty (VAS-Score) was significantly different between each setting ($p<0.01$). It was highest for the PIU (74±13) compared with standard-setting (9±7) and PPE-Setting (42±18).

Discussion and Conclusion(s):
Wearing personal protective equipment only slightly prolongs time until ventilation, when compared to the standard setting. However, handling of the protection equipment is difficult, and contamination possible. The PIU is a safe alternative, while it considerably affects medical tasks. Cricothyrotomy and the use of a fibreoptic scope within a PIU-Setting are very difficult and excluding it from the analysis increased success-rates for ventilation under 60s to 91%. This shows, that though challenging for healthcare professionals, airway management in a PIU setting is feasible within a clinically tolerable time frame. With overall average times until ventilation of around 10s, supraglottic airway devices remain highly recommendable tools, even in this challenging setting. At the congress, tables with detailed results will be shown.

#7184 : How Can Primary Care Clinics and Urgent Care Clinics Aid Hospital Emergency Departments in the Treatment of Patients during a Disaster?

Preferred format : Oral presentation

Authors:

Svetlana Cakarevic (1), Jeffrey Michael Franc (2)

1. , Qweensway Carleton Hospital, Ottawa, CANADA
2. Clinical Professor of Emergency Medicine, University of Alberta, Calgary, CANADA

Keywords: Disaster, Primary Care, Mass Cassualty Incident, Family Practice, Triage

Abstract :

Background: In the case of a disaster, there is an increased need to provide care to disaster victims. One of the challenges is the lack of resources, or diverting of resources, to manage the most serious cases. However, there is still a need to provide care for other patients with minor injuries, whose care might be delayed. The commonly used START triage tool was found to have sensitivity of 45.8 (95%CI, 36.7%–55.2%) for casualties that are triaged as green.

Goal: The purpose of the study is to develop and test a triage tool used to divert some of the patients from the scene of the disaster directly to primary care offices and urgent care centers.

The primary outcome of the study was the sensitivity and specificity of the triage tool. The secondary goal is to analyze if there is a significant difference in sensitivity and specificity when tool is used by paramedics vs. physicians.

Methodology: This was a two-step study. In the Derivation Phase, the Primary Care Assessment Triage Tool (PCATT) was developed by a focus group of family physicians. Neither the authors of this study nor the focus group participants had any knowledge of the subsequent validation cases during the derivation phase.

In the Validation Phase, cases were extrapolated from the charts of known patients, who were the victims of a Bus vs. Train accident in Ottawa, Canada. Cases were considered to be suitable for management in primary care offices if they required no procedures or hospital admission. We looked into eleven casualties that presented to the Queensway Carleton Emergency Department Ottawa, Canada, after the Bus versus Train accident that happened on September 18, 2013 in Ottawa, Ontario, Canada. On the basis of these charts, test cases were created and distributed to paramedics and physicians.

Results: In total 245 respondents began the questionnaire, and 212 completed the full 11 cases. This included 151 physicians and 69 paramedics. Overall sensitivity of the PCATT tool was 92.1% with 95% confidence interval 90% to 94%. Overall specificity of the PCATT tool was 56.7% with 95% confidence interval of 54% to 59%.When the PCATT tool was used by physicians, sensitivity was 94.1% and when used by paramedics, sensitivity was 87.9%. This was statistically significant (p=0.029) for confidence interval for effect size of 0.67% to 11%.Specificity was 58.5% for physicians and 53.1% for the paramedics. This was also statistically significant (p=0.038) for confidence interval for effect size of 0.38% to 12%.

Conclusion: In the case of our sample Mass Casualty Incident, the PCATT tool had a reasonable sensitivity when compared to other commonly used tools in the Emergency Department, although further study is clearly necessary. This tool appears to be to have reasonable sensitivity to be used to divert casualties with minor injuries and psychosocial need to the care of the primary care physicians and thus relieve the burden on already stretched resources in the emergency departments.

#7185 : PULSE's support for an enhanced European health system

Preferred format : Oral presentation

Authors:

Viorel Petcu (1), ADELINA GEORGESCU (1)

1. R&D, SC ONEST SOLUTIONS SRL, Bucharest, ROMANIA

Keywords: major medical emergency, health services, preparedness, response, crisis management, standardised procedures and processes, SARs, weak signal detection, threat analysis

Abstract :

Nowadays, our society faces an increasingly number of tragedies due to deadly threats such as pandemic disease and major accidents, terror attacks or natural hazards leading to the necessity of an European platform for medical support during major emergencies. In such situations, it is critical for the European emergency medical services to be in an excellent state of preparedness supported by first-class planning and decision support tools. Moreover, in the response phase, European emergency medical services need consistent, coordinated and standardized advanced support methods and tools providing support in critical tasks like e.g. early threat detection, common operational picture, creation of surge capacity etc.

This paper presents the developments and the achievements of the PULSE (Platform for European Medical Support during major emergencies) project - a Collaborative Research Project under the European 7th Framework Programme – Theme SEC - 2013.4.1-4:”Development of decision support tools for improving preparedness and response of Health Services involved in emergency situations”.

PULSE Platform is made up of three high level components: software mathematical models, software tools and SOPs (Standard Operational Procedures). It is expected that End-users will take benefit from the PULSE platform using the software Tools while operating according to the processes optimized by the PULSE project with SOP based on European best practices. Software Tools will use Models, which may be considered as “software routine” based on mathematical models/algorithms. PULSE Platform will mainly support the End-users making the best decision on the two related issues of Resource allocation and also Patient dispatch with respect to the expected future flow/status of patients with the constraint of available resources and medical doctrines. PULSE substantially improves the preparedness and response capabilities of the health services involved in major emergency situations, mitigating the loss of life and raising the survival rates among mass casualties.

The PULSE project provides validated procedures which will be adequate to improve the operation and success of the healthcare system in challenging disaster situations where combined operations are required at local, regional, cross border and international levels.

PULSE project supports an enhanced European health system by the improvement of the health services in both preparedness and response stages of a major medical incident leading to a more efficient emergency management, operational procedures harmonization, improved cross border cooperation of the medical services, improved understanding of the public acceptance, and legal, ethical and social issues in major emergency management.

#7186 : Opportunities and difficulties for achieving an equal and timely access of patients to emergency care in Bulgaria

Preferred format : ePoster

Authors:

Desislava Katelieva (1), Lora Georgieva (2)

1. NGO, BEMSA, Sofia, BULGARIA
2. Medical University of Varna, Department of Social Medicine and Healthcare Organization, Varna, BULGARIA

Keywords: organization, legal framework, emergency care, Bulgaria

Abstract :

Introduction: Emergency medicine is provided in deficit of time and information. Every emergency team must reach the patient on time and apply the appropriate lifesaving diagnostics and treatment. Bulgaria has long-standing traditions in emergency care, striving to ensure equal and timely access for all the population.

Material and methods: The organization and the legal framework of emergency medical care in Bulgaria in pre-hospital and hospital environment are analyzed. The results are presented from a study that was carried out in 2016 among 312 professionals in emergency aid regarding the reforms in the emergency system – information was obtained via a semi-structured questionnaire.

Results and discussion: The emergency medical care in Bulgaria is free of charge for the patients irrespective of their health insurance status or place of residence, and it is financed by the state budget. It was organized by the 1960s in structures belonging to hospitals and polyclinics. In the 1990s, 28 centers for pre-hospital emergency were established, and emergency wards were differentiated in 34 hospitals in 2007. Nowadays there are 366 mobile teams in the country, 197 emergency rooms with teams on duty, and 34 emergency departments in the biggest hospitals. The European Emergency Number 112 has been operating since 2007 in Bulgaria and is connected to 27 emergency medical telephone exchanges. Specialty of emergency medicine was introduced in 1996. The specialized hospital of emergency medicine “Pirogov” in Sofia is responsible for the continuing education of the physicians in emergency medicine. The main difficulties for timely and equal access of patients to emergency aid include the irregular distribution of emergency teams throughout the country; the shortage of personnel due to ageing, low remuneration and cases of aggression against them; as well as a lot of patients who are not urgent but do not possess a health insurance and use emergency structures every time they need medical care (thus, the service of urgent patients is delayed). A new medical standard in emergency medicine was adopted in 2015, based on the best world practices and particularly the European curriculum for emergency medicine of the European Society for Emergency Medicine (EuSEM). The new standard was intended to introduce the triage, algorithms of work, standardized architecture and equipment of all emergency structures. The training of paramedics and physician’s assistants who should enter in pre-hospital emergency was introduced. The results of the study among emergency personnel show that 67.9% of the respondents consider that the introduction of the triage will improve emergency services, 67.9% approve algorithms for work, 59.9% believe that the paramedics will solve the personnel shortage, 80% are motivated by reforms to continue to work in the system.

Conclusion: As a whole, the emergency care in Bulgaria is well structured but it experiences some organizational and personnel problems, which are expected to be solved through an introduction of the triage, improving the equipment, and the inclusion of paramedics and physician’s assistants in the emergency teams.

#7187 : RETROSPECTIVE ANALYSIS OF PROGNOSTIC EFFICIENCY OF COMPLETE BLOOD COUNT PARAMETERS IN PATIENT WITH PNEUMONIA

Preferred format : Oral presentation

Authors:

SENEM NEBİ (1), MURAT ERSEL (2), FUNDA KARBEK AKARCA (2), ÖZGE CAN (3)

1. , ŞİŞLİ ETFAL EĞİTİM VE ARAŞTIRMA HASTANESİ, istanbul, TURKEY
2. ACİL TIP ABD, EGE ÜNİVERSİTESİ TIP FAKÜLTESİ HASTANESİ, izmir, TURKEY
3. ACİL TIP ABD, EGE ÜNİVERSİTESİ TIP FAKÜLTESİ HASTANESİ, İZMİR, TURKEY

Keywords: pneumonia, RDW, mortality

Abstract :

OBJECTIVES: The primary objective of this study is to evaluate the prognostic efficiency of complete blood parameters . The secondary objective of this study is to evaluate the factors that effect the prognosis in patients with pneumonia.

METHODS: In our retrospetive study, patients with pneumonia who are older than 18 years old and who admitted Ege University Emergency Medicine Service between 01.01.12 - 31.12.13 were studied. Datas were acquired by using the hospital database. The patients who admitted after their treatment started in another health instutition, patients who are using drugs which effect blood cells, patients who have disease that effect blood cells, patients whose death data were inaccessible , and patients whose pneumonia diagnosis were not certain were excluded from the study. Datas were grouped and were registered at data forms. Datas were loaded to SPSS 20.0 program and analyzed.

RESULTS: Median age of 970 patients who included the study were 72 (18-118). 63.9% of the patients were male. According to Pneumonia Severity Index (PSI), 71,2%(690) of the patients were Stage IV-V and were required hospitalization, 28.8%(280) of the patients were Stage I,II,III and were treatable as outpatients. According to CURB65 score, 39% (378) of the patients were at low risk (score 0 and 1) and 61% (592) of the patients were at high risk (score ≥2). It was found that 6.4%(62) of the patients were died in first 24 hours, 13.4% (130) of the patients were died in first 48 hours, 13.4%(130) of the patients were died in first week, and 17.6% (210) of the patients were died in the first month. In patients who admitted emergency service with atypical symptoms (e.g. abdominal pain, loss of conscience, impairment of oral intake) were found statistically higher mortaliy ($p<0,05$) compared to the patients who admitted with typical symptoms (e.g. cough, sputum, dyspnea). Mortality were statistically higher in patients who has at least 1 additive ilness ($p<0,05$). It was found that mortality were increased 1,036 (±0,011) times as rate of breath increase as 1/min, mortality were increased 2,070 (2,070-3,457) times if fever was <36°C or >40°C, mortality were increased 1,008 (±0,002) times as urea increase as 1mg/dl. It was found that gender, pulse rate, trombocyte count <150000uL, and CRP values were not independent risk factors that effect mortality. Analyzing complete blood count parameters, it was found that 30 day mortality were increased 1,033 (±0,015) times as RDW increase as %1. There were found no connection between lowness of heamoglobin, haematocrit and mortality. There were found no connection between trombocyte count, MPV value, PSW value and mortality.

CONCULSION: CURB65 and PSI score distribuions of the patients included to our study were similar to the literature. It was found that increase of RWD value were related to mortality. Heamoglobin, heamatocrit, trombocyte, PDW, MPV values were found unrelated to mortality. There were not enough studies related to prognostic value of complete blood count parameters. It is required to study widescale researchs with healthy control groups.

#7188 : Low back pain in Emergency Room

Preferred format : ePoster

Authors:

Raquel Perez Castillo (1), Jose Luis Ruiz Lopez (1), Maria Cuenca Torres (1)

1. Emergency, Hospital Universitario de la Ribera, Alzira, SPAIN

Keywords: Low back pain

Abstract :

Acute low back pain in an extremely common condition in the emergency care for their intensity and sudden onset. Low back pain annually generates large amount of sick leave and multiple consultations in different specialties representing a huge health and employment, economic and social spending. It is the job of the entire medical team try to reach the same differential diagnosis of early identification and those specific low back pain for the specific treatment as soon as possible.

In this paper is described and analyzed the assessment of low back pain in the ED, focusing on the specific back pain. Analyzing the information gathered in the emergency department (triage sheet and sheet discharge) to see if there are specific prognostic factors for back pain in the ED.

Methods: observational, descriptive, analytical and retrospective study was conducted in 2014 in the emergency department of the University Hospital de la Ribera. Data collection in Excel® format for the treatment and organization of variables, which are then analyzed in the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL) version 15 was performed.

Results: The study was conform with 346 patients of both sexes with an average age of 52 years and a standard deviation of 19,095. Low back pain predominated in females. Of all diagnoses at discharge, the majority was low back pain, and back pain diagnoses considered as specific vertebral fracture.

Conclusions: According to our study could be defined as prognostic factors specific low back pain in the ED: The EVA in the diagnosis of vertebral fracture and the priority given in triage only for the diagnosis of vertebral fracture. Doctors helped diagnostic tests, specifically the RX to issue a clinical diagnosis right. Those patients who came repeatedly to HUS with back pain and were sent to CCEE for that reason, were eventually diagnosed with specific low back pain.

#7189 : Traumatic diaphragmatic injuries: 12 year experience from a tertiary trauma centre: A retrospective cohort study

Preferred format : Oral presentation

Authors:

Lim Beng Leong (1), Teo Li Tserng (2), Chiu Ming Terk (3), Asinas-Tan Marxengel (4), Seow Eillyne (5)

1. Senior Consultant, Emergency Department, Ng Teng Fong Hospital, Singapore, SINGAPORE
2. Consultant, Trauma and Acute care Surgery, Tan Tock Seng Hospital, Singapore, SINGAPORE
3. Senior consultant, Trauma and Acute care Surgery, Tan Tock Seng Hospital, Singapore, SINGAPORE
4. Clinical Associate, Emergency Department, Ng Teng Fong Hospital, Singapore, SINGAPORE
5. Senior consultant, Emergency Department, Khoo Teck Phuat Hospital, Singapore, SINGAPORE

Keywords: diaphragmatic, injuries, trauma

Abstract :

Introduction: Traumatic diaphragmatic injuries (TDIs) are clinically challenging. We aimed to review TDIs treated in a tertiary trauma centre.

Materials and Methods: We performed a 12 year, single-centre retrospective review of adult patients with TDIs. Primary outcomes were survival, mortality rates and injury severity scores (ISS) associated with each TDI subtype. Secondary outcomes included proportions of TDIs diagnosed radiologically, operatively or at autopsy. We compared TDI subtypes with their mechanism of injury, mortality rates and median ISS. Data was analyzed using descriptive statistics. P values < 0.05 were considered statistically significant.

Results: We recruited 46 patients with acute diaphragmatic herniation (14/46 or 30.4%), tears (22/46 or 47.8%) or contusions (10/46 or 21.8%). The survival and mortality rates ranged from 0.0 to 64.3% and 35.7 to 100.0% respectively among the TDI subtypes. The ISS among survivors and deaths ranged from 22.0 (interquartile range [IQR] 6.5) to 34.0 (IQR 23.0) and 53.5 (IQR 16.0) to 66.0 (IQR 28.5) respectively among these subtypes. Chest X ray revealed 2/33 (6.1%) while computer tomographic scans detected 6/13 (46.2%) patients with TDIs. All survivors (n=21) and deaths (n=25) underwent open surgery or autopsy respectively that confirmed their TDIs. Blunt and penetrating trauma was more frequently associated with acute herniation and tear respectively. There were statistically significant differences among the TDI subtypes with their mechanism of injury, mortality rates and median ISS of survivors.

Conclusions: TDIs had a predictable pattern with mechanism of injury and were associated with significant mortality rates. Pre-operative imaging had limited diagnostic use.

#7191 : Evaluation of knowledge of pre-hospital physicians on the diagnosis and management of purpura fulminans

Preferred format : Oral presentation

Authors:

Jennifer CULOMA (1), Sabine LEMOINE (1), Vincent LANOE (1), Christian LE NGOC HUE (2), Florian LOGARIDES (1), Frank PEDUZZI (2), Daniel JOST (1), Michel BIGNAND (1), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: purpura fulminans, sepsis schock, pre-hospital managment

Abstract :

Introduction: Purpura fulminans (PF) is a rare disease but any delay in diagnosis and/or therapy increases the risk of morbidity and mortality. Early diagnosis from first contact in the medical chain is essential to establish appropriate treatment as early as possible. The purpose of this study was to assess the knowledge of pre-hospital emergency doctors in urban areas on the diagnosis and management of PF.

Materials and methods: An initial practice survey was based on an online questionnaire sent to all pre-hospital physicians in our Emergency Department. The questions were multiple choice with 7 questions with 5 items and 1 question with 6 items. The questionnaire included 4 parts, evaluating the knowledge of epidemiology, clinical signs, treatment and prevention/prophylaxis. All responses of doctors who have completed and returned the questionnaire were included. The endpoint was the rate of correct answers.

Results: From November 12 to December 1st, 2015, 49/75 doctors answered the questionnaire, or a rate of completion of 65%. Out of all the answers (n= 2009) (100%), 1433 (71%) were correct. Among the 490 epidemiological answers, 310 (63%) were accurate, including 17/49 (35%) correct answers on PF mortality. 980 answers about PF clinics were correct in 729 (74%) cases with 4/49 (8%) correct answers about "the absence of meningeal syndrome" being perceived as a severity factor. The 294 answers about therapy were correct in 228 (78%) cases with 25/49 (51%) for the item concerning early administration of catecholamines. The 245 answers on prevention/prophylaxis were correct in 166 (68%) cases with 26/49 (53%) for the item concerning the usefulness of the introduction of the antibiotic prophylaxis beyond 48 hours of initial care.

Discussion: The theoretical knowledge of emergency physicians were good for most items. There is room for improvement, particularly on the concept of severity associated with the absence of clinical signs and modalities of therapeutic intensification.

Conclusion: An illustrated instruction card was then made to overcome the misunderstandings and harmonize the therapeutic and prophylactic practices in the studied service.

#7192 : Cardiac arrest in children outside the hospital: what is the impact of shockable rhythms?

Preferred format : Oral presentation

Authors:

Vincent THOMAS (1), Sabine LEMOINE (2), Daniel JOST (2), Vincent LANOE (2), Marilyn FRANCHIN (2), Benoit FRATTINI (2), Michel BIGNAND (2), Jean Pierre TOURTIER (2)

1. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: out-of-hospital, cardiac arrest, children

Abstract :

Introduction: Out-of-hospital cardiac arrest (OHCA) in children is a situation that faced by the whole pre-hospital emergency team. The aim of this study was to describe pediatric OHCA heart rhythms recorded by semi-automated external defibrillators (AED) used by on-scene First Aid professionals.

Material and methods: This was a prospective observational study of an urban area with high population density. It included children from 0 to 18 years in OHCA who received an AED. When used, pediatric electrodes delivered 30 joules of energy. The collected variables showed a relation to the epidemiological data in accordance with Utstein's recommendations, as well as the electrocardiographic data from the AEDs.

Vincent Thomas, Sabine Lemoine, Daniel Jost, Vincent Lanoë, Marilyn Franchin, Benoit Frattini, Michel Bignand, Jean-Pierre Tourtier

Results: Over a period of 4 years, 229 children were included and 191 AED plots were analyzed. The median [Inter Quartile Range] age was 6 [5-16] years, with 129 boys (56%). Twenty-eight children (12%) had a shockable rhythm on the First Aid workers' arrival and were multi-shocked in 39% of cases. The fraction of time devoted to external chest compressions over the total time of care was 60%. The AED reported shock in 3 children and administered an excessive shock in 1 case. The rate of successful defibrillation was 95.4%.

Conclusion: Shockable rhythms in children were rare. Reducing chest compression interruptions by First Aid workers and better consideration of pediatric specifics in the analysis algorithm of AEDs can improve care. The study continues with the collection of survival and neurological outcome data at 1 year.

#7193 : Are the diagnoses of pre-hospital and hospital emergency physicians consistent? A prospective observational study.

Preferred format : Oral presentation

Authors:

Olivier YAVARI-SARTAKHTI (1), Olga MAURIN (2), Daniel JOST (1), Stéphane BOIZAT (2), Paula VANHAECKE (2), Francois VIARD (2), Jonathan GONZVA (2), Sabine LEMOINE (1), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: prehospital medical team, basic life support team transport, definitive diagnosis

Abstract :

Introduction: It is accepted that the pre-hospital emergency physician (EP), after examination and in the absence of serious conditions, can entrust a patient to a Basic Life Support Team transport (BLST) to reach the nearest Emergency Department (ESD).

The aim of this study was to evaluate the diagnosis agreement between EPs and the hospital for these BLST patients and then verify the absence of deleterious effects of BLST transport.

Materials and methods: This was a prospective observational study, with a first aid chain quality approach. Inclusion criteria: patient over 18 years after examination by a EP was transported by BLST to an ED. Collected variables: age, gender, pre-hospital and hospital diagnosis, follow up (living, transferred or deceased on Day 1). A committee of three doctors ruled on the consistency of the pre-hospital and hospital diagnosis and then the relevance of the decision to transport by BLST and the adjustment of hospital referral.

The primary endpoint was the diagnostic agreement between EPs and the hospital team . The Secondary endpoint were the rate of patients who needed to be transferred from ED to a specialized service, the rate of unexpected death.

Results: From September 6 to October 27, 2015, 105 patients were included. Twenty-one were lost to follow up. The median age was 55 [46-79] years, with 54 men (51.4%). The agreement rate between pre-hospital and hospital diagnoses was 61.9%.

The diagnostic discrepancy did not involve more transfers after arrival at ED (p=0.31). One patient died within 24 hours of admission to the ED.

Most often pre-hospital diagnoses were cardiological (n=47) and respiratory (n=14). Five patients (4.7%) were transferred within 24 hours to an ICU. Seventeen cases were subject to review. Six had a discordant diagnosis. A posteriori, 5 patients out of 17 were subject to an inappropriate decision about the transport and/or hospital referral.

Discussion: Despite an intermediate rate of diagnostic agreement, the number of patients transferred secondarily was low and the death rate of less than 1%. Diagnostic discrepancy did not correlate to inadequate hospital referral of the patient.

#7194 : Asymptomatic ruptured of abdominal aortic aneurysm in a patient with COPD presented in Emergency Department

Preferred format : ePoster

Authors:

Vasile Gavrila (1), Gabriela Filip (1), Alexandru Nicolae Carstea (1), Rodica Daniela Gavrila (2)

1. Emergency Department, Clinical Emergency County Hospital, Timisoara, ROMANIA
2. Department of Family Health Care Providers, , Romanian National Society of Family Medicine, Timisoara, ROMANIA

Keywords: abdominal aortic aneurysm, Emergency Department, pulsating abdominal mass

Abstract :

Ruptured abdominal aortic aneurysm (AAA) is one of the most fatal surgical emergencies, with an overall mortality rate of 90%.The classic triad consists of abdominal or flank pain, hypotension and a pulsatile abdominal mass, but only manifests in 50% of cases at best. AAAs can be symptomatic without acute rupture as well. We present the case of a 67 years-old-man with COPD, active smoker, hypertensive, brought by ambulance in the Emergency Department with mild dyspnea, cough and hemoptysis. Physical examination revealed a pulsating abdominal mass. Laboratory investigations showed mild anemia. Abdominal ultrasound revealed an infrarenal aortic aneurysm. Un urgent angioCT was performed, which showed un infrarenal aortic aneurysm with minimal extravasation of contrast. Rupture of an abdominal aneurysm is a catastrophic complication with a high mortality rate. In this case, the aneurysm rupture was asymptomatic and only a thorough clinical examination identified a pulsatile mass which raised the suspicion of aortic aneurysm.

#7195 : Is there a relationship between the mode of transport to the hospital and the deadline for the first imagery of stroke ?

Preferred format : Oral presentation

Authors:

Laure ALHANATI (1), Stéphane DUBOURDIEU (2), Laurence SZTULMAN (1), Daniel JOST (1), Guillaume CASSOURRET (1), Eric RAMDANI (1), Michel BIGNAND (1), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: stroke, brain imaging, basic life support team transport

Abstract :

Introduction. The referral of cerebrovascular accident patients (CVA) to neurovascular units (NVU) has improved the prognosis of said patients. Imaging (CT or MRI) must be systematically carried out on arrival at the hospital. The aim of this study was to evaluate in urban areas of high population density the time between stroke onset and the completion of the 1st brain imaging, according to the transportation of patients to the hospital.

Materials and methods: This was a prospective observational study including all patients hospitalized in NVUs of a large metropolis. Data collection involved patient characteristics (age, gender), their means of arrival in the service: personal vehicle (PV), private ambulance (PA), professional rescuers (PR), emergency physician (EP); time of CVA onset and, first arrival in care, 1st brain imaging, at the beginning of early thrombolysis if carried out. The different times were reported by their median [interquartile range]. Comparison of times made use of a median test (STATA® 14.0)

Results. From the June 1st to 30, 2015, 554 patients (with the average age of 69 + 15 years, 306 men) were admitted in 13 NVUs in the studied geographic area. The average "CVA-1st imaging" times were 550 [128-559] minutes in case of personal transportation (n=141), 236 [144-510] min by private ambulance (n=99), 167 [105-325] min. by professional basic life support (BLS) teams (n=220), 180 [135-154] min by a medical team (n=41), 69 [45-70] minutes in case of intra-hospital transfer (n=23).

Transient Ischemic Attackpatients favored a personal mode of transport; hemorrhagic CVA, BLS teams transport; ischemic CVA, a medical team tied with the rescuers.

Discussion. The time between the 1st symptoms and carrying out the 1st imaging doubled when patients used their personal transportation versus that of institutional care. Awareness campaigns for institutional care in case of onset of CVA signs should continue to be carried out.

#7196 : Using a witness geolocation system adapted to first aid work to improve the management of out-of-hospital cardiac arrests in urban area

Preferred format : Oral presentation

Authors:

Stéphane TRAVERS (1), Daniel JOST (1), Paul DARDEL (2), Sabine LEMOINE (1), Vincent LANOE (1), Frédérique BRICHE (3), Benjamin RAJON (3), Michel BIGNAND (1), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. Staying Alive, AEDMAP, PARIS, FRANCE
3. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: out-of-hospital cardiac arrest, witness geolocation, first aid

Abstract :

Introduction: The time between occurrence of out-of-hospital cardiac arrest (OHCA) and initiation of chest compressions (CC) determines prognosis. To overcome the lack of witnesses trained in first aid and the difficulties in carrying out a telephone-guided ECM, the 2015 international recommendations emphasize the value of geolocating rescuers near a patient in OHCA. The purpose of this simulation study was to test geolocation and the OHCA witness alert, via the use of a smartphone application in an emergency calls reception center. This study was the precondition for large scale deployment.

Materials and methods: Three tests were performed involving simulated calls for OHCA, call response in accordance with the service procedure (address, detection of OHCA, phone-guided CC and then searching if the situation required for "Good Samaritans" (GS) located within 500 meters of the simulated victim. The GS were personnel deployed in the area but not informed of the address of the emergency. For the last 2 tests, sending an ambulance was performed in real time.

Results: Delay (min) measured during 3 tests (T1;T2;T3) of the GS engagement by call center from simulated call time for OHCA to:

- Search time for a GS (3;2;1)

- GS engagement time (3;3;2)

- RVTV Departure time (not measured;4;3)

- RVTV arrival time (not measured;8;20)

- Time saved for the initiation of CC (not measured;2;15)

Distance (m) from GS at engagement and delay (min) of CC start:

- T1 (100;5) (300;7)

- T2 (100;6) (300;5)

- T3 (300;5)

RVTV = rescue vehicle to victims

The results show a benefit of using this system in terms of the CC initiation period.

Discussion: These results confirm the usefulness of this tool to integrate emergency calls reception center. The next goal will be to measure its impact on the immediate outcome of patients.

#7197 : Outcomes of older patients attended by paramedics for falls in Perth, Western Australia

Preferred format : ePoster

Authors:

Hideo Tohira (1), Stephen Ball (1), Teresa Williams (1), Paul Bailey (2), Anthony Celenza (3), Judith Finn (1)

1. Prehospital, Resuscitation and Emergency Care Research Unit, Curtin University, Perth, AUSTRALIA
2. Clinical Services Director, St John Ambulance Western Australia, Belmont, AUSTRALIA
3. Discipline of Emergency Medicine, University of Western Australia, Nedlands, AUSTRALIA

Keywords: Falls, emergency medical services, injury

Abstract :

Background: Falls are a leading cause of injury-related hospitalisation, and one of the most common reasons for emergency ambulance calls among elderly patients in Australia [1]. Despite the high incidence, little is known about outcomes of falls among older patients. We aimed to compare outcomes of falls attended by ambulance paramedics with those from other common reasons for emergency ambulance calls among older patients.

Participants and methods: We conducted a retrospective cohort study of falls attended by ambulance paramedics in Perth, Western Australia (WA) between 1 October 2013 and 31 December 2014. We selected patients who were 65 years or older from electronic patient care records (ePCR) from the St John Ambulance Western Australia (SJA-WA) , the sole provider of ground-based emergency ambulance services in Perth. We identified patients who had a fall based on dispatch codes. We linked the ePCR with the emergency department (ED) information system data and the WA death registry to identify patient outcomes. The primary outcome was patient disposition after assessment by paramedics at the scene, and secondary outcomes included patient disposition from ED as well as subsequent ambulance request, ED presentation, and death within 24 hours after the index event (the first attendance by paramedics). These outcomes were compared to outcomes of older patients with the next two most-common reasons for emergency ambulance response – undifferentiated “sickness” and chest pain.

Results: There were 11,806, 11,451 and 8,998 cases of falls, sickness and chest pain, respectively. Patients who had a fall were oldest among the three patient groups (median age 84 years old vs. 82 for sickness, 79 for chest pain). Patients who had a fall were most likely to be discharged at the scene (13% vs. 6% for sickness, 2% for chest pain, $p<0.001$), subsequently request an ambulance (8% vs. 5% for sickness, 4% for chest pain, $p<0.001$) and present at ED (4% vs. 3% for sickness, 2% for chest pain, $p<0.001$) within 24 hours after the index event. Among those who were transported to ED, patients who had a fall were most likely to be discharged from ED (38% vs. 33% for sickness, 29% for chest pain, $p<0.001$). Patients dispatched as sickness were most likely to die within 24 hours after the index event (1.0% vs 0.6% for falls and 0.6% for chest pain).

Discussion/conclusion: We found that patients who had a fall were most likely to be discharged at the scene and from ED among the three most frequent reasons for requesting emergency ambulance services in older patients. However, we also found that patients who had a fall were most likely to subsequently request ambulance services and present at ED within 24 hours after the index event. In WA currently there are no clinical decision rules to guide paramedics as to which patient could be managed at the scene. Decision rules to identify patients who had a fall and could be discharged at the scene are required.

References:

1. Australian Institute of Health and Health (2016). Falls in older people. http://www.aihw.gov.au/injury/falls/.

#7200 : Could serial hematocrit measurement be as an alternative diagnostic method for Abdomino-pelvic CT scan in blunt abdominal trauma?

Preferred format : ePoster

Authors:

Reza Mosaddegh (1), Mahdi Rezai (1), Nasrin Noohi (1)

1. Emergency Department, Firoozgar Hospital, Emergency medicine management Research center, Rasoul-e-Akram Hospital, Iran university of Medical S, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Serial hematocrit, Blunt abdominal trauma, Intra-abdominal hemorrhage, Sensitivity, Specificity

Abstract :

Introduction: Assessment for blood loss is the third priority in the primary survey of multiple trauma patients. Serial physical examination, radiologic and ultrasound investigations may be helpful in diagnosing blood loss in patients with Blunt Abdominal Trauma (BAT). Generally, serial hematocrit measurement is performed in many hospital to detect probable blood loss in BAT patients. We undertook this study to find out the accuracy of serial hematocrit measurement in detection of intra-abdominal injuries in BAT patients with different severity without obvious findings of blood loss.

Methods: We enrolled trauma patients presented to our Emergency Departments (EDs) from 2013 to 2015 prospectively. All trauma patients who sustained BAT and candidate for abdomino-pelvic CT scan entered the study and two blood samples (0 and 6 hours after admission) were drown from them. Severity of injury determined by use of Injury Severity Score (ISS). Laparotomy or CT scan considered as a gold standard diagnostic methods in this study.

Results: Nine hundred and sixty-five patients were entered the study and 44 (4.5%) suffered from intra-abdominal hemorrhage. The drop of hematocrit in hemorrhage group was not significantly lower than non-hemorrhage group (4.1±0.9 vs 3.3±1.4 respectively, P=0.08).The sensitivity and specificity of serial hematocrit (drop >2 levels) for detecting intra-abdominal hemorrhage were 0.59 and 0.79 respectively. Changing of Hct was a weak predictor for intra-abdominal bleeding (area under receiver operator curve (AUC: 0.6)).

Conclusion: BAT is a major cause of morbidity and mortality among all age groups and regularly encountered in EDs. Identification of intra-abdominal hemorrhage is often challenging. Our study showed that serial hematocrit measurement had not enough accuracy to detect intra-abdominal hemorrhage in BAT patients.

#7201 : How is the clinical impacts of blood cultures ? Analysis of patient presenting with sepsis due to pneumonia at the emergency department in Japan

Preferred format : ePoster

Authors:

Yakushiji Hiromasa (1)

1. Emergency and Critical Care Centre, Kishiwada Tokushukai Hospital, Kishiwada, JAPAN

Keywords: blood cultures, sepsis, pneumonia

Abstract :

Background

Blood cultures are routinely used to investigate suspected sepsis with pneumonia in the emergency department. However, recent studies have reported the low impact of these cultures on therapy of pneumonia.

Objective

To assess the clinical utility of blood cultures for patient presenting with sepsis due to pneumonia.

Methods

This is two-years retrospective study. The patients (age ≧15 years) who were transported to our hospital by ambulance and hospitalized with sepsis due to pneumonia from Janualy 1, 2013 to December 31, 2014, were enrolled. The diagnosis of pneumonia was made by clinical and radiographic evidence. Clinical evidence of pneumonia included findings from the medical history, vital signs, physical examination, laboratory findings, and gram stained sputum.

The blood culture results, treatment for pneumonia, and severity were investigated. Blood cultures were classified as negative, true positive, or contaminant. A contaminant culture is defined when common contaminants isolated only 1 set of blood cultures.

Results

The study involved 194 of the total of 17674 cases transported by ambulance. 26 cases were septic shock. Two sets of blood cultures were collected in all of cases with the exception of one case. Of all cases of pneumonia, 11 (6.5%) had positive blood cultures and 3 (2.0%) resulted in changed in management. Those with septic shock were higher positive blood culture ratio than those with not, but we found no significant difference (11.5% vs 6.5%, OR 1.85, P=0.40).

Discussion

Recently, the low positive blood culture rates of pneumonia have been reported in Japan. They reported it was 3.7%. This study shows even the patients were septic state, positive blood culture rates were low and blood cultures have low clinical impacts for sepsis due to pneumonia. It may not be necessary to obtain blood cultures for patients with sepsis due to pneumonia.

Conclusion

Even the patients were septic shock state, positive blood culture rates were low in pneumonia cases and had low clinical impacts. It may not be necessary to obtain blood cultures for patients with sepsis due to pneumonia

#7202 : Medical emergency data - potential impacts and benefits

Preferred format : Oral presentation

Authors:

Judith Born (1), Jürgen Albert (2), Andreas Bohn (3), Norbert Butz (2), Karlheinz Fuchs (4), Johannes Schenkel (2), Christian Juhra (1)

1. , University Hospital Muenster, Münster, GERMANY
2. , German Medical Association, Berlin, GERMANY
3. , Emergency Medical Service, City of Muenster, Münster, GERMANY
4. , Emergency Medical Service, District of Steinfurt, Steinfurt, GERMANY

Keywords: health telematics, electronic health record, medical information exchange, emergency treatment

Abstract :

1. Introduction

A considerable number of problems in emergency care are caused by a lack of provider access to pre-existing patient information at the point of care [1, 2].

In order to improve access to vital patient data in case of emergency the German Electronic Health Card (EHC) is supposed to hold emergency data. On request of the insured, the emergency data is supposed to be saved on the card by authorized health professionals (e.g. primary care physicians), so that it can be securely accessed in case of emergency by providers of emergency care.

As a basis, the German Medical Association developed a medical emergency dataset (MED), which provides the possibility to store information on contact persons, prior diagnosis, medications, allergies, implants and other emergency-relevant information.

The aim of the study group is to investigate what impact the developed MED will have on the treatment process and which benefits can be expected in a specific emergency situation.

2. Participants and methods

From 2013 to 2014 a first exploratory study was conducted to test the usability and the potential benefits of the MED. Within this study 13 primary care physicians completed a total of 64 emergency data sets. Afterwards the usability and potential benefit of the completed data sets were assessed by emergency care providers (14 clinicians with experience in emergency care, 14 emergency physicians and 9 paramedics) based on a semi-standardized questionnaire. Since the necessary telematic infrastructure is not yet established, the evaluation process was performed paper-based.

Based on the first study, a two-armed simulation study is currently prepared to test the MED under lifelike conditions and to compare the treatment process with and without MED.

Both mentioned studies are funded by the European Union and the Federal Ministry of Health, Emancipation, Care and Aging of North-Rhine Westphalia.

3. Results

Within the exploratory study clinicians, emergency physicians as well as paramedics rated the emergency data set in more than 70% of the reviewed cases as very useful or useful. The greatest benefit was attributed to the information on diagnoses and medication.

The simulation study will start in fall 2016, so the results are pending at this time.

4. Discussion

First results indicate high potential benefits of the emergency data set in real patient care situations. Further research will show whether these benefits can be confirmed under realistic conditions.

References

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2. A. Stiell et al., Prevalence of information gaps in the emergency department and the effect on patient outcomes, *Canadian Medical Association Journal* **10** (2003), 1023-1028.

#7203 : Emergency and Acute Medicine Network for Health Care Research (EMANet) Berlin

Preferred format : Oral presentation

Authors:

Julia Searle (1), Anna Slagman (1), Johann Frick (1), Liane Schenk (2), Adelheid Kuhlmey (2), Martin Möckel (1)

1. Division of Emergency Medicine CVK, CCM, Charité - Universitätsmedizin Berlin, Berlin, GERMANY
2. Institute of Medical Sociology and Rehabilitation Science, Charité - Universitätsmedizin Berlin, Berlin, GERMANY

Keywords: Emergency Departments (EDs); ED-crowding; multimorbidity; health care research;

Abstract :

Background: In recent years, utilisation of EDs and length of stay in EDs have increased steadily. EDs are a low-threshold gate to 24h per day/7 days per week available, multi-disciplinary emergency and acute care and are frequently used by patients without “classic” emergency conditions, who do not require hospitalisation. Societal and demographic changes have been leading to a growing number of older, socially deprived and multimorbid patients and therefore to a dramatic increase of the medical and psychosocial complexity of patients seen in the ED. The result is crowding of EDs which is symptomatic for supply gaps beyond EDs across the primary, secondary and tertiary care institutions, including nursing homes.

EMANet structure: EMANet is a regional health care research network in the large city centre district of Berlin-Mitte, funded by the German Federal Ministry for Education and Research (BMBF). EMANet will be set up to develop and sustain high quality, trans-sectoral, multi-disciplinary health care research in and across all 8 EDs of Berlin-Mitte. EMANet is a collaboration of institutions with expertise in public health research at the Charité – Universitätsmedizin Berlin and provision of emergency and acute care across the inner-city centre of Berlin as well as the largest statutory health insurance fund. The Network will be coordinated by the Division of Emergency and Acute Medicine and the Institute of Medical Sociology and Rehabilitation Science both at the Charité Berlin. The scientific partners reflect the integral, trans-sectoral network structure combining health care research, methodological and clinical expertise as well as health economic assessments in all EMANet research projects. The consortium will gradually be extended by integrating primary care physicians, nursing sciences and nursing homes, social services, specialist hospital departments, rehabilitation institutions and further regional health care researchers.

EMANet-aims: The scientific aims in the first funding period are to assess patient characteristics, trans-sectoral supply treatment trajectories and gaps in health care for multimorbid patients admitted to all of Berlin’s inner-city EDs. For the second phase, EMANet will aim develop and implement improved and cost-efficient health care provision for multimorbid patients with acute conditions. EMANet focuses on health care research in an area that has greatly been neglected in Germany but is key to identifying supply gaps in and across all sectors of the German health care system. It aims to develop relevant interventions for multimorbid patients who are currently not sufficiently supported or integrated in our health care system.

#7204 : Epigastric pain caused from spontaneous isolated left gastric artery dissection

Preferred format : ePoster

Authors:

Shotaro Kawamura (1), Hidetoshi Watanabe (1)

1. Emergency department, Ichinomiya nishi hospital, Ichinomiya, JAPAN

Keywords: visceral artery dissection, celiac artery dissection, left gastric artery dissection, acute abdomen

Abstract :

Background

Spontaneous visceral artery dissection without concomitant aortic dissection is a rare but fatal disease. It is difficult to diagnose by contrast enhanced computed tomography(CECT), because affected artery is small especially when the lesion is in celiac artery. We think it is important to report this case because visceral artery have to be ascertained from its origin to distal branches.

Case presentation

A 46-year-old female had sudden, severe epigastric pain at rest. The pain was stabbing quality, radiating to the back, not intermittent and was associated with sweating. She was taken to the emergency department by ambulance after four hours. She had Basedow disease and untreated hypertension. Her current medication was methimazole. She was a non-smoker and non-drinker. Her mother had aortic dissection.

On physical examination her blood pressure was 189/102 mmHg and pulse 81 beats per minute. She had tenderness to palpation over her upper abdomen, especially in the epigastrium without associated guarding. The chest, lung, and cardiac exams wer reported as normal.

Lab results were all within normal limits. Her electrocardiogram showed normal sinus rhythm but no acute ischemic changes. Transthoracic echocardiogram and abdominal ultrasonography showed both normal results. Our impression was that the pain was most likely attributable to aortic dissection and CECT was performed.

The CECT revealed a focal left gastric artery dissection. The dissection began approximately 0.5cm distal to the origin of the left gastric artery, and its false lumen was completely thrombosed. There was no disruption of blood flow in its true lumen and other branches including celiac artery were intact. Our therapeutic strategy was noninvasive conservative medical treatment and she was started on intravenous Nicardipine to lower her blood pressure. Another CECT was performed after two days and there was no progression of dissection. She was discharged home with close follow up arranged.

Conclusion

There has been reported fewer than 100 cases of isolated celiac artery dissection in the literature, but not been reported any cases of spontaneous isolated left gastric artery dissection. When we suppose aortic dissection, we need to consider not only celiac or superior mesenteric artery dissection, but also left gastric artery dissection.

#7205 : Obstructive Hydrocephalus Secondary To Third Ventricle Colloid Cyst: A Rare Cause Of Severe Acute Headache

Preferred format : ePoster

Authors:

YUZENG SHEN (1), YEE CHIEN TAY (2)

1. DEPARTMENT OF EMERGENCY MEDICINE, SINGAPORE GENERAL HOSPITAL, SINGAPORE, SINGAPORE
2. , MOHHOLDINGS, SINGAPORE, SINGAPORE

Keywords: headache, colloid cyst, third ventricle, hydrocephalus

Abstract :

INTRODUCTION: Headache is a common presenting complaint to the Emergency Department, with a variety of etiologies ranging from benign primary headaches to catastrophic intracranial bleeding. We present a patient with severe, acute headache secondary to obstructive hydrocephalus from third ventricle colloid cyst.

CASE REPORT: A 34 year old male with no significant past medical history of note presents to the emergency department after landing from a four hour flight. He presented with acute onset of headache prior to his flight and the severity of headache worsened during the flight, associated with altered mental state during flight descent.

His vital signs are as follows: temperature, 38.0^{o}C; pulse rate, 82/min; respiratory rate, 16/min; blood pressure, 131/89mmHg; pulse oximetry, 100% on room air; GCS score of 14 (eye opening 3, verbal response 5, motor response 6). On physical examination, neck was supple and patient was still able to converse, but opens eyes only to calling. There were no focal neurological deficits. Laboratory investigations showed elevated total white blood cell count of 15.5 x 10^{3}/uL. Chest x-ray was unremarkable. CT head showed a hyperdense mass in the interpeduncular cistern causing mass effect on the floor of the third ventricle and probably on the foramen of Monro with resultant moderate hydrocephalus. Patient was admitted to the Neurosurgery department for further management.

External ventricular drain (EVD) was inserted early to relieve acute hydrocephalus. Inpatient MRI of the brain showed a colloid cyst over inferior aspect of foramen of Monro and third ventricle, causing hydrocephalus with mild decompression of lateral ventricles post-EVD insertion.

(If identified for poster presentation, additional relevant images of pertinent radiological investigations done would be included to provide further illustration and enhance learning value)

Subsequently, the patient underwent craniotomy and excision of third ventricle colloid cyst and was noted to have deficits in attention span, working memory, speed of information processing, learning, and executive function. Inpatient septic work up was negative and fever was attributed to a central cause. The patient was discharged with outpatient follow up to neurosurgery and rehabilitation medicine.

DISCUSSION: Colloid cysts are rare intracranial lesions and are the most common tumor of the third ventricle. Patients with colloid cysts may remain asymptomatic or can be associated with morbidity when obstruction of the foramen of Monro occurs, leading to severe headache, hydrocephalus and even death. CT head should be performed at the emergency department to identify causes of severe headache, and surgical intervention should be performed if there is evidence of acute hydrocephalus.

CONCLUSION: A third ventricle colloid cyst is a rare cause of acute headache with significant morbidity and mortality in the setting of acute obstructive hydrocephalus. It requires a high index of suspicion, particularly if headache is severe and unremitting, with the presence of red flag signs and symptoms.

#7206 : How medical students use the web to conduct everyday clinical research?

Preferred format : ePoster

Authors:

Carine Zumstein (1), Claire Kam (1), Pierrick Le Borgne (1), Sophie Hatsch (1), Caroline Witt (1), Arnaud Perriguey (1), Charles-Eric Lavoignet (1), Pierre Vidailhet (2)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. UNISIMES, Faculté de Médecine de Strasbourg, Strasbourg, FRANCE

Keywords: Internet, websites, medical students

Abstract :

Introduction:

Given the field of medicine is increasingly broad, a physician may sometimes use Internet in order to improve his knowledge. As a result, we examined how medical students look for an answer to a clinical question using Internet within a limited time.

Methods:

The study was divided into two parts. Part 1: each student has to solve a clinical case, within a limited time, using Internet if necessary. Part 2: each student has to complete a survey detailing his documentary research on the Internet. The students were divided into two groups. The first group answered to the clinical question then did a self-assessment and vice-versa for the second group. We examined their browsing histories (how many websites were visited, the frequency of consultation for each website, the number of copy & paste, the search time...). Each student has also to assess the relevance of websites as well as his level of training for documentary research and his knowledge of the certified websites.

Results:

In this study, 90 students were evaluated. 41 websites were consulted. The most visited websites were: google.fr with 90% of consultations in the 1st group versus 100% of consultations in the 2nd (p=0.04). HAS-sante.fr (French National Authority for Health): 7% of consultations for group 1 versus 23% of consultations for group 2 (p=0.046). It was noted that the WHO websites were less frequently consulted by students (21% versus 35% (p=0,17)). By contrast, Wikipedia.fr and doctissimo.fr (French medical popularization website) were more consulted in the first group (81% versus 67% and 31% versus 19% respectively). The students who use the Internet were more highly rated than others (p=0.017).

Conclusion:

The students consult websites such as Wikipedia.fr and doctissimo.fr, but they don’t check information with other websites. A study on the relevant of the websites helps to improve their searches (as has-sante.fr or doctissimo.fr) and receive high ratings. Internet offers additional knowledge, however the students don’t use correctly this tool. For example, they consult the same Internet page and they don’t have the same answer. They don’t consider wikipedia.fr as a reference site but they keep consulting this website. To sum it up, the medical student should be trained on the Internet search in order to know the assets and the limits.

#7207 : Neurogenic pulmonary edema: case report.

Preferred format : ePoster

Authors:

Maria de la Peña Lopez-Galindo (1), Alba Hernandez (1), Beatriz Sierra (2), Alexander Maza (3), Sara Lainez (2), Maria Jose Gimeno (4), Blanca Maradiaga (4)

1. Emergency Department, University Hospital Lozano Blesa . Zaragoza. Spain, Zaragoza, SPAIN
2. Emergency Department, University Hospital Lozano Blesa. Zaragoza. Spain, Zaragoza, SPAIN
3. Neurosurgery Department, University Hospital Lozano Blesa. Zaragoza. Spain, Zaragoza, SPAIN
4. Radiology Department, University Hospital Lozano Blesa. Zaragoza. Spain, Zaragoza, SPAIN

Keywords: Neurogenic pulmonary edema

Abstract :

Neurogenic pulmonary edema, firs described by Shanahan in 1908, is characterized by pulmonary edema that occurs shortly after serious injury of thr central nervous system. It is a common but underdiagnosed condition; its incidence varies from 20 to 50% among patients with serious neurological injuries and its mortality reache 7%. Differential diagnosis must be made with aspiration pneumonia, pulmonary edema from primary myocardial disfunction, pulmonary contusion and ventilator inducec lung (barotrauma).

The purpose of this case report communication is to review this entity and remind the importance of early diagnosis.

A 38 year old male, previously healthy, was transferred to the emergency room of our center in a medicalized ambulance after suffering abrupt syncope, collapse and maintained loss of consciousness while doing physical exercise.

Assessed in situ an emergency physician, the patient had a Glasgow Coma Scale of 3 with medium, non reactive pupils, blood pressure of 145/80 mmHg, 90 beats per minute and oxygen saturation of 97%. The patient was intubated before the tranfer.

When entering the emergency room blood pressure was 111/83 mmHg and heart rate 111 beats per minute. In spite of the invasive endotracheal intubation and mechanical ventilation, the patient´s oxygen saturation level was 55-60% and outlet of pink, foamy liquid from the tube was noticed. Sinus tachicardia with no repolarization alterations was observed on the electrocardiogram.

From pulmonary auscultation crackels were heard in both lung fields suggesting acute pulmonary edema. Urgent brain and thoracoabdominal CT scans were requested revealing the presence of extensive Fisher IV subarachnoid hemorrhage and a 7.0 x 6.5 x 7.2 mm ruptures aneurysm of the anterior communicating artery was confirmed by Supra-Aortic Trunks and Circle of Willis angiography. Also thoracic images suggestive of bilateral alveolar consolidation were appreciated.

The blood work, coagulation study and cardiac enzymes were within the normal range. The patient died 40 hours after admission in the Intensive Care Unit.

CONCLUSION

Neurogenic pulmonary edema should be suspected in patients with acute and severe injury to the central nervous system and rapid development of acute respiratory failure, hipoxemia and desaturation.

90% of patients with subarachnoid hemorrhage from ruptured aneurysm that die abruptly previously present neurogenic pulmonary edema. Its onset can be acute and sudden, as in our case, but usually it appears between the 2nd and 7th day of bleeding. Risk factors associated with the magnitude, severity of bleeding, diagnosis and early treatment are essential to reduce mortality and improve the prognosis.

#7208 : Clinical development fellowship posts – A novel way to save an emergency department?

Preferred format : ePoster

Authors:

Andrew Saunders (1), Victoria Bradford (1), Andy Stevenson (1), Beth Harrison (1), Hannah Monaghan (2)

1. Emergency Medicine, NHS Lothian, Edinburgh, UK
2. Medical Education, NHS Lothian, Edinburgh, UK

Keywords: Staffing, emergency, medicine, fellowship, development

Abstract :

Background:

With more Emergency Medicine (EM) doctors moving to work abroad, fewer Foundation Doctors (FY2) moving directly into training posts and dwindling numbers of middle-grade tier doctors in Scottish Emergency Departments (ED), rota gaps are being filled in-part by locum doctors. This is a waste of precious funds at a time when National Health Service (NHS) resources are scarce.

In 2013 St John's Hospital (SJH) ED, a medium-sized ED with a ~50,000/year footfall in Livingston, Scotland, was facing an out-of-hours staffing crisis. Year long Clinical Development Fellowship (CDF) posts were introduced to solve this staffing shortfall, save resources and to develop post-FY2 trainees in clinical skills, teaching, simulation, leadership and quality improvement. So far three cohorts have been undertaken.

Aim:

The aim of this project was to investigate the impact of EM-specific CDFs within SJH ED and potential benefits for future EM training.

Methods:

Using online questionnaires from the 18 previous and current CDFs as well as semi-structured interviews with ED Consultants we explored whether CDF posts in EM made the specialty more or less appealing as a future career, as well as uncovering benefits that the programme provided to the ED and CDFs themselves.

Results:

Initial results indicate 100% of CDFs were involved in simulation projects, including the set up of in situ point-of-care multidisciplinary simulation. The majority of CDFs also achieved publications or presentations of projects undertaken as part of their post and were trained in and practiced QI methodology. Several projects have resulted in introduction of new pro-formas within the ED, improving patient care.

All CDFs had exposure to teaching, gaining a positive experience regardless of future career direction and achieved teaching qualifications, either in the form of a Post Graduate certificate or from the Clinical Educator Programme, a local teaching qualification, CPD accredited by the Royal Colleges. 100% of CDFs also undertook an accredited Medical Leadership courser, all stating this was beneficial in their day-to-day work and that this improved confidence in becoming a Clinical Supervisor in the future. With skills learnt from these courses, several CDFs set up teaching programmes within the ED to help facilitate junior doctor and undergraduate learning.

On the whole consultants viewed the safety profile of CDFs working in combination with FY2 doctors overnight positively, and acknowledge other benefits including resource saving and rota filling. This is supported by extrapolated data that shows an estimated saving of £33,000 per annum for each CDF post, if compared to use of non-permanent staff; an estimated total saving of £630,000 over 3 cohorts.

Conclusion:

CDF posts confer financial and skills-based benefits to EDs that are heavily reliant on locums. They have shown a promising start within NHS Lothian, and now other Boards within Scotland run the same programme supporting a variety of acute areas. It appears that these posts not only provide the clinical and development experience which post FY2 doctors desire, but also have a positive impact on the Department as a whole in terms of reliable staffing and value.

#7209 : Cardiotoxicity after overdose of korean medicine, Kyushin

Preferred format : ePoster

Authors:

Byung Hak So (1)

1. Emergency department, The Catholic University of Korea, St. Vincent's Hospital, Suwon, KOREA, REPUBLIC OF

Keywords: poisoning, buradienolide, arrhythmia

Abstract :

Kyushin (Chinese, meaning "saving heart") pill, manufactured by Boryung pharmaceutics, Republic of Korea, is a dark brown pill with a unique scent and taste including toad venom 0.83 mg. Toad, *Bufo* venom, found in granular glands of the skin, parotid glands and eggs of some species of toads (*Bufo gargarizans, Bufo stejnegeri* in Korea) contains several toxins and bioactive alkaloids, such as bufadienolide (bufotenin and bufogenine, etc.), digoxin-like cardiac glycosides. We report a case of Bufotoxin intoxication in 87-year-old female patient who showed signs of digitalis intoxication and recovered from tachy-bradyarrhythmia and pulseless electrical activity cardiac arrest.

81-year old, female patient presented in the ED with decreased mental status, occurred 3 hours ago. 2 hours 30 minutes before to ED presentation, a medical crew in a nursing facility found the patient in decreased mental status and empties of Kyushin next to the patient. Glasgow coma scale was 8 points, Systolic blood pressure was 104mmHg, heart rate 142 per minute, respiratory rate 24 per minutes and body temperature 36.0°C with IV dopamine infusion. The first 12-leads electrocardiogram on patient's arrival showed sinus tachycardia with heart rate 142/min and right bundle branch block. PR interval was 218msec, corrected QT interval was 429msec. After 3 minutes, suddenly heart rate dropped to 20s per minutes with SBP 96mmHg. IV atropine 1mg bolus was injected, IV dobutamine infusion started and activated charcoal of 50g was applied via nasogastric tube.

After 30 minutes when patient arrived, ventricular fibrillation on ECG monitor was detected, cardiopulmonary resuscitation was started, defibrillations with energy of 200J were delivered 6 times, IV magnesium 2g and amiodarone 300mg and 150mg were injected. After 6 cycles of cardiopulmonary resuscitation, patient's of spontaneous circulation had returned, SBP was 134mmHg, ECG showed complete AV block with ventricular rate of 43/min. Mechanical ventilator and external cardiac transcutaneous pacing with 130mA, 60/min were applied.

Plasma toxicologic test revealed the serum concentration of digitoxin 66.90 ng/ml, digoxin 0.76 ng/ml.

After 9 hours of ED presentation, cardiac transcutaneous pacing was removed, SBP was 115 mmHg and mental status came to be alert. ECG showed sinus bradycardia with rate of 57/min, PR interval 413 msec and QRS interval 98 msec. After 10 hours of presentation, the patient had been weaned and transferred to the nursing facility according to the willing of guardians. 1 week later, the patient's recovery from arrhythmias without any serious complication was confirmed by telephone.

Kyushin overdose can cause serious arrhythmias similar to digitalis intoxication.

Reference

1. Ko, R. J., et al. (1996). "Lethal ingestion of Chinese herbal tea containing ch'an su." West J Med **164**(1): 71-75.

#7213 : Dual-energy computed tomography shows brain ischemia and hyperbaric oxygen therapy efficacy in acute carbon monoxide intoxication

Preferred format : Oral presentation

Authors:

Mustafa Uzkeser (1), Abdullah Osman Kocak (1), Ilker Akbas (1), Gokhan Polat (2), Mecit Kantarci (2), Mucahit Emet (1), Sahin Aslan (1)

1. Department of Emergency Medicine , Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
2. Department of Radiology, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: Carbon monoxide poisoning; dual-energy computed tomography; hyperbaric oxygen treatment; perfusion defect

Abstract :

In carbon monoxide (CO) poisoning, the oxygen carrying capacity of blood is reduced; the amount of oxygen (O2) delivered to the tissues decreases and it leads to hypoxia at the tissue level. The most affected organs are the ones which use plenty of O2 such as the brain and heart. By imaging methods, these effects can be shown to some extent in the acute phase. Radiologic findings appear later, leading to delays in diagnosis. Rapid diagnosis and treatment increases the chance of a successful discharge. Here, we present a young man who was found unconscious possibly due to CO exposure. When he arrived to the emergency department (ED), there was no neurologic finding. Initial brain computed tomography (CT) failed to show any damage. However, dual-energy CT (DECT; as far as we know, first in the literature) revealed perfusion defect on the temporal lobe. Dual-energy CT was also efficacious in showing the healing in the brain after hyperbaric oxygen treatment (HBOT). A 20-year-old male patient was found unconscious and delivered to our emergency department by ambulance for suspected carbon monoxide poisoning. When he arrived to the emergency department, there was no neurologic finding. Initial brain computed tomography failed to show any damage. His laboratory results were within reference range, except carboxyhemoglobin being 40%. Dual-energy computed tomography (DECT; as far as we know, first in the literature) revealed perfusion defect as it showed hypodense areas on the right temporal lobe. He was transferred in the emergency intensive care unit. In addition to normobaric oxygen treatment, 2 sessions on the first day and 1 session on the second and thirds days of hyperbaric oxygen treatment were performed. Control DECT was taken on the fourth day of hospitalization after hyperbaric oxygen treatment was completed. Control DECT revealed a decrease in iodine uptake and relative recovery in perfusion on the same region. After relief of his complaints and with total recovery in neurologic examination, the patient was discharged to follow-up with recommendations on his fourth day of admission. We conclude that brain DECT may be useful for both the diagnosis and the effectivity of treatment in patients with carbon monoxide intoxication who had neurologic symptoms.

(This case report is accepted in American Journal of Emergency Medicine with doi number as: 10.1016/j.ajem.2015.12.031)

#7216 : Application of the Canadian C-Spine Rule and Nexus low criteria and results of cervical spine radiography in emergency condition.

Preferred format : Oral presentation

Authors:

William Ngatchou (1), Jeanne Beirnaert (1), Daniel Lemogoum (1), Cyril Bouland (1), Pierre Youatou (1), Ahmed Sabry Elsaeid Ramadan (1), Regis Sontou (2), Maimouna Bol Alima (1), Alain Plumaker (1), Virginie Guimfacq (1), Claude Bika (1), Pierre Mols (1)

1. Emergency services, CHU Saint Pierre, Brussels, BELGIUM
2. Radiology, CHU Saint Pierre, Brussels, BELGIUM

Keywords: cervical spine X-ray, emergency, quality.

Abstract :

Background: The Canadian C Spine Rule (CCR) and the National Emergency X-Radiography Utilization Study (Nexus) low criteria are well accepted as guide to help physician in case of cervical blunt trauma. We aimed to evaluate the application of these recommendations in our emergency department. Secondly we analyzed the quality of cervical spine radiography (CSR) in an emergency setting.

Results: 281 patients with cervical blunt trauma were analyzed retrospectively. The CCR and the NEXUS rules were respected in 91.2% and 96.8% of cases respectively. No lesions were found in 96.4% of patient. A lesion was present in 1.1% of patient and suspected in 2.5% of patient. The quality of CSR was adequate in only 37.7% of patient. The poor quality of CSR was due either to the lack of C7 vertebrae visualization in 64.6% or other lower vertebrae in 28%. Other causes included the absence of open mouth view (8%), the absence C1 vertebrae visualization (3.4%), artifact in 2.3% and the absence of lateral view in 0.6% of patient.

Conclusions: CCR and NEXUS are widely used in our emergency department. The high rate of inadequate CSR reinforces the debate about it’s utility in emergency condition.

#7217 : Ketamine and Morphine in prehospital care: an effective tool for paramedics in routine practice. A before-after study

Preferred format : ePoster

Authors:

Stefano Dellagiacoma (1), Micaela Hochstrasser (2), Paola Di Giulio (3), Fulvio Ricceri (4), Michael Zurru (1), Christiane Berta (5), Bruno Conti Rossini (6), Luciano Anselmi (7)

1. Specialised nurse in anesthesia and resuscitation, SALVA Locarno, 6600 Locarno, SWITZERLAND
2. Specialised nurse in intensive care medicine and resuscitation, Croce Verde Bellinzona, 6500 Bellinzona, SWITZERLAND
3. MSc, University of Applied Sciences and Arts of Southern Switzerland, dep of bsiness economics, health and social care, 6928 Manno, SWITZERLAND
4. Unit of Cancer Epidemiology, University of Turin, Turin, ITALY
5. MD, SALVA Locarno, 6600 Locarno, SWITZERLAND
6. MD, La Carità Hospital, Locarno, 6600 Locarno, SWITZERLAND
7. MD, San Giovanni Hospital Bellinzona, 6500 Bellinzona, SWITZERLAND

Keywords: prehospital emergency care; Ketamine; fire and rescue personnel; acute medical pain; acute trauma pain

Abstract :

ABSTRACT

Background. Although there are several papers which have assessed the effectiveness of the association of morphine sulphate with Ketamine in prehospital trauma care, until now we don`t know any study to examine the effectiveness and safety of the morphine-Ketamine (M/K) combination administered by paramedics in everyday practice.

Methods. Data before and after the implementation of a new pain protocol were collected in 4 Ticino Ambulance Services. Previously, a bolus of i.v. morphine 0.1mg/kg, up to 10 mg, was administered to patients older than 18 years, with medical or trauma pain more than 6 (scale 1-10); if the pain remained more than 3, subsequent doses of 2.5 mg were administered every five minutes, up to 20 mg; if the initial pain score was 3-5, then i.v. morphine 2.5 mg initially and 2.5 mg every five minutes up to 10 mg was administered. In the new protocol, the same dosage of i.v. Ketamine (0.1 mg/kg or 2.5 mg, respectively) was associated with morphine. At baseline, after 5 and 10 minutes, and until arrival at the emergency department, the following data were collected: state of consciousness, vital signs, heart rate, blood pressure, 3-lead ECG; pain, agitation, hallucinations, nausea and vomiting.

Results. On the whole, 398 patients were included in the study (208 treated with morphine and 190 with M/K); pain was significantly reduced in both groups but more in the M/K group (morphine vs M/K: 5 min mean score 6.00 (SD2.29) vs 4.54 (2.66); 10 min 4.65 (2.33) vs 3.28 (2.46); ED arrival 3.35 (2.20) vs 2.20 (1.93); P< 0.0001 for all comparisons).

No differences were observed at any time for nausea and vomiting. Patients treated with M/K had more episodes of hallucinations (5 cases vs none, P 0,02) which regressed rapidly and didn’t need administration of benzodiazepines. The mean dosage of morphine was not significantly different (morphine 8.5+3.76 mg; M/K 7.8 +4.06 mg p=0.06)

Conclusions. The association of M/K is an effective and well tolerated treatment which can be administered by paramedics in everyday practice.

#7218 : Predictors of 30-day mortality in patients admitted to emergency departments for acute heart failure

Preferred format : ePoster

Authors:

Antoine Benedetti (1), Matthieu Marchetti (1), Jean-Yves Lardeur (1), Nicolas Marjanovic (1), Olivier Mimoz (1)

1. Emergency Department, University Hospital Center of Poitiers, Poitiers, FRANCE

Keywords: acute, heart failure, emergency, mortality

Abstract :

Introduction: Acute heart failure (AHF) is a leading cause of admission in emergency departments (ED). It is also associated with significant in-hospital mortality, suggesting that there is room for improvement of care. Our aims was to investigate clinical patterns, biological characteristics and determinants of in-hospital mortality.

Methods: We conducted a monocentric, retrospective review of patients admitted to ED for AHF in a large academic center over a 12-months period. Data collected included demographics, clinical, biological and outcomes data. Epidemiologic data were collected at baseline, and patients were followed up during a 30-days period. The log-rank test, odd-ratios (OR) with 95% confidence intervals (CI) and ROC analysis were used to determine the prognostic value of clinical and biological patterns on 30-days mortality.

Results: There were a total of 322 patients. Mean age was 83 +/- 9 years, and 53% of the patients were women. During the 12-months of the study period, 53 patients (18.3%) died within 30 days of admission to the ED. The following three characteristics were independently associated with increased mortality: age >85 years, OR=1.5[95%CI:0.8-2.7]; creatinine clearance <30 mL/min, OR=2.6[95%CI:1.4-5] and NT-proBNP >5000 pg/mL, OR=2.2[95%CI:1.2-4]. Based on the ROC curve, the best NT-proBNP cut-off value to predict first day mortality was 9000 pg/mL (area under the curve (AUC) of 0,790). For 7-days mortality, it was 7900 pg/mL (AUC of 0,698) and for 30-days mortality, 5000 pg/mL (AUC of 0,667).

Conclusion: The admission NT-proBNP level, age and creatinine clearance are predictive of in-hospital mortality in elderly patients admitted to ED for AHF.

#7219 : “Is less really more?” Out patient antibiotic treatment (OPAT) in the paediatric emergency department (PED)

Preferred format : Oral presentation

Authors:

Jennifer Kate Smith (1)

1. , none, Edinburgh, UK

Keywords: paediatric, ambulatory, ceftriaxone

Abstract :

AIMS: To describe the population of paediatric patients attending a tertiary Paediatric Emergency Department (PED) on an ambulatory basis for intravenous ceftriaxone following the introduction of a formalised OPAT protocol from September 2015. Included in the analysis are patient demographics, reason for treatment, number of doses of antibiotic, investigations performed, admission rates and complications of OPAT.

METHODS: Data were retrospectively identified from the OPAT database which all patients treated were included on and patient electronic records analysed by the lead author.

RESULTS: 72 patients with a median age of four years (range two months – 14 years) from September 2015 until March 2016 were treated with OPAT. 54% were male. 169.5 doses of IV ceftriaxone were administered (mean 4.6, median 2). More patients received OPAT on Fri-Sun than the other weekdays and there was a peak in activity in February/March reflecting departmental overall attendance trends. The largest diagnostic group treated were patients with limb or trunk cellulitis (44%) followed by periorbital cellulitis (29%), lymphadenitis (13%) and other (14%). 67 of the 72 patients had a documented temperature in the electronic record, of which 12 (18%) were >37.5ºC. Over 97% of patients had baseline full blood count and C-reactive protein at presentation, 53% had a blood culture and 75% had other microbiological or virology laboratory samples taken. There were 22 positive results from these, including one positive blood culture (*streptococcus pneumoniae*), five *group A streptococcal* swabs, five *staphylococcus aureus* swabs and smaller numbers of other bacterial and viral pathogens. 49% had imaging, mostly ultrasound scans. 16 patients (22%) were subsequently admitted, of whom 69% were male. Of these, seven patients had cellulitis, five periorbital cellulitis, one tenosynovitis, one abscess, one lymphadenitis and one occult bacteraemia. Most were admitted for worsening appearance and no children were systemically septic or unwell. Admission rates in the febrile versus non febrile groups were not significantly different (25% versus 21%). 50% of the patients admitted required surgical intervention in the form of incision and drainage or washout. One child had an orbital cellulitis after 24 hours OPAT and an uneventful drainage of this. Another had a calcaneal osteomyelitis and subsequently developed a subtalar septic arthritis. The remainder had a change in intravenous antibiotics and were in-patients for up to 48 hours.

CONCLUSIONS: OPAT with IV ceftriaxone is an alternative to hospital admission in well children with predictable pathologies. In our population of 72 patients, 78% of patients were successfully managed in this way, thus reducing bed stays aswell as emotional and physical inconvenience. Those that were admitted had complications unforeseen at the outset of treatment but were predictable of the primary disease process and clinically recognised with appropriate escalation of care. Caregivers of children treated with OPAT must be counselled about the risk of complications and potential need for more frequent intravenous antibiotics or surgical intervention at the beginning of treatment so that their expectations can be adjusted accordingly.

#7220 : Pulmonary Embolism:Abdominal Pain a clinical dilemma

Preferred format : Oral presentation

Authors:

dalip Kumar (1), Mohammad Watfa (1), Matthew Osborne (2), Caroline Howard (3), Claire Willis (1), Dilshad Al-Sheikh (4)

1. National Health Service-ED Consultant, Southend Uinversity Hospital NHS Trust, Westcliff on Sea, UK
2. National Health Service-ED Charge Nurse, Southend Uinversity Hospital NHS Trust, Westcliff on Sea, UK
3. National Health Service-ED Consultant & Clinical ED Director, Southend Uinversity Hospital NHS Trust, Westcliff on Sea, UK
4. National Health Service-ED Locum Consultant, Southend Uinversity Hospital NHS Trust, Westcliff on Sea, UK

Keywords: Pulmonary Embolism, Abdominal Pain

Abstract :

Pulmonary Embolism: Abdominal Pain a clinical dilemma

Authors:

- Dr Dalip Kumar, MBBS (ED Consultant-Southend University Hospital)
- Matthew Osborne, RN, DipHe, BSc, PGCert, PGDip (ED Charge Nurse- Southend University Hospital & Lecturer School of Health and Human Scientists, University of Essex)
- Dr Mohammad Abu Watfa, Mu Dr (ED Consultant-Southend University Hospital)
- Dr Caroline Howard, MBBS, MRCP, FCEM (Clinical Director and Consultant ED-Southend University Hospital)
- Dr Claire Willis, MBBS, MRCS {A&E Ed}, FCEM (ED Consultant-Southend University Hospital)
- Dr Dilshad Al-Sheikh, MBCHB, Dip.Med (U.K.), MRCEM (Locum ED Consultant-Southend University Hospital)

Key Words:

Abdominal pain, CT, FAST scan, pulmonary embolism, thrombolysis, haemodynamic instability, obstructive shock

Abstract (Case Report):

The treatment and disposition of patients with pulmonary embolus (PE) is commonplace in the emergency department (ED), but atypical presentations can prove to be especially challenging. Abdominal pain is an uncommon presenting symptom for pulmonary embolism (PE).We report a case of an 83-year-old man presented to the ED via ambulance with a history of central abdominal pain and nausea for less than 24 hours; his past medical history included Parkinson's disease. The paramedic crew initially found the patient to have tachypnoea and peripheral cyanosis but was in sinus rhythm and normotensive; he also had an altered level of consciousness, although this had since resolved. With the history of collapse, evidence of shock and abdominal pain, primary consideration was for a rupturing abdominal aortic aneurysm; as such he was managed using an ABCDE approach in the ED's resuscitation area.

Assessment revealed he was alert and his airway patent, the respiratory rate remained tachypnoeic and shallow despite high flow oxygen therapy while respiratory auscultation was unremarkable. The patient remained in sinus rhythm and had hypotension which did not responded to resuscitative fluid challenge, he was afebrile. He additionally had significant difference in left and right blood pressure readings and displayed a prolonged capillary refill time and raised JVP. Abdominal assessment revealed no palpable or pulsatile masses, only tenderness in the epigastrium. FAST Scan revealed an aorta of 2.7cm but incidentally showed a dilated inferior vena cava and a dilated right ventricle.

The surgical team was called in to support the ED team to assist in ruling out abdominal pathology, and a CT scan of chest and abdomen was done. The findings of the CT revealed bilateral pulmonary emboli at which point the medical team were consulted for additional input.

Typical presentation of PE is tachycardia, haemoptysis, syncope, hypotension, crepitations and cough or fever[1,2] ,a combination of them are present in 95% of patients with PE[3,2]**;** Referred abdominal pain may be seen in less than 7% of cases[4,5] .PE can be classified according to size[6] as massive (manifesting as haemodynamic instability), sub-massive (haemodynamically stable on presentation but with the potential for instability predictable by signs of right-ventricular strain) and non-massive (haemodynamically stable and no signs of right ventricular strain). A decision was made to thrombolyse with Alteplase as the patient remained clinically unstable in an obstructive shock with a massive PE[7]**.**This patient was admitted under the ongoing care of the medical team.

The consequences of missing a PE can be catastrophic, with around 1% of all hospital deaths due to PE alone[8] and mortality of untreated PE's at 15%[9]**.**Therefore, rapid diagnosis and treatment is essential, especially in the haemodynamically unstable patient in the ED. This is facilitated by access to diagnostic imaging such as the FAST scan and CT scan, the distinguishing of hypovolemic shock compared to obstructive shock, escalation and involvement of speciality care and the use of thrombolysis in haemodynamically unstable patients.

This abstract demonstrates that patients presenting with abdominal pain should be considered for PE as their differential diagnosis.

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Abstract Word Count: 498

#7221 : Web-based tools for educating caregivers about childhood fever: a randomized controlled trial

Preferred format : Oral presentation

Authors:

Natasha Lepore (1), Lara Hart (2), Naveen Poonai (3)

1. Bachelor of Medical Sciences, Schulich School of Medicine & Dentistry, Western University, London, CANADA
2. Department of Pediatrics, Schulich School of Medicine & Dentistry, Western University, London, CANADA
3. Department of Pediatrics, Schulich School of Medicine & Dentistry, Western University & Divison of Emergency Medicine, London Health Sciences Centre, London, CANADA

Keywords: Internet, education, fever, pediatric

Abstract :

Title: Web-based tools for educating caregivers about childhood fever: a randomized controlled trial.

Introduction: Fever is a common reason for an emergency department (ED) visits and misconceptions abound. To date, educational strategies targeting caregivers have made little impact. Multimedia approaches to educate caregivers have proven effective in many childhood conditions. However, the utility of web-based interventions in caregivers has not been explored for childhood fever. In this study, we assessed the effectiveness of an interactive web-based module (WBM), read-only website (ROW), and written and verbal information (SOC) to educate caregivers about fever in their children.

Methods: This was a parallel group, randomized, superiority trial at a pediatric ED in London, Ontario, Canada from December 2013 to January 2015. The caregivers of children 0-17 years presenting to the ED with either a chief complaint of fever or had a temperature greater than 38 C were included. Caregivers were randomized to a WBM, ROW, or SOC. Primary outcome was the gain score on a novel questionnaire testing the caregiver's knowledge on the measurement and management of fever. Secondary outcome was the caregiver satisfaction with the interventions. Primary outcome was analyzed using ANOVA and contrast analysis using the Student's t-test was performed if overall differences were found. Caregiver satisfaction scores were compared using the Student's t-test.

Results: There were 77, 79, and 77 participants in the WBM, ROW, and SOC groups, respectively. Web-based interventions were associated with a significant mean (SD) pre-test to immediate post-test gain score of 3.5 (4.2) [95% CI: 2.5, 4.4] for WBM ($p < 0.001$) and 3.5 (4.1) [95% CI: 2.6, 4.4] for ROW ($p < 0.001$) in contrast to a non-significant gain score of 0.1 (2.7) [95% CI: -0.5, 0.7] for SOC. Mean (SD) caregiver satisfaction scores (out of 33) for the WBM, ROW, and SOC groups were 22.6 (3.2), 20.7 (4.3), and 17 (6.2). All groups were significantly different from one another in the following rank: WBM > ROW > SOC (95% CI WBM: 21.9, 23.4; ROW: 19.8, 21.7; SOC: 15.5, 18.5, $p < 0.001$).

Conclusions: In contrast to verbal and written information, web-based interventions are associated with significant improvements in caregiver knowledge about fever. A web-based module is associated with the greatest caregiver satisfaction and should be routinely used in the ED.

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Acknowledgements: The authors have no conflicts of interest relevant to this article

#7222 : Pre-hospital times and clinical characteristics of multi-system trauma patients: A comparison between mountain and urban areas

Preferred format : Oral presentation

Authors:

Simon Rauch (1), Tomas Dal Cappello (1), Giacomo Strapazzon (1), Francesco Bonsante (2), Martin Palma (1), Elisabeth Gruber (3), Matthias Ströhle (4), Alberto Trincanato (1), Andreas Frasnelli (5), Peter Mair (4), Hermann Brugger (1)

1. Insitute of mountain emergency medicine, Eurac, Bolzano, ITALY
2. Department of Anesthesiology and Intensive Care Medicine, Bolzano Central Hospital, Bolzano, ITALY
3. Department of Anesthesiology and Intensive Care Medicine, Bruneck Hospital, Bruneck, ITALY
4. Department of Anesthesiology and Intensive Care Medicine, Innsbruck Medical University Hospital, Innsbruck, AUSTRIA
5. Notfallstation Vils, Spitalzentrum Oberwallis , Gils, SWITZERLAND

Keywords: multi-system trauma, mountain areas, pre-hospital times

Abstract :

Objective: Time from accident to hospital admission in trauma patients is expected to be longer in mountain as compared to urban areas. The aim of this study was to investigate pre-hospital times and clinical characteristics of multi-system trauma patients in mountainous areas and compare them with urban centres.

Methods: Pre-hospital and in-hospital data of trauma victims included in the prospective International Alpine Trauma Register (IATR) hosted in Bolzano, Italy, were compared with published data of trauma victims from rural and suburban areas included in the TraumaRegister DGU® (TR-DGU) of the German Trauma Society. Only patients aged 16 to 80 years with ISS≥16 were included.

Results: A total of 94 patients from IATR and 11020 patients from TR-DGU met the inclusion criteria. Although helicopter rescue was more frequent in mountain compared to urban areas (92% vs. 40%, Fisher's exact test $p<0.001$), the mean prehospital time was significantly longer in mountain areas (117.4±143.9 vs. 68.7±28.6min, Welch's *t*-test $p=0.002$) with 38% of patients having a pre-hospital time of >90min. Mean ISS was higher in ITAR patients as compared to DGU® TraumaRegister patients (38.5±15.8 vs. 28.6±12.2, $p<0.001$). Moreover, patients presenting with a low systolic blood pressure (≤90mmHg) at scene were more frequent in ITAR (41% vs. 19%, Fisher's exact test $p<0.001$), yet less patients from IATR as compared to TR-DGU® received pre-hospital volume therapy (82% versus 92%, $p=0.001$). The rate of unconscious patients with GCS≤8 (34% vs. 33%, $p=0.917$) as well as pre-hospital intubation rate (44% vs. 54%, $p=0.077$) were similar in mountain and urban areas. At hospital arrival mean haemoglobin was comparable (12.0 vs. 12.1g/dl, $p=0.774$), whereas mean base excess was lower in mountain than urban areas (-5.4±4.1 vs. -3.3±5.1, $p<0.001$). Furthermore, patients with a low systolic blood pressure (≤90mmHg) at hospital arrival were more frequent in IATR as compared to DR-DGU® (27% vs. 15%, p=0.003). No significant difference in hospital mortality was observed between patients from the two registries (11.1% vs. 17%, p=0.163).

Conclusion: Multi-system trauma in mountain areas has some distinctive characteristics and is associated with a significantly increased pre-hospital time despite helicopter rescue in over 90% of cases.

#7224 : Pre-hospital transcutaneous pacing. A case of post cardiac arrest origin idioventricular escape rhythm pacing

Preferred format : Oral presentation

Authors:

Iryna Domoratska (1)

1. Emergency medicine service, Falck Zacranna Slovakia, Kosice, SLOVAKIA

Abstract :

Introduction: This is a case of successful acute management of a rare condition of idioventricular escape rhythm followed by cardiac arrest, PEA, asystole in a polymorbid patient, managed by transcutaneous pacing (TCP).

Case description: Emergency Service Paramedics were sent by Dispatchers for 63-year old female patient, who was found suddenly unresposive by her relatives. Uppon arrival, the paramedics found the patient lying on the floor of the living room. The patient was unresponsive, and her daughter was present and indicated that she has just collapsed.

The patient was protecting her own airway, had no radial pulse, but the carotid pulse was felt slow and week. Her GCS was 7, and within few minutes the patient went into cardiac arrest. The paramedics called for the medical team and started CPR. The medical team arrived four minutes later, and the CPR was ongoing, but the patient was still unconscious, breathless, the pupils were equal, 5 mm in diameter, with no reaction to light. There was no palpable carotid pulse, with PEA on LP 15 monitor, and her blood sugar was 21,2 mmol/l.

We started ACLS and a brief history was taken. The patient had multiple comorbidities with a history of IHD, arterial hypertension, DM type 1 on insulin. She was feeling unwell before becoming unresponsive. ETI, ALV with 100% oxygen, chest compression, i.v. line inserted and Adrenaline was given 1 mg i.v. every 3 min. The PEA rhythm changed to asystole than again to PEA. Within 18 minutes after ACLS start, the carotid pulse started to be palpable with a rate 23/min, and her BP was 86/40 mmHg. On LP monitor there was a picture of idioventricular escape rhythm, regular, 23/min, with wide QRS and no P waves.

The medical team started prepearing for TCP, while giving 1 mg Atropin i.v., until a total dose of 3 mg, and Dopamine 10mcg/kg/min. Pacing started with a frequency 60/min, 150 mA. Immediately, a picture of successful mechanical and electrical capture was obtained, and her BP became 103/53 mm/Hg. The patient was transported to the ICU depatment, where within 30 minutes sinus rhythm reappeared. The patient survived without any neurological deficit. The reason of the cardiac arrest was diagnosed as NSTEMI, and PCI was performed.

Discussion: The presented case is interesting due to the rare appearence of an idioventricular escape rhythm after CPR with asystole and PEA. The author (and the head of the resuscitation team in presented case) did not find in literature such case description. The idioventricular escape rhythm is always mentioned as a terminal event just before ventricular standstill in patients with underlying cardiac disease. The management of the presented case was done according to the ERC guidelines for ACLS, and TCP was a life saving method of treatment for the patient.

#7225 : Paracetamol overdose may cause transudatic pleural effusion in adults

Preferred format : ePoster

Authors:

Mucahit Emet (1), Abdullah Osman Kocak (1), Ilker Akbas (1), Sibel Guclu (1)

1. Department of Emergency Medicine, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: paracetamol, acetaminophen, over dose, pleural effusion, transude

Abstract :

Since its first clinical introduction in the United States during the 1950s, acetaminophen (paracetamol) has been one the most widely used drug in the world. It is highly effective and safe in the recommended doses. Although it is a remarkably safe drug, it is the most common cause of poisoning and fatality due to its toxic administration worldwide. Liver and kidney damage after its toxic administration are well known; however, direct damage to other organs has rarely been reported. This case is the first report in the literature on the development of the pleural effusion after high-dose paracetamol intake.

A 34-year-old female patient applied to our ED with the complaint of swallowing 33 g of paracetamol with suicidal ideation. Her initial and follow-up vital and laboratory findings were within normal range. After routine toxicity treatment, a total of 200 mg/kg N-acetylcysteine IV therapy was given during 21 hours. On the third day of the hospitalization, dyspnea and pain on the right hemithorax and right flank occurred. Chest X-ray showed blunted right sinus which was not observed before. CT angiography revealed bilateral pleural effusion that was more prominent on the right. With thoracentesis, clear, colorless and odor-free fluid of about 500 cc was drained. Laboratory examination of the fluid confirmed it as transudate. Blood, sputum, urine, pleural fluid cultures and ARB staining were all negative. We believe pleural effusion occurred due to decrease in pleural permeability and the consequent decrease of the fluid absorption. The absence of any chronic disease in the medical history, occurrence of the event just after the drug intake, transudative character of the fluid and the exclusion of other disorders.

Pleural effusion is defined as an abnormal fluid accumulation because of the penetration of excessive fluid in the pleural cavity or of the decrease of the absorption of the fluid or of both. Although pleural effusion can develop as a complication of various diseases, heart failure, pneumonia, tuberculosis, and pulmonary embolism are the most common underlying factors in adults. Pleural effusion due to drug intake is rare. We found no other reported case of paracetamol-induced pleural effusion. In a clinical study on IV paracetamol, it was reported that pleural effusion might occur as a rare adverse effect in the pediatric patient population. There were no reports on the risk in adults. Paracetamol and NSAIDs blocked the Na+ channels and the Na+/K+ pumps in normally functioning parietal pleura. Due to this blockage, the permeability of the pleural membrane decreases. Therefore, the absorption of the fluid from the pleural membrane is also decreased. In a recent in vivo study conducted on rats, paracetamol and NSAIDs delayed the pleural fluid absorption in the rats with postoperative hydro-thorax.We believe that the cause of the pleural effusion in our patient was the variability of the pleural permeability and the consequent decrease in fluid absorption caused by the high-dose intake of paracetamol. In summary, it should be kept in mind that high-dose intake of paracetamol may cause transudative pleural effusion as a complication.

#7226 : Prevalence and characteristics of patients with undiagnosed hiv infection in an urban Emergency Department

Preferred format : ePoster

Authors:

alberto Pizarro Portillo (1), Alberto Pizarro Portillo (1), Monica Negro (1), Ana Del Rey (1), Carmen del Arco (1), Ignacio Santos Gil (2), Francisco Rodrgiuez (3)

1. Emergency Department, La Princesa Hospital , Madrid, SPAIN
2. Infectious Diseases Department, La Princesa Hospital , Madrid, SPAIN
3. Biostatistics, La Princesa Hospital , Madrid, SPAIN

Keywords: HIV infection, Routine HIV test, Prevalence, Emergency Department

Abstract :

Background:

Cost-effectiveness analyses support HIV screening in health care settings including emergency departments (EDs) when local undiagnosed HIV infection prevalence exceeds 0.1%. In Spain routine HIV testing is not incorporate in the EDs. To evaluate the potential for the implementation of routine screening we determined the prevalence of unknown HIV infection among patients seeking care in the fast track area of the ED and described the factors associated with the diagnosis.

Participans and methods:

The study was conducted at a single urban academic ED: La Princesa Hospital in Madrid. Patients aged 15-75 presenting to the fast-track area of the ED and who was getting a blood draw for other reasons was tested for HIV regardless of risks or symptoms. Stream pretest written information was given to patients notifying that the test was going to be normally performed unless the patient opted out. Patients were excluded if they had known HIV diagnosis, had an acute psychiatric or unstable medical illness or if a language barrier existed. Plasma samples were sent to the hospital microbiology laboratory and screened for HIV with traditional 4^{th} generation EIA test. Patients with positive results were referred to infectious diseases department for confirmatory testing and treatment. The prevalence of unknown HIV infection and 95% confidence intervals (CIs) were determined by standard methods. Odds ratios were calculated for all factors potentially associated with unknown HIV infection. Analyses were performed with SPSS v18.0 and STATA v12.

Results:

A total of 1,722 patients had blood drawn. Of these, 21 patients (1.2%) opted out from the screening and 19 (1.1%) of the blood samples weren't eventually analyzed. The prevalence of undiagnosed HIV infection in the ED among 1,682 patients tested was 0.6% [95%CI: 0.23-0.96]. It was, **statiscally non-significant,** higher among foreing-born individuals 0.97% [95%CI:0.3-2.2], and middle-aged individuals 36-50 1.46% [95%CI:0.4-2.5]. Being male (**OR 5,78 95%CI 1,0-31,4),** chief complaint suggesting infection **(OR 8,14 95%CI 1,6-41,4)** and history of hepatitis **(OR 5,53 95%CI 1,1-27,7)**, were associated with unknown HIV infection.

Conclusion:

There was a high prevalence (0.6%) of undiagnosed HIV infection among patients seeking care in this Emergency Department. Universal routine Opt- out HIV testing was highly accepted. These results advise EDs and hospitals to implement different strategies like routing screening or indicator condition guided HIV testing to avoid as many missed HIV diagnoses as possible.

#7227 : Lingual Abscess In A Heavy Smoker

Preferred format : ePoster

Authors:

Mustafa Uzkeser (1), Ilker Akbas (1), Abdullah Osman Kocak (1), Fatma Cakmak (1), Mucahit Emet (1)

1. Department of Emergency Medicine, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: lingual abscess, heavy smoke,

Abstract :

Lingual abscess is an extremely rare disease that misdiagnose may lead to sepsis and/or airway obstruction. Only 24 cases were reported during the last century in the United States of America. Here, we present a case with lingual abscess with no identifiable etiological cause. We suggest that the reason may be mucosal damage related to smoking.

A 50-year-old male patient was admitted to our emergency service with complaints of swelling of his tongue, pain and dysphagia. The swelling and pain had started 4 days ago and had been increasing gradually. Additionally, over the last 24 hours, dysphagia and difficulty in speaking developed. He was a heavy smoker (2 packets/day for 35 years). His medical history revealed neither a predisposing factor such as a chronic disorder including immunosuppression nor recent history of oral trauma. His physical examination revealed poor oral hygiene and a red, swollen tongue. There were two painful, protuberant lesions with purulent discharge: one located over the tongue, 2x3 cm in dimension and the other located sublingually, 1x2 cm in dimension . He had hoarse voice and saliva was discharging from his mouth. Maxillofacial and cervical tomographic examinations with contrast were performed. Tomographic examination revealed a lesion with peripheral contrast uptake, located at the mid-portion of the tongue and consistent with an abscess . The patient was consulted with an otorhinolaryngologist and then hospitalized. Here, fine needle aspiration was performed for diagnostic and therapeutic purposes and pus was drained from the lesion; then, ceftriaxone 2 gr/day IV and ornidazole 1gr/day were started empirically. The culture result revealed gram-positive cocci and anaerobes. The empirical antibiotic treatment was continued with the same protocol. The patient was discharged from the hospital at his 8^{th} day of admission, following regression of his symptoms.

Although the tongue is in contact with numerous pathogens, it is highly resistant to infections. Smoking increases the sensitivity to oral mucosal infections. It reduces the immunological response of the host by altering the immune system in the oral, nasal and airway mucosa. The development of infection is more evident in cases who have poor oral hygiene or diabetes mellitus and immunocompromised status accompanying heavy smoking. We consider that smoking caused impairment in the mucosa leading to be infected by elements of oral flora in our case. Immunocompromised status, poor oral hygiene, chemotherapeutic agents and diabetes mellitus are among predisposing factors for development of lingual abscess. It is essential to evaluate underlying medical problems and trauma. However, no specific cause can be identified in some cases. No history of trauma, no history of a chronic disorder, foreign body or bite was present in our case. In conclusion, this case leads us to suggest that smoking may be an etiological factor in the development of lingual abscess in patients with no other identifiable etiological factors. Although clinical explanations related to lingual abscess are not generally mentioned in the majority of classical essential textbooks, emergency service physicians and head-neck surgeons should be aware of this situation which may lead to fatal consequences.

#7228 : Rare cause of chest pain

Preferred format : ePoster

Authors:

Bodócsi Beáta (1), Koncz István (1), Hum Zsigmond (1), Serfőző Orsolya (1), Pap-Szekeres József (2), Szabó István (1)

1. Bács-Kiskun County Hospital, Emergency Department, Kecskemét, HUNGARY
2. Bács-Kiskun County Hospital, Surgical Department, Kecskemét, HUNGARY

Keywords: chest pain, hiatal hernia

Abstract :

Introduction: Chest pain is a common symptom in patients who visit Emergency Departments. The main work is to exclude the life-threatening diseases: acute coronary syndrome, pulmonary embolization and dissection of the thoracic aorta. The diagnostic algorithms target to confirm or to reject the possibility of these illnesses but to keep in mind that many less common but dangerous diseases may cause chest pain.

Case report: An 80- year old man with dyspnea and intense chest pain for seven hours was admitted to our emergency department. The patient had no other symptoms. In his past medical history there are suspected prostatic cancer, hypertonia and cataract. Physical examination did not reveal any abnormalities however the blood pressure of the patient was 190/100 Hgmm. 12- lead ECG showed Right Tawara bundle bunch block (RBBB) with secunder ST-T alterations. Chest X-ray showed only minor alterations and the cardiac necroenzymes were insignificant. The patient had impaired renal function (eGFR: 46 ml/min/1.73 m2) and elevated D-Dimer (2.7 µg/ml) level. Pulmonary embolization and aortic dissection were mainly suspected. We performed a chest computer tomography (CT) scan and interestingly we found that the patient's stomach was placed in the mediastinum. The patient had an urgent Nissen laparoscopic funduplication and he was emitted home.

Discussion: The cause of chest pain was hiatus hernia in this case. Chest pain is a serious problem as cardiovascular diseases are on the top of mortality statistics but sometimes less common causes should be considered.

#7229 : Vasopressin effectiveness in renal colic pain management: systematic review and meta-analysis

Preferred format : ePoster

Authors:

Mohammad Jalili (1), Entezari Pouya (1), Doosti-Irani Amin (1), Masoomi Rasoul (1), Mirfazaelian Hadi (1)

1. , none, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Renal colic, Vasopressin, Pain Management

Abstract :

Background: This meta-analysis of trials was conducted to evaluate the effectiveness of vasopressin on renal colic pain management in comparison to more typically used medications (opioids and nonsteroidal anti-inflammatory drugs (NSAIDs)).

Methods: PubMed, EMbase, Scopus, CINHAL, and Cochrane Central Register of Controlled Trials were searched for clinical trials. Outcomes of interest were pain reduction and need for rescue treatment.

Results: Ten studies met our inclusion criteria and analyzed. Seven out of 10 studies had low quality and 3 others were high in quality assessment using Jadad scoring system. On the scale of 1-10, NSAID showed significantly more pain reduction after 30 minutes in comparison to vasopressin (3.39 with a 95% confidence interval (CI) of 4.62-2.16 (p= <0.01)) but this reduction was not significantly different between NSAID and vasopressin-NSAID combination (-0.28 with 95% CI of -0.62-0.05 (p= 0.01)). Summary of RR for the need for rescue treatment in vasopressin in comparison to NSAID was 0.31 with a 95% CI of 0.13-0.74 and a significant RR (P= <0.04) but no difference was shown in vasopressin-NSAID combination in comparison to NSAID (0.70 with a 95% CI of 0.49-1.00 (p= <0.19)). On need for rescue treatment, vasopressin in comparison to opioid showed insignificant RR (1.82 with a 95% CI of 0.36-4.34 (p= 0.72)) but for vasopressin in comparison to vasopressin-opioid combination, it was 0.75 with a 95% CI of 0.56-0.99 and a significant RR (p= 0.042).

Conclusion: The results of this systematic review showed that according to the present low quality studies, vasopressin can be used as an adjuvant therapy in renal colic management in combination with opioids but does not have any addition therapeutic effect in NSAID combination.

#7230 : Evaluation of the inflamatory profile (kinins and cytokines) and eletrocardiographic in patients with Arboviroses (Dengue and Zika Virus) attended in Ribeirao Preto- Brazil

Preferred format : Oral presentation

Authors:

Rosemary Daniel (1), Santos Luis (2), Deborah Ferreira (3), Leandro Peres (3), Matheus Ferreira (3), Walther Campos (4), Cesar Mendes (4), Gabriel Lopes (4), Felipe Leão (4), Edson Texeira (5), Renata Joviliano (1), Reinaldo Bestetti (1)

1. teacher medical, UNAERP, ribeirão preto, BRAZIL
2. resident doctor, UNIFESP, ribeirão preto, BRAZIL
3. resident doctor, UNAERP, ribeirão preto, BRAZIL
4. medicine student, UNAERP, ribeirão preto, BRAZIL
5. nurse, unaerp, ribeirão preto, BRAZIL

Keywords: Dengue, Zika virus, inflammatory response, electrocardiographic changes

Abstract :

The Arbovirus are viruses transmitted by arthropods (Arthropod- borne viruses), and part of its replicative cycle occurs in insects. It is transmitted to humans and other animals by the bite of blood-sucking arthropods. The arboviruses that cause diseases in humans are of families: Bunyaviridae, Togaviridae, Flaviviridae, Reoviridae and Rhabdoviridae.

The Flaviviridae family has single-stranded RNA virus and encapsulated. They are mainly found in ticks and mosquitoes (Aedes albopictus and Aedes aegypit) and can infect humans. The Flavivirus have significant morbidity and mortality and are worldwide. Among the viruses transmitted by mosquitoes belonging to this family are: Yellow Fever, Dengue (DENV), Encephalitis and Zika virus (ZIKV).

In May 2015, the Pan American Health Organization reported the risk of transmission of ZIKV in some cities in northeastern Brazil. Were laboratory confirmed indigenous cases, warning of the potential for global spread of the virus, similar to the DENV and CHIKV. From oct / 15 there was an increase in cases of microcephaly in the northeast.

By the above, as already announced, in 2016 began with an epidemic of DENV and an avalanche of suspected cases of ZIKV. Due to the rapid progress of cases and appearance in other countries, the World Health Organization in feb/16, announced that ZIKV is an international public health emergency.

Objectives: General- investigate the pathophysiology of infection ZIKV. Specific- electrocardiographic evaluation and plasma inflammatory response profile (kinins and cytokines) in patients with different types of arboviruses (DENV, ZIKV)

Because it is new virus in our environment, we have little knowledge about ZIKV. Thus, with these reviews we hope to identify a pattern of variation in the inflammatory profile between arboviruses and electrocardiographic changes, particularly in patients with ZIKV. Will be assessed.:

1 Levels of high Kininogens and low molecular weight (CAPM and CBPM); amidolytic activity plasma prekallikrein, kallikrein and kininase II (ECA).

2- Profile Determination of cytokines associated with Th1 pattern (INF-gamma, IL-12), Th2 (IL-4, IL-10, IL-13, IL-5) and TH17 (IL-17, IL-22 and IL-23)

3- Quantification of cytokines with anti-activity and serum pro inflammatory: IL-1beta, TNF-alpha, IL-6, IL-12 and TGF-beta 1/2.

In electrocardiograms the following changes will be evaluated: tachycardia sinus bradycardia sinus, atrial fibrillation, atrial flutter, right bundle branch block, left bundle branch block, ST-T changes, QTc interval, QT dispersion

Methodology: Patients treated at 10/03/16 to 30/05/16 period, the Emergency Unit Attendance- Ribeirao Preto with clinical arbovirus (DENV and ZIKV) will undergo blood collection for laboratory tests and performed an electrocardiogram.

Data analysis: nonparametric Mann-Whitney, Kruskal-Wallis or Wilcocox

Results: The exanthem in cases of ZIKV appear in the first days of symptoms accompanied by pruritus. Arthralgia is more intense in the case of DENV well as fever. In blood count thrombocytopenia is more severe in cases of DENV, however ZIKV presents an important leukopenia. We are still in the data collection and analysis phase. At present we have 300 samples for analysis.

#7231 : Is this another case of vasovagal syncope?

Preferred format : ePoster

Authors:

Ivan Chua (1)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE

Keywords: syncope, mediastinal mass

Abstract :

Syncope is a common presentation to the Emergency Department with at least 1/3 of the population having experienced it at least once during their lifetime. The top 2 causes of syncope are vasovagal (21.2%) and cardiac (9.5%), and the cause is unknown in 36.6%. We present a case of a 28 year old Chinese gentleman with an unusual cause of syncope due to a mediastinal mass. He presented with a first onset of syncope lasting 1 min following a visit to the local general practitioner for 1 week of cough. A CXR was performed in view of the cough which revealed prominence of the left hilar shadow which suggested a possible hilar mass, which upon further evaluation with CT, turned out to be a 6.8*4.8cm heterogeneous lobulated anterior mediastinal mass. We will also review the pertinent points in the evaluation of a patient who presents with syncope.

#7232 : Giant splenic artery aneurysm presented with sudden epigastric cramping pain

Preferred format : ePoster

Authors:

Jiun-Jia Chen (1)

1. Emergency physician, Cheng Ching Hospital Chung Kang Branch, Taichung City, TAIWAN

Keywords: Splenic artery aneurysm

Abstract :

Introduction:
Splenic artery aneurysms (SAA) are the third most common true aneurysm occurring in the abdomen after aortic and iliac artery aneurysms. SAAs are more common in women (female: male = 4:1) and in the sixth decade of life, with as many as 80 percent occurring in patients >50 years of age. Patients with symptomatic SAA present with nausea and vague abdominal discomfort in the midepigastric or left upper quadrant. They are clinically important because of the possibility of rupture, which is associated with a high mortality rate, especially during pregnancy and/or in patients with portal hypertension. This time, we presented a case of giant SAA (15 x 8 x 8 cm) with initially manifestation of sudden epigastric cramping pain.

Case report:
A 91-year-old male with a past medical history of hypertension presented with sudden epigastric cramping pain eight hours prior to admission. Initial vital signs were T 36.5℃, pulse rate 145/min, respiratory rate 18/min, BP 122/86 mmHg, room air SpO2 97%. Physical examination revealed epigastric tenderness without peritoneal signs and one abdominal pulsatile mass.

Chest X-ray revealed no obvious subphrenic free air or widening mediastinum. ECG revealed sinus tachycardia. Laboratory data revealed WBC 5380/μL, Seg: 68.2%, creatinine: 1.54 mg/dl, total bilirubin: 0.5 mg/dL, lipase: 135 IU/L. We initially suspected abdominal aortic aneurysm and arranged abdominal CT with/without contrast for further survey. The abdominal CT result revealed giant SAA. Endovascular stenting was performed by radiologist. His epigastric pain was relieved well after stenting.

Discussion:
Previous studies have shown a high risk for SAA rupture when the aneurysm measures >2 cm. Patients treated with conservative treatment showed a higher late mortality rate. Endovascular repair of the SAA has better short-term results compared with open surgical repair, including significantly lower perioperative mortality; however, open surgical repair is associated with fewer late complications and reinterventions during follow-up. Endovascular repair has the best outcomes and should be the treatment of choice if the splenic artery has a suitable anatomy for endovascular repair.

#7233 : Acute coronary syndrome presented with an only presentation of exertional headache

Preferred format : ePoster

Authors:

Jiun-Jia Chen (1)

1. Emergency physician, Cheng Ching Hospital Chung Kang Branch, Taichung City, TAIWAN

Keywords: Acute coronary syndrome, headache, cardiac cephalalgia

Abstract :

Introduction:
Pain above the nose or below the navel is rarely cardiac in origin. Cardiac cephalalgia means that a case of headache is presented where the underlying cause was cardiac ischemia. This is a very rare syndrome and the mechanism is still unknown now. This time, we presented a case of acute coronary syndrome (ACS) with an only presentation of exertional headache of sudden onset.

Case report:
A 64-year-old female with past medical history of diabetes mellitus and end-stage renal disease under regular hemodialysis presented with severe headache of sudden onset while exercise for one hour prior to admission. Diaphoresis was noted at triage. She denied chest pain or tightness. She denied similar history before. Initial vital signs were T 36.5℃, pulse rate 90/min, respiratory rate 18/min, BP 103/59 mmHg. Physical examination showed no remarkable findings. Due to the suspicion of brain lesion, such as subarachnoid hemorrhage, emergent brain computed tomography (CT) was arranged. Emergent brain CT revealed no obvious intracranial lesion. Patient still complained of severe headache one hour after morphine 5 mg IM . Under the consideration of electrolytes imbalances or cardiac ischemia, ECG and blood exam were arranged. ECG revealed ST elevation of lead aVR and multiple ST depressions of lead I, II, III, aVF, and V2~V6. Previous ECG 2 months ago revealed normal sinus rhythm without ST-T changes. Laboratory data showed troponin I 1.05 ng/mL (Nromal: < 0.11). Coronary angiography was performed by cardiologist. The result showed 80% stenosis of right coronary artery (RCA) and 99% stenosis of left circumflex artery (LCX). Both percutaneous transluminal coronary angioplasty and bare-metal stent were applied for RCA and LCX. Her headache was relieved well after stenting. Then the final diagnosis was confirmed as severe headache of sudden onset due to ACS. She was under regular follow up at cardiovascular outpatient department without complications.

Discussion:
When the headache occurs as the only manifestation of an acute coronary event, the clues for suspicion are: (1) older age at onset, (2) no past medical history of headache, (3) presence of risk factors for vascular disorders, (4) onset of headache under stress.

#7234 : Diagnosing teenage pregnancy in ED: When to test

Preferred format : Oral presentation

Authors:

Marcus Y. L. Sim (1), Peter Heinz (2)

1. University of Cambridge Clinical School, N/A, Cambridge, UK
2. CUHFT, Addenbrooke's Hospital, Cambridge, UK

Keywords: adolescents, teenage pregnancy, pregnancy testing, abdominal pain

Abstract :

Background: Adolescent girls presenting to emergency departments (ED) with abdominal pain are a common presentation. Pregnancy is one differential diagnosis amongst many but if missed can have serious consequences. The UK is one of the European countries with the highest rate of teenage pregnancies with large regional variations. 4.5% of all deliveries are to mothers aged 18 or younger (31,000 p.a.). There is limited guidance on when to screen for pregnancy in this age group. In our study we audited practice in a cohort of adolescent girls presenting to a tertiary teaching hospital ED with abdominal pain following a review of the literature.

Methods: Resource websites of RCPCH (UK), RCEM (UK), AAP (US), NHS Improving Quality (UK) and Pubmed were searched for protocols and guidelines. All female attendances aged between their 12th and 18th birthday with a presenting problem of abdominal pain between October 2015 and January 2016 were identified and the electronic records reviewed. Data was collected on whether a menstrual history was taken, sexual activity, pregnancy testing and final diagnosis and disposal.

Results: A total of 124 ED attendances by 98 patients were identified. One 16 year old girl was found to be pregnant on testing with suspected ectopic pregnancy. 27% of attendances did not have a pregnancy test, when excluding pre-menarchal patients this rate dropped to 25%. 14 and 15 year olds had a pregnancy test result documented in only 60% of cases. Of those patients not tested, 12% went to theatre and 14.7% were exposed to ionising radiation including CT scans. Sexual activity was asked about in only 25% of cases but did not impact on the rate of testing. Menstrual history was documented in 66% of attendances. 12% of attendances who were not tested had no definitive diagnosis on discharge from the ED.

Conclusion: Detection of teenage pregnancy is important. There are recommendations for testing in risk groups but this is not universally implemented. A number of factors account for substandard practice as highlighted in our cohort and we present current latest recommendations and propose a management algorithm.

#7235 : A rare cause of pulmonar hemorrhage

Preferred format : ePoster

Authors:

Cristina Ana Baquer Sahun (1), Marta Jordan Domingo (1), Daniel Saenz Abad (1), Carmen Lahoza Perez (1), Maria Martinez Diez (1), Raquel Montoya Saenz (1), Ines Murillo Diaz de Cerio (1), Miguel Rivas Jimenez (1)

1. Emergency Department, Hospital Clínico Universitario Lozano Blesa, Zaragoza, Zaragoza, SPAIN

Keywords: pulmonar hemorrhage, chronic kidney disease, Goodpasture syndrome

Abstract :

Case Description: 77-year-old male with medical history of hypertension, sigmoid diverticulosis and chronic kidney disease (CKD) (diagnosed by Nephrologist as secondary to nephrosclerosis, without histologic diagnosis), was admitted at the Emergency Department because of hemoptysis and dyspnea with oliguria. He did not have hemoptysis before.

Exploration and additional tests: On physical examination the patient was afebrile with 88% oxygen saturation and blood pressure 100/60 mmHg. The pulmonary auscultation showed decreased breath sounds and crackles in both lungs. The blood tests showed: hemoglobin 8,8gr/dl, hematocrit 27%, creatinine 15,6mg/dl, urea 3,08 g/dl, pO2 in arterial blood gases 65mmHg. Torax X-ray: cardiomegaly, alveolar-interstitial involvement.

After hemodynamic stabilization, the patient was admitted in Nephrology Department to continue the study. To reach the final diagnosis, several complementary tests were requested:

- Renal biopsy: rapidly progressive glomerulonephritis, with 100% of epithelial crescents
- cANCA 1,04u/ml
- pANCA 20,75u/ml
- Anti-glomerular basement membrane antibodies: positive 3 times

Differential diagnosis: pulmonary-renal syndromes, such as Wegener´s granulomatosis, Goodpasture syndrome, Churg Strauss syndrome, polyarteritis nodosa and microscopic polyangiitis, systemic lupus erythematosus, Goodpasture syndrome, essential mixed cryoglobulinemia. We also should keep in mind as differential diagnosis infectious disease.

Diagnosis: Alveolar hemorrhage with rapidly progressive glomerulonephritis and anti-glomerular basement membrane antibodies is diagnostic of Goodpasture syndrome.

Conclusion: During admission in nephrology, the patient was treated with plasmapheresis and prednisone, with favorable evolution. Goodpasture syndrome is an autoimmune disease with glomerular basement membrane antibodies that mainly affects the kidneys and alveoli. It is a rare disease and a lower incidence is estimated at one case per million population. This case shows the difficulty of early diagnosis of reno-pulmonary syndrome in cases where there is only kidney clinical manifestations, as was our case before the debut with hemoptysis. Therefore it is very important a thorough medical history along with a detailed physical examination and appropriate complementary tests to make a correct differential diagnosis.

#7236 : Detoxification with endoscopy – removal of metallic mercury from the gastrointestinal tract

Preferred format : Oral presentation

Authors:

Zag Levente (1), Zag Levente (1), Berkes Gabor (1), Takacs Irma (1), Szepes Attila (2), Szabo Istvan (1)

1. Emergency Department, Bacs-Kiskun County Hospital, Kecskemet, HUNGARY
2. Gastroenterology , Bacs-Kiskun County Hospital, Kecskemet, HUNGARY

Keywords: mercury, intoxication, endoscopy

Abstract :

Background: Ingestion of metallic mercury was thought to be innocuous until the middle of 20th Century. Several cases proved the opposite, when aspirations, acute renal failure, liver function impairment and memory deficits developed after mercury ingestion. Management includes gastric lavage, use of osmotic laxatives and chelating agents. Despite the treatment, systemic intoxication may occur, therefore more efficient method of treatment is needed to avoid the possible negative consequences. Case report: We report a case of an 18-year-old man, who attempted suicide with drinking 1000 g of elemental mercury. He was brought by ambulance 3 hours after ingestion to our emergency department. He complained of periumbilical pain, vital signs were normal. Physical examination revealed abdominal tenderness. Laboratory values were normal, except from elevated AST and ALT, which were the same as the laboratory results a year ago. His blood mercury level was normal, while urine mercury level was slightly elevated when measured on day 3 from exposure. Radiograph was performed and showed one large opacity at the region of the stomach or in the jejunum. The National Toxicology Information Center was consulted, and based on the information given we decided to remove the mercury from the gastrointestinal tract with gastroscopy. During gastroscopy, one large and several smaller mercury beads were seen and removed with suction. The food debris prevented the complete removal of mercury. The follow-up radiograph showed scattered opacities in the small bowels. After the removal, the patient was transferred to intensive care unit, then to psychiatry. During the 3 month follow-up period no symptoms or any physical problem developed. Discussion: We applied gastroscopy as management of massive metallic mercury ingestion, which has not been published yet in the literature. With endoscopy we could prevent aspiration, shorten exposure time, therefore we minimalized the risk of intoxication. We conclude that endoscopy is a safe way to manage massive elemental mercury ingestion.

#7237 : What is the coagulopathies' impact on arrival at the hospital in severe trauma patients initially cared for by prehospital medical teams? A retrospective observational study

Preferred format : Oral presentation

Authors:

Marilyn FRANCHIN (1), Sabine LEMOINE (1), Isabelle KLEIN (2), Benoit FRATTINI (1), Olga MAURIN (2), Rudy TITREVILLE (1), Daniel JOST (1), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: coagulopathy, severe trauma, hemorrhages

Abstract :

Introduction: Pre-hospital severe trauma patients' (STP) clotting disorders are early and worsen their prognosis. The aim of this study was to describe the incidence of coagulopathy and to explore the existence of statistical associations between the presence of coagulopathy and other characteristics gathered from STPs cared for by prehospital medical teams in urban areas.

Material and method: This was a retrospective observational study. The inclusion criterias were patients cared for hemorrhages by prehospital medical teams, transported to a hospital recovery room, and for whom the initial hospital hemostasis record sheet was available. The pre-hospital variables recorded were 1. Epidemiological (age, gender, circumstances) 2. Paraclinical and biological (shock-index, Glasgow scale score, blood lactate values) 3. Therapeutic (intubation, tranexamic acid and/or catecholamines administration) 4. Time from "prehospital medical team engagement to recovery room arrival. The hospital variables were the early biological results (prothrombin time (PT)). The analysis of results was gathered and then multivariated using STATA 14.0 ®.

Results: Over 11 months, including 1570 medical transports, 156 (10%) were STPs. For 72 of these 156 STPs, initial hospital hemostasis record could be found. For these 72 (100%) included, the median age was 33 years, IQR [26-44], with 63 (88%) men. The trauma was linked to either a public highway accident (n=42 or 58%) or penetrative weapon wound (n=19) or defenestration (n=11). The initial shock-index was >1 in 9 (12.5%) cases. The patients were intubated in 10 (14%) cases, received catecholamine in 2 (3%) cases and received pre-hospital tranexamic in 22 (31%) cases. The median "prehospital medical team engagement-recovery arrival" time was 64 min (IQR [52-78]). On hospital arrival, 15 (21%) STPs had a PT<70%. .

In univariate analysis, the hospital PT tended to be correlated with pre-hospital lactate values (p=0.06). In multivariate analysis, we found an association between hospital PT <70% and respectively: pre-hospital shock index >1 (p=0.02), the elderly (p=0.02), and pelvis injury (p=0.04).

Discussion: Clotting disorders were found in one in five despite currently proper care. The study continues on a larger cohort taking into account survival. It also constitutes the reference group of a pre-post study. The "after" period will be to administer lyophilized plasma at the pre-hospital phase.

#7238 : Using the Boussignac® orotracheal intubation probe in out-of hospital cardiac arrest: an observational study

Preferred format : Oral presentation

Authors:

Olga MAURIN (1), Daniel JOST (2), Nicolas GENOTELLE (1), Olivier YAVARI-SARTAKHTI (2), Alexandre MENDIBIL (1), Julie TRICHEREAU (1), Vincent LANOE (2), Clément DERKENNE (1), Jean Pierre TOURTIER (2)

1. Emergency Department, Fire Brigade of Paris, PARIS, FRANCE
2. Emergency department, Fire Brigade of Paris, PARIS, FRANCE

Keywords: out-of hospital cardiac arrest, Boussignac intubation probe, automated external cardiac massage device

Abstract :

Introduction: The Boussignac intubation probe (BIP) is a device that allows the continuous insufflation of oxygen in patients in out-of-hospital cardiac arrest (OHCA). The aim of this study was to report the experience feedback of BIP use and the characteristics of patients who received it, in a rescue system using the BIP in routine care.

Material and methods: This was a retrospective observational study which included OHCA aged over 18 years who received advanced life support by a prehospital medical team (PMT) using the BIP in routine care. Collected data were the Utstein variables, the difficulty for intubation, Cormack grade, SpO2 and EtCO2, follow up (transport to hospital with a beating heart or under automated external cardiac massage device). A univariate description was conducted comparing patients who received (B+) or did not receive (B-) the BIP. A logistic regression was used to explain the “admission alive (with beating heart) at the hospital”. The covariables were: age, gender, electric shock administration for defibrillation, the location. We used a propensity score to make the B+ and B- groups comparable. The software used for statistical analysis was Stata 14.0.

Results: From January 2012 to December 2014, 9618 CAs were supported by a professional basic life support team. The mean age was 67 +/- 17 years, 61% were men. In total, 337 patients were intubated with a BIP. The B+ versus B- patients were younger, more often initially in ventricular fibrillation (VF) (B+: 15.4% vs B-: 7.7%). EtCO2 was higher during external cardiac massage (B+: 29.4 +/- 2.8 kPa vs B-: 22.8 + 1.6 kPa). The rate of difficult intubation was the same in both groups (p=0.9). In multivariate analysis, the factor to explain (transportation of beating heart patient versus deceased left on site) was not associated with the use of the BIP (OR=1.2[0.7-1.7]).

Discussion: Concerning the difficulties encountered, greater rigidity of the probe is retained as well as the risk of personal exposure in contact with biological fluids (mucus, blood in case of hemoptysis) due to the proximal end of the tube left open to atmosphere.

Conclusion: The BIP is a commonly used pre-hospital device, especially with young subjects in VF. Its use improves EtCO2, does not generate more difficult intubation, but does not allow the transportation of more beating heart patients. Complementary studies need to explore survival rates.

#7239 : Humanitarian emergencies: training residents in anaesthesia for deployment with Médecins Sans Frontières

Preferred format : Oral presentation

Authors:

Alba Ripoll Gallardo (1), Luca Ragazzoni (2), Ettore Mazzanti (3), Stella Egidi (4), Pier Luigi Ingrassia (2), Francesco Della Corte (2)

1. , CRIMEDIM- Research Center in Emergency and Disaster Medicine - Università del Piemonte Orientale, Novara, ITALY
2. translational medicine, CRIMEDIM- Research Center in Emergency and Disaster Medicine - Università del Piemonte Orientale, Novara, ITALY
3. , Career manager HR Field- MSF Italy , Rome, ITALY
4. , Medical Advisor- MSF Italy, Rome, ITALY

Keywords: Humanitarian assistance; Professionalization, Anesthesia education; Resident’s education

Abstract :

BACKGROUND

Over the last few years, international concerns have been risen regarding the need of professionalization in humanitarian assistance. Aside from the escalation of violence, the disparity between medical needs and the quality of care provided is fueled by the insufficient workforce capacity and poor performance of inexperienced humanitarian health staff. The nuances of humanitarian settings demand professionals able to display specific competencies and adapt their abilities to complex contexts regardless of the skills gained during medical residencies. The Research Center in Emergency and Disaster Medicine (CRIMEDIM) alongside with MSF-Italian section developed an evidence-based training program aimed to promote the professionalization of young doctors in the field of disaster medicine and humanitarian health. This is a descriptive analysis of the program innovation.

METHODS

Upon acceptance of the project proposal by the MSF-Italian section directional branch, the course didactic structure and learning objectives as well as the eligibility criteria for participants were defined through a meticulous literature review, expert opinion and round tables with MSF recruiters. The course curriculum covered the following topics: disaster medicine, public health, safety and security, infectious diseases, psychological support, communication, anaesthesia in underserved areas, leadership, decision-making, problem-solving, teamworking, and human resource management. Senior residents (4th or 5th year) were defined as target audience. Candidates were jointly selected on the basis of their motivation, flexibility, professional competence and language proficiency. Upon acceptance, participants completed a competency-based course**.** The actual novelty was the course format which intended to expose participants to an innovative blended-learning experience consisting of three months of distance learning, one-week traditional instructor-led teaching with state-of-the-art simulation technologies and workshops and apprenticeship in the field in a project run by MSF. Upon completion of the apprenticeship, the residents’ performance was evaluated by the Medical Focal Point (MFP) of their projects through the MSF standard evaluation module.

RESULTS

Two editions of the course took place between 2013 and 2015. Eight residents were admitted; of these, 3 were female and 5 were male with a median age of 31 y.o. One resident was deployed in Pakistan, 2 in Afghanistan, 1 in Democratic Republic of Congo, 1 in South Sudan, 1 in Central African Republic and 1 in the Philippines. One was sequentially deployed in Nepal and Yemen. Six candidates held a position as anesthetists while 2 functioned as emergency physicians. The mean time of deployment was 2.5 months with 4 MSF operational centers involved. Evaluators highlighted the following participants’ strengths: leadership, problem solving, communication, team working, cultural awareness and compliance with humanitarian principles. Their professional competence was never questioned. All residents were recommended for future MSF missions and two were again deployed by the end of 2015.

CONCLUSION

This course intends to contribute to the development of young doctors’ professional skills when working in emergency settings and limited-resource environments. Moreover, this project demonstrates how academia can successfully partner with humanitarian aid organizations to promote the professionalization of future humanitarian health workers.

#7241 : Prognostic contribution of MR-proADM in patients with acute exacerbations of COPD presenting to the emergency department.

Preferred format : ePoster

Authors:

Erwin Hansconrad (1), Erwin Hansconrad (2), Alexandre Mebazaa (1), Patrick Plaisance (2), Said Laribi (1)

1. Unité Inserm 942, Biomarqueurs cardio-neuro-vasculaires, Hôpital Lariboisière, Paris, FRANCE
2. Service d'Accueil des Urgences, Hôpital Lariboisière, Paris, FRANCE

Keywords: acute exacerbation of COPD – MR-proADM – CURB-65

Abstract :

Background: It is essential to risk-stratify patients with acute exacerbation of COPD (AECOPD) presenting to the emergency department (ED), to adapt their management. MR-proADM has been shown to predict 2-year survival in AECOPD. CURB-65 score is associated with short-term mortality AECOPD. The aim of our study is to examine the prognostic performance of MR-proADM alone and in combination with CURB-65 score to predict short-term mortality in AECOPD in the
ED.

Methods: A prospective cohort of 117 patients presenting to the ED with dyspnea with a diagnosis of AECOPD were included in this analysis. MR-proADM assays were performed at arrival to the ED. Patients were classified into 3 risk groups using CURB-65 score: low (LR), intermediate (IR) and high risk of mortality (HR). A score of CURB-65 of 0 or 1 corresponding to a LR, a score of 2 corresponding to an IR and a score between 3-5 corresponding to a HR group.

Results: The 30-day mortality rate was 7.1% (n = 8). High levels of PaCo2, NIV therapy or mechanical ventilation within 6 hours of ED arrival were predictive of 30-day mortality. Elevated level of MR-proADM at admission was a significant predictor of 30-day mortality (MR-proADM = 0.92 nmol/L [0.7-1.3] in survivors vs MR-proADM = 1.98 nmol/L [1.45 to 2.4] among patients who died at 30 days with p = 0.002). Level of MR-proADM changed significantly depending on the orientation of patient, with higher level in patients hospitalized in intensive care unit. The MR-proADM increased with the CURB-65 score with a significant difference between risk groups (LR: MR-proADM = 0.86 nmol/L [0.66 to 1.01]; IR: MR-proADM = 1.02 nmol/L [0.79 to 1.53]; HR: MR-proADM = 1.29 nmol/L [0.93 to 2.28] with p <0.001).

Conclusion: MR-proADM predicts 30-day mortality in patients presenting to the ED in AECOPD. The levels of MR-proADM are correlated to the CURB-65 score suggesting that MR-proADM in association with the CURB-65 score could help emergency physicians in assessing AECOPD patients severity in the ED.

#7242 : Simulation-based trial of crisis checklists in the emergency department: a pilot study

Preferred format : ePoster

Authors:

Eric Dryver (1), Charlotte Odevall (1), Anders Bergenfelz (2), Ulf Ekelund (1)

1. Emergency Department, Skane University Hospital, Lund, Lund, SWEDEN
2. Practicum Clinical Skills Centre , Skane University Hospital, Lund, SWEDEN

Keywords: Checklist, Emergency Medicine, Simulation, Resuscitation

Abstract :

Background: Checklists improve the management of crises in simulated operating rooms and intensive care units. Crisis checklists have not been evaluated in the emergency department (ED) setting. Checklists may not necessarily have the same value when used in the actual working environment as opposed to a simulation center.

Aim: The aim of this pilot study was to evaluate crisis checklists using in-situ simulations in an actual ED.

Methods: Checklists of key emergency treatments were developed for eight crises:anaphylaxis, hemorrhagic chock, ST-segment elevation myocardial infarction, beta-blocker and/or calcium antagonist poisoning, poisoning with a membrane stabilizing agent, status epilepticus, severe sepsis, increased intracranial pressure.The content of the checklists was based on international guidelines and other authoritative sources.Emergency care teams working in the ED of Lund, Sweden, were randomized to manage simulated crises with or without access to these checklists, for a total of 16 simulations lasting 10-12 minutes. Time from scenario start to key treatment delivery was independently measured by two observers. Each crisis featured between 7 and 11 key treatments.Checklist user-friendliness was evaluated using a questionnaire.

Results: The median percentage of treatments carried out was 83% (range 38-100%) with checklist access versus 44% (range 15-86%) without ($p = 0.03$). One simulation needed to be prematurely terminated due to clinical care requirements and subsequently repeated. Of the 36 participants who had checklist access, 26 (72%) felt that the checklist helped them manage the case. Almost all participants, 67 of 71 (94%), would want the checklists used if they were the patient.

Interpretation: Studying crisis checklists in an actual ED is feasible. The pilot study results suggest that checklists may improve the care of critically ill patients in the ED.

#7243 : Use of Physical restraint on elderly people in emergency department

Preferred format : Oral presentation

Authors:

Erwin Hansconrad (1), Anthony Chauvin (1), Patrick Plaisance (1)

1. Service d'Accueil des Urgences, Hôpital Lariboisière, Paris, FRANCE

Keywords: elderly people – physical restraint - chemical treatment

Abstract :

Background: Confusion in elderly people presenting to Emergency Department (ED) is often associated with a state of agitation with or without aggressivity. Recommendations for the management of these patients exist. Physical restraint (PR) is sometimes necessary to protect them but it is a source of morbidity and mortality. The aim of our study was to examine how emergency physicians prescribe physical restraint for elderly people presenting to ED. The primary outcome was association chemical treatment (benzodiazepines and / or neuroleptic) or not to PR.

Methods: Elderly people (age > 75 years old) with prescription of PR were included in this retrospective study between november 2014 and march 2015 in Lariboisière University Hospital, Emergency Department . Two groups were compared on such criteria: 1 / PR alone (group A); 2 / PR + chemical treatment (group B). The primary outcome was the association chemical treatment (benzodiazepines and / or neuroleptic) or not to PR. The secondary outcomes were justified prescription of PR, revaluation of the indication of PR and monitoring of the PR. The student test was used for quantitative variables. The Chi 2 test was used for qualitative variables.

Results: One hundred thirty-eight consecutive patients were analyzed (66 [48%] in group A and 72 [52%] in group B) with no significant difference between the 2 groups ($p = 0.32$). The prescription of benzodiazepine associated with PR was significantly higher compared to the prescription of neuroleptic. The number of justified prescription of PR was higher but not significantly different ($p = 0.05$) in group B ($n = 18$ [25%]) than in group A ($n = 8$ [12%]). Half of justified prescription of PR was linked to an act of nursing care. The daily revaluation of the PR was significantly higher in group B (respectively 11 [15%] vs 0 in group A, $p < 0.01$).

Conclusion: Elderly people having PR did not always have an associated chemical treatment as provided by the recommendations. The prescription of PR were insufficiently justified. The daily revaluation of the indication of the PR and clinical-biological monitoring were almost non-existent causing a risk of increased morbidity and mortality. This study justified the establishment of a protocol to guide the prescription of the PR in elderly people in our ED.

#7244 : Efficacy and safety of methoxyflurane analgesia in adult patients in the emergency department: a randomised, double-blind, placebo-controlled study (STOP!)

Preferred format : Oral presentation

Authors:

Frank Coffey (1), Patrick Dissmann (2), Kazim Mirza (3), Mark Lomax (4)

1. DREEAM: Department of Research and Education in Emergency Medicine, Acute Medicine and Major Trauma, Nottingham University Hospitals NHS Trust, UK, Nottingham, UK
2. Emergency Department, James Cook University Hospital, Middlesbrough, UK
3. Accident and Emergency Department, Colchester Hospital University Foundation NHS Trust, Colchester , UK
4. Data Management & Statistics, Mundipharma Research Limited, Cambridge, UK

Keywords: trauma, acute pain, analgesic, methoxyflurane, Penthrox, prehospital, emergency department

Abstract :

Background/Introduction

Acute pain remains highly prevalent in the Emergency Department (ED) setting[1,2], with many patients undertreated[3]. Low-dose methoxyflurane, self-administered by the patient via a handheld inhaler (Penthrox®, 3mL dose) is a fast-acting, non-narcotic analgesic agent that has been used in Australia for 20 years. Data outside of Australia are limited, therefore this double-blind, randomised, placebo-controlled UK study investigated the efficacy and safety of low-dose methoxyflurane analgesia for the treatment of acute pain in the ED setting.

Participants and Methods

Patients presenting to the ED with a pain score of 4-7 on the Numerical Rating Scale due to minor trauma (contusions, fractures, lacerations, etc) were randomised in a 1:1 ratio to receive methoxyflurane (up to 6mL) or placebo (normal saline), both via a Penthrox® inhaler. Study medication was self-administered by the patient as required by inhaling from the device. Rescue medication (paracetamol/opioids) was available immediately upon request of the patient.

The primary efficacy endpoint was visual analogue scale (VAS) pain intensity. Changes from baseline were analysed using repeated-measures ANCOVA. Treatment effects were estimated as least squares mean differences between the treatment groups overall (primary analysis) and at each timepoint. Key secondary endpoints were time to first pain relief and time to request for rescue medication (compared using Cox proportional hazards model) and rescue medication use (yes/no) within 20 minutes of the start of treatment (compared using logistic regression). All analyses adjusted for baseline VAS score. Patients had a 14-day post-treatment safety follow-up.

Results

300 adult and adolescent patients were enrolled; data are presented for the adult subgroup (N=203). Mean baseline VAS pain score was ~66mm in both groups. Mean change in VAS pain from baseline to 5, 10, 15 and 20 minutes was greater for methoxyflurane (-20.7, -27.4, -33.3 and -34.8mm, respectively) than placebo (-8.0, -11.1, -12.3 and -15.2mm, respectively). Overall, there was a highly significant treatment difference (estimated treatment effect: -17.4mm; 95% CI: -22.3 to -12.5mm; $p<0.0001$). Median time to first pain relief was significantly shorter with methoxyflurane (5 minutes) compared with placebo (20 minutes) (hazard ratio: 2.32; 95% CI: 1.63, 3.30; $p<0.0001$). The proportion of patients who used rescue medication in the first 20 minutes was 2.0% for methoxyflurane and 22.8% for placebo (odds ratio: 0.07; 95% CI: 0.02, 0.29; $p=0.0003$). The proportion of patients requesting rescue medication at any time (prior to censoring) was lower for methoxyflurane (11.8%) than placebo (38.6%) (hazard ratio: 0.23; 95% CI: 0.12, 0.44; $p<0.0001$); median time to request could not be estimated. Treatment-related adverse events (mostly dizziness/headache) were reported by 42% of patients receiving methoxyflurane and 15% of patients receiving placebo; none caused withdrawal and the majority were mild and transient.

Conclusions

The results of this study support the evidence from previous trials that low-dose methoxyflurane administered via the Penthrox® inhaler is a safe, efficacious and rapid-acting analgesic.

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#7245 : Coronary angiography is related to improved clinical outcome of out-of-hospital cardiac arrest with initial non-shockable rhythm

Preferred format : ePoster

Authors:

Eunsil Ko (1), Eunsil Ko (1), Ji Kyoung Shin (1), Min Seob Sim (1), Ik Joon Jo (1), Jin-Ho Choi (1)

1. , none, Seoul, KOREA, REPUBLIC OF

Keywords: Out-of-hospital cardiac arrest, non-shockable rhythm, coronary angiography

Abstract :

BACKGROUND: Coronary angiography (CAG) for survivors of out-of-hospital cardiac arrest (OHCA) enables early identification of coronary artery disease and revascularization, which might improve clinical outcome. However, the role of CAG has not been validated against initial non-shockable rhythm.

METHODS: From March to December 2014, we assessed clinical outcome of 665 adult OHCA patients at 27 hospitals registered in a Cardiac Arrest Pursuit Trial with Unique Registration and Epidemiologic Surveillance (CAPTURES), a prospective nationwide multicenter registry. The primary outcome was survival with good neurological outcome at hospital discharge.

RESULTS: Initial shockable rhythm and non-shockable rhythm were found in 259 (38.9%) and 406 (61.1%) patients, respectively. Patients with non-shockable rhythm were older, more likely to be female, less likely to underwent a bystander resuscitation or pre-hospital defibrillation ($p<0.001$, all). CAG was performed in 143 (55.2%) and 53 (13.1%) of shockable and non-shockable rhythm, respectively. Performing CAG was associated in better clinical outcome not only in patients with shockable rhythm (74.1% versus 28.4%) but also in patients with non-shockable rhythm (34.0% versus 3.1%, log-rank $p<0.001$, all).

CONCLUSION: Among OHCA survivors, we found coronary angiography was related to better survival and good neurological outcome of patients with initial non-shockable as well as shockable rhythm.

#7246 : Should we redefine criteria for extracorporeal cardiopulmonary resuscitation in prolonged cardiac arrest?

Preferred format : ePoster

Authors:

Philip Verdonck (1), David Yeo (1), Koenraad Monsieurs (2)

1. Accident and Emergency, University Hospital Birmingham NHS Foundation Trust, Birmingham, UK
2. Emergency department, University Hospital of Antwerp, Antwerp, BELGIUM

Keywords: extracorporeal cardiopulmonary resuscitation, VA-ECMO, cardiac arrest

Abstract :

Introduction

Most protocols for extracorporeal cardiopulmonary resuscitation (E-CPR) normally exclude patients in prolonged cardiac arrest, as good neurological outcome and survival decrease significantly with longer CPR times. We present an out-of-hospital cardiac arrest (OHCA) case, who received veno-arterial extracorporeal membrane oxygenation (VA-ECMO) after 150 minutes of advanced life support. The patient was eventually discharged following successful cardiac transplantation with complete neurological recovery.

Case report

A 21-year old female suffered a witnessed OHCA while shopping and basic life support was started immediately (T0). Emergency medical services arrived within 10 minutes (T10). The initial rhythm was ventricular fibrillation and advanced life support was initiated according to European Resuscitation Council guidelines and continued until arrival at the Emergency Department. The patient remained in refractory ventricular fibrillation with an end-tidal CO_2 ($ETCO_2$) above 25 mmHg during prehospital resuscitation. On arrival at the ED (T40) the patient had pulseless electrical activity. Bedside cardiac ultrasound did not demonstrate tamponade or right ventricular distension but severe left ventricular dysfunction was noted.

Venous blood gas at T45 showed a pH of 7.091 and lactate of 7.8 mmol/L. At T70 there was return of spontaneous circulation, but this was non-sustained, and at T80 she reverted back to ventricular fibrillation, and chest compressions were restarted. The cardiothoracic team was consulted and she was accepted for VA-ECMO. Due to logistic reasons, she was only transported to theatre at T130. Femoral VA-ECMO was successfully initiated at T150. Postoperative echocardiography in the Intensive Care Unit (ICU) demonstrated severe dilated cardiomyopathy. At day 2, she was moving all four limbs and a decision to implant a biventricular assist device as a transplant bridge was made. She had a successful cardiac transplantation on day 13 and was discharged from ICU at day 58, with complete neurological recovery. Histopathology demonstrated non-specified cardiomyopathy. The patient had a sister who died in similar circumstances at young age.

Discussion

Despite prolonged OHCA and delayed initiation of VA-ECMO, outside recommended guidelines, there was a successful outcome with complete neurological recovery. This patient matched several inclusion criteria for E-CPR: witnessed OHCA, minimal no-flow time, rapid decision to transport, and good $ETCO_2$ during resuscitation. Most studies recommend VA-ECMO initation within 60 minutes post-arrest as neurological outcome and chances of survival significantly decrease in prolonged OHCA. Even in case of survival, neurological outcome is often poor. Maintaining efficient tissue perfusion with adequate chest compressions is probably more important than the absolute time from onset of cardiac arrest. This is also suggested by the French national recommendations on this subject.

Conclusion

We report a case of E-CPR after prolonged OHCA, with full neurological recovery following cardiac transplantation. Contrary to current literature, we suggest that rather than base the decision to initiate VA-ECMO primarily on time from cardiac arrest, other factors should be considered. This is particularly so when the out-of-hospital cardiac chain of survival is preserved, and this case demonstrates that the envelope can be extended beyond 60 minutes in some circumstances.

#7247 : Atraumatic limp in children presenting to a tertiary paediatric emergency department (PED): time for change?

Preferred format : ePoster

Authors:

Jennifer Kate Smith (1), James Carr (1), Gordon White (2)

1. , none, Edinburgh, UK
2. , none, Edinburgh , UK

Keywords: atraumatic, limp, paediatric

Abstract :

AIMS: To retrospectively review the investigations and outcomes of all children with atraumatic limp presenting to a tertiary paediatric emergency department in 2014 to assess whether the current management protocol, advocating blood tests and ultrasound for all, was necessary.

METHODS: All patients who had a hip or knee ultrasound scan ordered from the PED were identified and their electronic patient records accessed with relevant consent to retrieve the following data: age, duration and nature of symptoms, examination findings including ability to weight bear, blood results (white cell count, absolute neutrophil count, C-reactive protein, erythrocyte sedimentation rate), pyrexia preceding or documented during PED attendance, duration of symptoms, examination findings, clinical diagnoses and outcomes.

RESULTS: 535 patients had hip and/or knee ultrasound scans in 2014, of which 492 were performed for atraumatic limp and were therefore included in the analysis. Age range was 10 months-15 years (median 4.5 years). Three hundred and twenty seven patients (66%) had a diagnosis of transient synovitis, three patients had septic arthritis and osteomyelitis respectively (0.6%), four patients had Perthes disease (0.8%) and one had slipped capital femoral epiphyses (SCFE), 0.2%. Twenty three percent had no formal diagnosis recorded (but no significant later diagnoses emerged in any) and there were small numbers of overuse, soft tissue and fracture injuries aswell as single patients with rheumatological or neurological causes. All the patients with septic arthritis were young (18 months or younger) and a febrile history and raised inflammatory markers. All the patients with osteomyelitis were diagnosed on MRI scan. Two had mildly raised blood inflammatory markers, none were pyrexial. The positive predictive value and sensitivity of WCC, neutrophils, CRP and ESR were universally poor in identifying septic arthritis and ostemyelitis though negative predictive values, as expected, were very high (>0.99). Slipped capital femoral epiphyses was identified in a 10 year old who had a pelvic xray (as per the existing protocol) as were the Perthes disease patients, who had more protracted histories ranging from 5 days – 4 months. The laboratory cost of performing FBC, CRP and ESR in this cohort was £3,956 and Consultant Radiologist time to perform the hip/knee USS was in excess of 40 hours (estimated at 5 minutes per scan).

CONCLUSIONS: The majority of children who are well and afebrile presenting with atraumatic limp can be safely managed at first presentation without blood and radiological investigations given the extremely low incidence of infective pathologies in this population. Bony abnormalities such as SCFE and Perthes must be considered in older children or those with atypically lengthy histories and a plain xray is the investigation of choice. Our protocol has been redesigned to reflect this with attention to rigorous safety netting in the form of written caregiver information leaflets and PED Consultant review in 3-5 days at which time further investigations including blood tests and imaging might be considered in the patient who has not improved.

#7248 : Prehospital use of lyophilized plasma for hemorrhagic shock: description of a randomized controlled study

Preferred format : Oral presentation

Authors:

Daniel JOST (1), Vincent LANOE (1), Benoit VIVIEN (2), Pierre-Yves DUBIEN (3), Jean Stéphane DAVID (4), Albrice LEVRAT (5), Dominique SAVARY (6), Sébastien BEAUME (7), Francois TOPIN (7), Marc FOURNIER (8), Francois KERBAUL (8), Pierre-Yves GUEUGNIAUD (3), Karim TAZAROURTE (9), Anne SAILLIOL (10), Jean Pierre TOURTIER (1)

1. Emergency department, Fire Brigade of Paris, PARIS, FRANCE
2. SAMU 75, Necker Hospital , PARIS, FRANCE
3. SAMU 69, Edouard Herriot Hospital, LYON, FRANCE
4. Department of Anesthesiology and Critical Care, Lyon Sud Hospital, LYON, FRANCE
5. Department of Critical Care Medicine, Hospital center of Annecy Genevois, ANNECY, FRANCE
6. SAMU 74, Hospital center of Annecy Genevois, ANNECY, FRANCE
7. Emergency Department, Marseille marine fire department, MARSEILLE, FRANCE
8. SAMU 13, La Timone Hospital, MARSEILLE, FRANCE
9. Emergency Department, Edouard Herriot Hospital, LYON, FRANCE
10. Military Blood Transfusion Center, French Defence Health Service, CLAMART, FRANCE

Keywords: lyophilized plasma, hemorrhagic shock, massive transfusion, post traumatic coagulopathy

Abstract :

Introduction: Bleeding from trauma is responsible of a fall of clotting factors which maintains and promotes bleeding. Early plasma administration can correct post traumatic coagulopathy. Unlike frozen plasma which requires specific logistics only available at the hospital, lyophilized plasma is storable at room temperature, is recoverable in less than 6 minutes, and is compatible with all blood types, which allows its use in pre-hospital emergency situations. The aim of this report is to describe the protocol of a study that just started whose main purpose is to show the feasibility and effectiveness of using lyophilized plasma in pre-hospital situations for post traumatic hemorrhagic shock.

Material and method: Randomized, open, controlled, multicenter study in two parallel groups. Inclusion criteria: severe trauma > 18 years with hemorrhagic shock [systolic blood pressure (SBP) 108] or shock index > 1.3. During prehospital care, patients receive either lyophilized plasma or saline in addition to the usual treatment applied in post-traumatic hemorrhagic shock.

First endpoint: variation of prothrombin time (PT delta) between pre-hospital care (before administration of lyophilized plasma) and hospital arrival (after lyophilized plasma). Secondary endpoints: 1. fibrinogen variation (F delta) between the pre-hospital and hospital admission; 2. Transfusion need during the first 6, 12, 24 hours of hospitalization; 3. Duration of intensive care unit stay; 4. survival at day 30; 5. Safety endpoint: description of accidents, incidents, events, and adverse events potentially related to lyophilized plasma. An ancillary study will compare the thromboelastometric (ROTEM®) parameters between the two groups. The number of subjects required is 70 per group for an alpha risk =0.05 and an 80% power. Statistical plans the intention to treat and per protocol analysis. PT Delta, F delta and thromboelastometric data will be compared between the two groups by analysis of covariance. The transfusion need will be judged on the median amount transfused at the hospital: red blood cell concentrates, fibrinogen, FFP and platelet concentrates. Survival analysis will use the comparison between Kaplan Meier curves. Feasibility will be judged on the occurrence of technical or logistical problems encountered during the lyophilized plasma administration in prehospital setting. Safety will be judged on the occurrence of serious and unexpected adverse events attributable to lyophilized plasma.

Discussion: This study should improve our knowledge on the effects of pre-hospital plasma transfusion for patients in hemorrhagic shock.

Conclusion: The study started in 2016 with results expected in 2018.

#7249 : Can we differentiate hives, angioneurotic edema and anaphylaxis using serum erythropoietin levels?

Preferred format : Oral presentation

Authors:

Fatih Mehmet Sari (1), Mucahit Emet (2), Saime Ozbek Sebin (3), Haticetul Kubra Sari (4), Abdulkadir Yildirim (5)

1. Emergency Department, Atatürk University, Faculty of Medicine, Erzurum, TURKEY
2. Department of Emergency, Ataturk University, Erzurum, TURKEY
3. Physiology, Atatürk University, Faculty of Medicine, Erzurum, TURKEY
4. Dermatology, Atatürk University, Faculty of Medicine, Erzurum, TURKEY
5. Biochemistry, Atatürk University, Faculty of Medicine, Erzurum, TURKEY

Keywords: Urticaria, Angioedema, Anaphylaxis, Erythropoietin

Abstract :

Background

Erythropoietin (EPO), a renal type I cytokine, plays key role in the regulation of erythropoiesis. EPO is also increased at the area of inflammation in addition to erythropoiesis and hypoxia showing an anti-inflammatory mechanism. EPO decreases releasing of proinflammatory factors such as TNFα, IL-6, IL-12/IL-23, reduce production of NO by inhibiting inducible NO synthase (iNOS), shows anti-inflammatory effect by reducing NF-κB dependent immunocytokines production, inhibits reactive oxygen species at neutrophils and changes activity of T cells indirectly by disruption of antigen presentation or affecting signal transmission of antigen presenting cells. EPO shows non-erythropoietic functions such as immunoregulatory effect in autoimmune diseases and tissue protective effect in trauma and ischemia.

Aim

We aimed that whether there is a significant difference between erythropoietin (EPO) levels in patients who were administrated to emergency department with urticaria, angioedema and anaphylaxis or not.

Method

Our study was conducted prospectively in ED during two years. Exclusion criteria: Patients who refused to participate, with previously known anemia, renal failure, liver disease, chronic obstructive pulmonary disease, asthma, any disease affecting bone marrow, and malignancies. Patients were classified as urticaria (just skin lesions), angioedema (skin and/or mucosa signs) and anaphylaxis (according to international anaphylaxis criteria). Blood levels of white blood cell (WBC), neutrophil (NEU), lymphocyte (LEN), eosynophil (EO), basophil (BAS), red blood cell (RBC), haemoglobine, haematocrit (HTC), mean corpuscular volume (MCV), mean corpuscular hemoglobin (MHC), mean corpuscular hemoglobin concentration (MCHC), red cell distribution width (RDW), platelet, platelet distribution width (PDW), creatinine, blood urea nitrogen (BUN) were evaluated. Parameters related to erythropoietin as HTC/EPO, RDW/EPO, WBC/EPO, NEU/EPO, LEN/EPO, RBC/EPO, PLT/EPO, EO/EPO, BAS/EPO were calculated and compared.

Results

156 patients grouped as urticaria (n=62, 41.7%), angioedema (n=56, 35.9%), anaphylaxis (n=38, 24.4%) were included. Of 38 anaphylaxis patients, 65.8% had rash, 50% had itching, 13.2% had facial edema, 21.1% had periorbital edema, 34.2% had perioral edema, 18.4% had tongue edema, 84.2% had shortness of breath. There was no significant difference, in terms of erythropoietin and related parameters among urticaria (6.2±1.7 mIU/ml), angioedema (6.2±1.7 mIU/ml) and anaphylaxis (6.4±1.7 mIU/ml) patients (p=0.799). Erythropoietin levels were significantly higher in patients with uvula edema compared to patients without (6.0±1.7 vs. 6.5±1.6; p=0.027). HTC/EPO and RDW/EPO ratios were lower in patients who had rash than patients who had not (8.0±1.9 vs. 7.1±2.3; p=0.033 and 2.7±0.9 vs. 2.2±0.6, respectively; p=0.013).

Discussion

EpoR expression in non-hematopoietic tissues is shown in previous studies. A study conducted on cutaneous mast cells of subjects with or without dermatologic diseases showed the presence of soluble EpoR in secretory granules. Other immune cells such as macrophages also can release EPO which activate mast cells in paracrine way to express EpoR. Considering the paracrine effect on mast cells, the tissue level of EPO may be high before blood levels elevated. The relationship of mast cells in different tissues and difference between tissue and blood levels of EPO need further studies.

Conclusion

Urticaria, angioedema, anaphylaxis cannot be differentiated via using levels of erythropoietin. However, uvula edema is correlated with higher erythropoietin levels.

#7251 : Acute Physicians in the Emergency Department reduce admissions in Hospital

Preferred format : Oral presentation

Authors:

Mohammad Ansari (1), Ahmad Ismail (1), Inayat Rehman (1), Qazi Zaman (1), David Faroogi (2)

1. , george elliot hospital, Birmingham, UK
2. , george elliot hospital, Nuneaton, UK

Keywords: Acute Physicians, admissions

Abstract :

Introduction

The National Health Service in the UK is under severe pressure for vacant beds in the hospital as the number of patients attending Emergency Departments keep increasing every year and the number of admissions increase on a daily basis. We are always looking for ways to decrease the number of hospital admissions. We decided to appoint Acute Physicians in our Emergency Department to see whether it had any impact in reducing admissions to hospital. Acute physicians were to stay in the Emergency Department between 8AM to 8 PM daily. They were to take care of the management of Emergency Medical patients on arrival to our Emergency Department.

Objective

This study was carried out at George Eliot Hospital, Nuneaton to see if appointing acute physicians in our hospital reduced hospital admissions.

Methods

We looked at the total number of patients attending our Emergency Department between the years 2013, 2014, 2015 and 2016. In the March to April of the year before and after the appointment of acute physicians and number of admissions during this period.

Results

64163 patients were seen in Emergency Department in 2013 to 2014 and 14807 were admitted in the Hospital. 66536 were seen in 2014 to 2015 and 14915 were admitted. 700065 were seen in 2015 to 2016 and 14574 were admitted. There was a reduction of 8.88% in the month of December 2015. A reduction of 11.95% in admissions in the month of January 2016. A reduction of 11.21% in the month of Feb 2016 and a reduction of 6.8% in the month of March. There was a total overall reduction of 1.08% in admissions to the hospital for the whole year 2015 to 2016.

Discussion

Emergency department waiting times are continuing to increase with figures of the third quarter of this year (October to December) showing that the number of people waiting longer than four hours has reached its highest level in over a decade The causes of this problem and the solution to address this problem are complex and multifactorial Many patients are waiting for long periods of time in the Emergency Department for a bed. The number of people admitted in hospital has increased overtime and the availability of beds depends on early discharge and less admissions from the Emergency Department.

Conclusions

Our results show that appointing Acute Physicians in the Emergency Department can significantly reduce admissions in the hospital.

#7252 : Presentations of Tuberculosis in the Emergency Department of United Kingdom

Preferred format : ePoster

Authors:

Mohammad Ansari (1), Ahmad Ismail (1), Inayat Rehman (1)

1. , george elliot hospital, Birmingham, UK

Keywords: Tuberculosis, Emergency Department

Abstract :

Introduction

Over nine million cases of tuberculosis (TB) and nearly two million deaths from TB occur in the World every year. TB is the leading cause of death among curable infectious diseases. The World Health Organisation declared TB a global emergency in 1993. A total of 7892 cases of TB were notified in United Kingdom in 2013 with an incidence of 12.3/100000. The overall number of TB patients in the UK has declined by 11.6% in the past two years. 75% of cases occurred among people born outside the UK although only 15% were recent immigrants.

Objective

We conducted a retrospective study to assess various presentations of TB in the Emergency Department at City Hospital, Birmingham and George Eliot Hospital, Nuneaton, UK.

Methods

This study was carried out in the Accident and Emergency department of City Hospital, Birmingham, United Kingdom and the Emergency Department of George Eliot Hospital, Nuneaton, United Kingdom. A list of patients diagnosed to have TB was obtained from the medical records department. Hospital notes of all these patients were reviewed to collect the following data; age, sex, ethnicity and presentation in the Emergency Department.

Results

A total number of 52 patients were included in the study. These were patients diagnosed in the Emergency Department during the time of the study. 14 were Female and 38 were Male. The age group of these patients was 18 to 86, 16 patients were under the age of 30 years. Only 7 patients were born in the United Kingdom and the rest of the patients were from an immigrant population. In the patients with Pulmonary TB only 12 patients had cough and other chest symptoms. 3 patients had weight loss, fever and night sweats. 14 patients presented with back pain and lumbar swelling of varying degrees and one of these presented with neurological deficit consistent with cauda equine syndrome. One patient presented with appendicitis diagnosed to have abdominal TB and another patient with abdominal TB presented with weight loss and night sweats.

Discussion

Our study results show there is a significant number of patients that attend the Emergency Department with atypical presentations of TB. The majority of patients are from the immigrant population. Our study is consistent with a report from the Health Protection Agency (HPA) of the United Kingdom regarding the presentation in the immigrant population. HPA figures show a higher percentage of pulmonary (42%) compared to extra-pulmonary TB. In our study we saw more (58%) extra-pulmonary TB. The main reason for this observation is better community management of pulmonary TB. Most often patients with pulmonary symptoms are detected in the community, seen by General Practitioners and treated as out-patients. But extra-pulmonary tuberculosis is difficult to diagnose in the community and they make their way to Emergency Departments as a last resort.

#7253 : Acute confusion: A case report

Preferred format : ePoster

Authors:

Inayat Rehman (1), Mohammad Ansari (1), Ahmad Ismail (1)

1. , george elliot hospital, Birmingham, UK

Keywords: Acute confusion

Abstract :

Acute confusion is a clinical syndrome which is difficult to define exactly, but involves an enormity of thought, perception and levels of awareness.

It is typically of acute onset and intermittent. Both hyperactive and hypoactive delirium is rarely recognised and often patients exhibit features of both. Episodes of confusion with memory loss and temporary amnesia are frequent symptoms of brain disease and varied etiology.

Among the more common causes are: head trauma, senility and dementia, defused vascular disease of the brain, metabolic disturbances which effect the brain such as; hyperglycaemia, intoxication – such as acute alcoholics, alcoholism, psychomotor epilepsy and postictal state of seizures caused by brain tumour and other diseases.

We present a case of a 50 year old gentleman who presented to the emergency department with acute confusion. His friend found him at home; confused, disorientated and aggressive. He wasn't communicating verbally, although he was his normal self the day before. He had past medical history of kidney stones, depression and anxiety. He was on Lamotrigine and Quetiapine.

On examination his airway was clear, his chest examination did not show any abnormality, respiratory rate was 15 per minute with oxygen saturation of 97% on air. Abdominal examination showed no abnormality. Pulse rate was 60bpm with BP 129/54. GCS of 12/15. Initial presentation was acute confusion state. A CT head and MRI head was performed which was found to be normal. His chest x ray was normal. His bloods were normal; urea 9.3, creatinine of 90 and Creatinine Kinase 1217.

He was diagnosed to be suffering from drug induced rhabdomyolysis, his medication was stopped. The patient improved and was discharged home.

Conclusion:

Acute confusion may be caused by many reasons, but it is uncommon to find somebody developing rhabdomyolysis on Lamotrigine and Quetiapine.

#7254 : An unusual presentation of Pulmonary Embolism

Preferred format : ePoster

Authors:

Inayat Rehman (1), Ahmad Ismail (1), Mohammad Ansari (1)

1. , george elliot hospital, Birmingham, UK

Keywords: Pulmonary Embolism

Abstract :

We present a case of bilateral pulmonary embolism which presented to the accident and emergency department of George Eliot Hospital, Nuneaton following an injury to the patient's chest.

Case report:

A 79 year old lady presented to the accident and emergency department after being unwell and found collapsed. She had a fall two days previously while she was visiting London. She injured the right side of her chest. She was seen in the local hospital and discharged with analgesia.

Two days later she collapsed. She felt light headed and dizzy and being very pale. An ambulance was called and when the paramedics arrived her pulse rate was 119bpm and her BP 85/48. Her past medical history included hypertension. She was on Lisinopril. She was fit and well, independent and self-caring.

On examination she was alert and orientated. The airway was clear. She was breathing spontaneously. Respiratory rate of 21. We were unable to get her oxygen saturations on 15 litres. She had decreased air entry on the right base, and she as tender over the right chest wall. Abdominal examination showed tenderness over the right upper quadrant. By this time her pulse rate had risen to 127bpm with a BP 104/59. Clinical diagnosis of abdominal injury was made and she was referred to the surgical team. Her chest x ray was unremarkable.

Later on a CT scan of her chest and abdomen was performed, which showed bilateral pulmonary embolism (PE) and generalised fatty liver. She was treated with dabigatran for a period of six months for bilateral PE.

She was discharged home with a follow up appointment in an outpatient clinic.

#7255 : Cannabinoid hyperemesis: An unusal cause of digestive symptoms

Preferred format : ePoster

Authors:

Rosario Peinado (1), Miguel Angel Ruiz (1), Concepcion De Vera (1), Alvaro Martin (2)

1. Servicio de Urgencias Infanta Cristina, Servicio Extremeño de Salud, Badajoz, SPAIN
2. Servicio de Urgencias Hospital Coria, Servicio Extremeño de Salud, coria, SPAIN

Keywords: Cannabis, hyperemesis, hot bath

Abstract :

Cannabinoid hyperemesis: An unusal cause of digestive symptoms

Cannabis has been used recreationally for a long time and is the third most commonly used drug after tobacco and alcohol. The therapeutic potential of cannabinoids has been recognized and utilized as anti-emetics. However, the Cannabinoid hyperemesis syndrome has been described characterized by a paradoxical effect of hyperemesis in some susceptible chronic cannabis abusers. The etiology of cannabinoid hyperemesis is not known but some authors propose that the central effects of long-term cannabis use on the hypothalamic-pituitary-adrenal axis might play a major role in the development of CH.

It would be essential for the diagnosis the regular use of cannabis for years, cyclic nauseas and vomiting , abdominal pain and resolution of symptoms after stopping cannabis use. Compulsive hot baths with symptom relief would support the diagnosis.

We present a case series of 7 patients, admitted in the Emergency Department of our hospital from May 2009 to May 2015, all of them with long-term cannabis use and recurrent nausea, vomiting, abdominal pain and, some of them, relieved with hot water bathing.

All patients, 2 females and 5 males, were under 44 years of age and reported using of cannabis for more than 2 years before the symptom onset. Two patients used it for 20 and 30 years.

The average attendance in the emergency department was 15.85. In one case, we counted 31 times. In 3 of them we found another drugs in urine (Heroin, cocaine). 5 reported weekly use of alcohol.

Diagnostic studies were performed in most patients and generated negative results for alternative diagnoses. These studies included complete blood cell count, glucose level, liver biochemistries, pancreatic enzyme level, abdomen X-ray and in two cases, abdominal computed tomography and upper endoscopy.

Standard treatment was used with fluid therapy, antiemetic and proton-pump inhibitor in all of them, thus achieving improvement in all cases after more than 12 hours of stay in the emergency room. 5 patients reported relief of symptoms with hot baths or showers.

The clinical improvement was confirmed in four patients after cessation of cannabis use. The rest continue going to the emergency room at the time of writing this article.

Because of the high prevalence and increasing consumption of Cannabis, it is likely that we will see an increased number of patients with this syndrome in the Emergency Departments . Therefore, it is necessary to collect the medical records of all patients who come with nausea and vomiting that are refractory to standard therapy but improved with hot baths. Cannabinoid hyperemesis should consequently be considered in these patients.

#7256 : Prediction of hospital mortality according to the lactate level taken after the prehospital interventions in polytrauma patients

Authors:

Terezia Pastekova (1), Katarina Brstiakova (2)

1. Anesthesiologist, Hospital in Poprad, Trnava, SLOVAKIA
2. Emergency doctor, Air Transport Europe, Nitra, SLOVAKIA

Keywords: Key words: Lactate, polytrauma, mortality

Abstract :

INTRODUCTION:
The predictive value of a single elevated blood lactate or blood lactate clearance on mortality in trauma patients has been demonstrated in a number of studies. The aim of this study was to evaluate the lactate level on the arrival to the hospital after our prehospital interventions in polytrauma patients and subsequent hospital mortality.
METHODOLOGY:
We have retrospectively evaluated 51 polytrauma patients who were evacuated by the helicopter emergency service and admitted to the clinics of anaesthesiology and intensive care of 2 trauma centres in a period from 2010 to 2014. These patients were divided into 3 groups according to the lactate level, which had to be taken immediately on the arrival to the hospital. Into the first group the patients with lactate ≤2.5 mmol/l (L1), were enrolled, into the second group the patients with the lactate level of 2.6-4.0mmol/l (L2), and the third group was formed by the patients with the lactate level ≥ 4.1 mmol/l, (L3). These groups were compared taking into account the age, duration of HEMS mission from the first alert to the admission to the hospital, the prehospital amount of intravenous fluids, the intake haemoglobin, and mortality. For statistical analysis ANOVA, Tukey Kramer test and Kruskal –Wallis with Dunn test were used. The differences in numbers of individual categories were tested using the 3x2 contingency table. P value <0.05 was significant for all statistical tests.
RESULTS:
The average age of all patients was 38.3 years, without significant difference among the groups (L1:36.0, L2:40.8, L3:40.3, ANOVA, p=0.63). The average time from the first alert to admission was 69.7 minutes without significant difference among the groups (L1:69.54, L2:64.3, L3:73.31). We prehospitaly administered in average 1260 ml of intravenous fluids. The amount of fluids was increasing with elevating lactate. (L1:1110ml, L2:1230ml, L3:1510ml, with statistical significance between the groups L1 and L3. The intake haemoglobin was significantly lower in the third group (L1:119g/l, L2:121 g/l, L3:89g/l). The hospital mortality rose with increased lactate (L1:16%, L2:20%). In the third group the mortality reached 43.75%. In this last group 75% of patients had at least in one prehospital measurement the systolic blood pressure less than 90mmHg and 62.5% were continuously administered Norepinephrine during the mission.
CONCLUSION:
We have confirmed the growing hospital mortality with increasing lactate, but this study has been limited by the small number of patients. We have observed quite high hospital mortality in the group with lactate ≥ 4.1 mmol/l, despite the higher prehospital amount of intravenous fluids, early intubation and artificial lung ventilation if there was an indication. What could help to decrease mortality in these patients is the further shortening of prehospital phase even though our transport
times are comparable with another helicopter emergency system (London´s Air Ambulance: 66 min). The next thing could be administration of blood products on board of a helicopter.

#7257 : After the bike he can’t take a hike

Preferred format : ePoster

Authors:

Nikita Svirkov-Vainberg (1), Farah Mustafa (1), Aidan Gleeson (1), Peadar Gilligan (1)

1. Emergency Medicine, Beaumont Hospital, Dublin, IRELAND

Keywords: blunt trauma, spinal contusion, spinal cord injury

Abstract :

Title

After the bike he can’t take a hike

Authors

N S-Vainberg, F Mustafa, A Gleeson, P Gilligan

Introduction

Bicycle and skate boarding injuries in young patients are a common presentation to the Emergency Department (ED). Not all injuries are obvious on initial assessment of the patient. Therefore, a thorough secondary survey of trauma patients is absolutely crucial to ensure adequate and appropriate management. We present a case of a teenager that had sustained trauma performing a stunt on his bike.

Case Report

A 17 year male patient was brought to the ED by ambulance in spinal precautions after landing on his head whilst undertaking a front-flip on his BMX bike. He had been wearing a helmet and shoulder pads and had fallen from a height of 2 meters on to his head and left shoulder while performing the stunt. He sustained a loss of consciousness of approximately one minute duration and was complaining of severe shoulder pain. He did not complain of any sensory deficit or weakness.

His primary survey was unremarkable.

He received analgesia and had x rays of his left shoulder, cervical, thoracic and lumbar spine. All x-rays were normal.

On further examination, the patient was noted not to have spinal tenderness but, when he was mobilised, he was noted to be Rhomberg’s positive and walked with a broad based gait. Further neurological evaluation revealed reduced co-ordination in his lower limbs, but no sensory or motor deficit. However, he had grade 3/5 weakness of C7 and C8, as well as grade 4/5 weakness for C4-6.

He was referred for an MRI of his cervical spine, which revealed a spinal contusion at C3-4.

He was admitted under the neurosurgical team for conservative management, physiotherapy and occupational therapy and is recovering well.

Conclusion

Spinal cord injury without radiographic abnormality (SCIWORA) refers to spinal injuries, with no identifiable bony or ligamentous injury on complete, technically adequate, plain radiographs or computed tomography. SCIWORA should be suspected in patients subjected to blunt trauma who report early (immediate) or transient symptoms of neurologic deficit or who have findings upon initial assessment. Treatment and prognosis are based upon neurologic presentation and MRI findings.

It is important to remember that patients with blunt trauma who have a history of transient neurologic symptoms that have resolved by the time of initial evaluation may have a significant injury to the spinal cord and/or spinal column despite a normal physical examination and normal spine radiographs and/or CT.

References:

http://www.uptodate.com/contents/spinal-cord-injury-without-radiographic-abnormality-sciwora-in-children

#7258 : C is for confusion and consider CT.

Preferred format : ePoster

Authors:

Farah Mustafa (1), Nikita Svirkov-Vainberg (1), Peadar Gilligan (1)

1. Emergency Medicine, Beaumont Hospital, Dublin, IRELAND

Keywords: Medical diagnosis, Cerebral venous thrombosis, Intracranial hemorrhage

Abstract :

Title

C is for confusion and consider CT.

Authors

F Mustafa, N S-Vainberg, P Gilligan

Introduction

Medical diagnosis is the process of determining which disease or condition explains a person's symptoms and signs. It is said that over 80% of diagnoses are made on history alone, a further 5-10% on examination and the remainder on investigations. Unfortunately, in the Emergency Department (ED), the clinicians often face the challenge of not having a detailed history available, and the diagnosis, investigations and management of the patient are very dependent on the clinical gestalt of the physician.

Methods

We present a case of a confused, withdrawn young female patient that presented to the ED with no clear history available but she admitted to taking paracetamol.

Results

A 24 years old female patient was brought in by ambulance to the ED with a suspected paracetamol overdose. She presented on her own and there was no clear history or collateral history available. She appeared withdrawn and had a GCS of 14/15.

A toxicology screen was sent with routine investigations that all came back normal. At this stage, a friend of hers arrived to the ED expressing concerns that he had contacted the ambulance after not hearing from her for more than 2 days and confirmed that the patient's family was away. In the context of her confusion and altered mental state a CT scan of her brain was performed which showed significant intracranial hemorrhage in left parietal and temporal lobes with significant surrounding edema, mass effect, sulcal effacement, compression of lateral ventricle and midline shift.

A CT venogram demonstrated thrombotic occlusion of the intracranial venous system from the level of the left internal jugular vein including left sigmoid and left transverse sinus.

Further evaluation and assessment revealed that the patient had admitted taking paracetamol to relieve the headache she had had for the last 2 weeks.

The patient's subsequent management and progress are described in detail.

Conclusion:

Cerebral venous thrombosis (CVT) is an uncommon presentation to the ED. CVT is believed to be more common in women than in men. In a study, 61% of women with CVT were aged 20 to 35 years. This difference may be related to pregnancy or the use of oral contraceptives.

Not having a history available, poses particular difficulty for EM clinicians to reach a diagnosis. Medical imaging used appropriately in conjunction with clinical gestalt can help significantly in investigating and managing patients.

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#7260 : Chaperones in the emergency department – an audit of clinical practice.

Preferred format : ePoster

Authors:

Farah Mustafa (1), Andrew Casey (1), Peadar Gilligan (1)

1. Emergency Medicine, Beaumont Hospital, Dublin, IRELAND

Keywords: Best practice guidelines, Chaperone, Emergency Department, Sensitive area examination

Abstract :

Title

Chaperones in the emergency department – an audit of clinical practice.

Introduction

The Royal College of Emergency Medicine, UK has established best practice guidelines for chaperones in the Emergency department, summarised as follows:

1. The presence of a chaperone should be offered to all Emergency Department patients undergoing a "Sensitive Area Examination", regardless of patient or practitioner genders.
2. The presence or absence of a chaperone should be appropriately documented.
3. If an Emergency Department patient declines a chaperone, the fact that one was offered and declined should be documented in the ED record.

We present an audit of clinical practice in our ED regarding the use of Chaperones.

Methods

We conducted the first cycle of the audit over a 3 month period with 12359 attendances out of which 476 patients needed “Sensitive Area Examination”.

After analysing the results of the first cycle, we are presenting the findings to the medical and nursing staff in the ED, and are reiterating the importance of the presence of Chaperones as well as the importance of clear documentation of the presence or absence of a Chaperone and/or if one was offered but declined by the patient. We are using the delivered lectures and electronic medium for educating the staff in ED and will proceed to complete the audit cycle.

Results

The results of the first cycle of the audit showed a very poor compliance of documenting the presence or absence of a chaperone and/or if the patient had declined one for “Sensitive Area Examination”. We are in the process of educating medical and nursing staff in the ED currently to improve practice and will complete the audit cycle shortly.

Conclusion

The Emergency Department is an environment in which the entire range of physical examinations may be clinically necessary, and so a hospital should recognise the need for a clear chaperone policy tailored to the Emergency Department setting. With the help of this audit, we have tried to improve our current practice relating to the management of patients that require “Sensitive Area Examination” in our dept.

References:

The Royal College of Emergency Medicine best practice guideline – Chaperones in Emergency Deparments.
C--inetpub-wwwroot-medical-cem-Upload-documentz-CEM8291-Chaperones in EDs

#7261 : SYSTEMATIC ASSESSMENT OF THE RESULTS OF SCHOOL ALERT PROGRAM

Preferred format : ePoster

Authors:

EMILIA PEREZ MEIRIÑO (1), carlos miras bello (1), corsina prado pico (1), manuel bernardez otero (1), luis sanchez santos (1), antonio iglesias vazquez (1)

1. Emergencies Medical System, FPUSG - 061, santiago, SPAIN

Keywords: ANAPHYLAXIS, EMERGENCIES, AGUDIZATION, CHILDREN

Abstract :

INTRODUCTION AND OBJECTIVES

The "ALERT SCHOOL" program was developed to anticipate the treatment of emergencies in children, related with chronic illnesses diagnosed previously. It includes administrative actions , training actions addressed to the teachers in charge of those children (including how to recognize a critically ill children, how to activate effectively the emergency system, and how to preserve and identify adequately the medication needed), and legal actions (once the 061 is activated, the doctors of the CEC make themselves responsible of the treatment).

The illnesses included in the program are: epilepsy and unspecified convulsions, severe allergy in relation with potential anaphylactic shock, diabetes mellitus and severe hypoglycaemia, and loss of consciousness.

The aim of the present study was to evaluate the results obtained with the Program "School Alert" including its effectiveness both to detect children with the illnesses included in the program, as well as to distribute adequately the sanitary resources to provide the treatment to the emergencies related.

METHODS

A retrospective analysis since the beginning of the Program, including the total of patients classified by pathology, the number of emergency calls received regard with the Program, and the resource required to solve the situation, was performed. The possible solutions were: solve by phone (with or without direct intervention of the teachers), mobilization of sanitary resources (including healthcare team and ambulance) and solved in situ, and admission to an Urgency Room (UR) of a Hospital Centre.

RESULTS

Between January of 2007 and December of 2012, 1874 patients were included in the Program. 861 (46,02%) in relation with severe allergy, 390 (20,84%) epilepsy or febrile convulsions, 274 (14,64%) diabetes mellitus (hypoglycaemia), and the rest (346, 18,49%) included different illnesses with the common risk to present a loss of consciousness.

In the 6-year period in the CEC were received 398 emergency calls related to those children, in 281 cases (70,60%) the call was solvedby phone in situ. In the other 117 cases (29,40%), in 40 a direct clinical assistance was needed including ambulance and solved by treatment in situ, and in the last 77 patients (19,35%), the child was admitted to the UR of a Hospital Centre.

DISCUSSION

The first (bystanders) link of the care chain, is the weakest. To strengthen it, it's essential to provide to bystanders both the ability to recognize precociously the emergency, as well as the ability to activate effectively the emergency system, and finally once is activated, the ability to provide the adequate treatment guided by the doctors of the CEC. To facilitate the whole process, the assumption of legal responsibility by the doctors of the EMS is essential.

The program was effective to detect and include children with the illnesses related (1874). In addition, if we consider that up to 70,4% of the emergencies were solved in situ, and the real emergencies (19,35%) were identified and stabilised in situ before admitting them to the UR of a Hospital Centre, we conclude that it was also effective to distribute adequately the sanitary resources.

#7262 : Most emergency department patients with epistaxis are treated without intervention and bounce backs are uncommon.

Preferred format : ePoster

Authors:

Renee Riggs (1), Fred Fiesseler (2), Dave Salo (2), Dave Cuthbert (2), Jamie Allen (2)

1. , Rutgers Medical School, New Brunswick, New Brunswick, USA
2. , Morristown Medical Center, Morristown, USA

Keywords: epistaxis, emergency medicine

Abstract :

Epistaxis is a common disease encountered in the emergency departments (ED), which can be time, labor, and resource intensive. Though rarely life-threatening its treatment can cause significant discomfort. Also troubling are the rate of bounce backs. **Study Objective**: To evaluate epistaxis ED returns visits and analyze based on procedural intervention. **Methods:** *Design:* A multi-center retrospective cohort study. *Setting*: 29 urban, suburban, and rural ED in the New York/New Jersey area. *Participants:* Consecutive patients with final ICD9 diagnosis of epistaxis from Jan. 1, 2010 to Sept. 30, 2015. Exclusion: ≤ 17 yrs of age. Repeat visits were defined as an unplanned ED encounter < 72 hours from initial visit. Seasonality was determined by equinoxes and solstices. Procedure codes were extracted utilizing ICD-9 billing information. *Statistics:* Chi-square and Mann Whitney were utilized with a P-value < 0.05 as significant. Results: A total of 2,954,800 patient encounters occurred during the study period. The total of 19068 (.6%) were diagnosed with epistaxis. Pediatric patients comprised 20% (N=4643), and were excluded. The overall median age was 67.5 yrs (IQR 52.8-80.0). Females comprised 48% (N=9325). Ninety-three percent were discharged, 7% were admitted, and 0.01% were transferred. Mean age in years of those admitted versus those discharged was 68 and 64, respectively (p=<0.0001). The most common season for ED epistaxis visits was winter 30% followed by spring (27%), fall (22%) and summer (21%). Unplanned return visits occurred in 10% of cases (N=1813). Median age of those who had repeat visits was 65 (95% CI 64.3-65.9) years versus 64 (95% CI 64.1-64.7) years for those who did not (p=0.83). Procedure codes incidence: anterior simple 39%, posterior 2%, anterior complex 1% and none 58% (cautery and or packing would have been performed on all codes except for “none”). Sixteen percent of those who underwent an anterior procedure had an unplanned return and 7% of epistaxis patients without a procedure had an unplanned return. (p=<0.0001). **Conclusion:** Unplanned return emergency department visits for epistaxis are uncommon and occur more frequently following packing. Physicians display good clinical judgement on those patients who do not require packing or cautery, which can be uncomfortable , time consuming, and costly.

#7263 : Suggestion of a modified reduction maneuvers with parents in the pulled elbow children

Preferred format : ePoster

Authors:

Heeyoung KIM (1), Junseok Seo (2), HanSeong Lee (2)

1. , none, Goyang City, KOREA, REPUBLIC OF
2. , none, Goyang, KOREA, REPUBLIC OF

Keywords: Radial head subluxation, Annular ligament, Reduction

Abstract :

Introduction

If radial head subluxation, otherwise known as pulled elbow, occurs, closed reduction can diagnose and treat the child simultaneously. As the guardian seldom understands the maneuver without explanation, we revised a method to involve the caregiver in the treatment.

Method

This is a prospective controlled study. From January, 2014 to December, 2014, children suspected of radial head subluxation, under the age of 6, were enrolled. Patients were randomly assigned to two groups. One group was treated conventionally and the other group was treated whilst the parent's finger was on the patient's lateral epicondyle. A total of three attempts were made using hyperpronation method and the supination-flexion method. The physician then recorded whether the treatment succeeded, the number of attempts, easiness of the reduction, guardian's degree of understanding and satisfaction.

Results

A total of 116 patients were enrolled. The number of attempts in the experimental group and the control group was 1.27 and 1.35 times respectively. The success rate was 96.6% in the experimental group and 94.7% on the control group. There was no statistically significant difference within the two groups. The physicians found the revised method as easy as the conventional method and the caregiver's degree of understanding was higher in the experimental group.

Conclusion

As the revised method increases the degree of guardians' understanding and does not increase the difficulty of the procedure, we recommend using the revised method in treating radial head subluxation.

#7264 : Urban and Rural Differences in Out-of-Hospital Cardiac Arrest of Advanced Life Support for a Video Call on Smartphones

Preferred format : ePoster

Authors:

Seong Jung Kim (1), Yongjin Park (2), Soo Hyung Cho (1)

1. Department of Emergency Medicine, Chosun University Hospital, Gwangju, KOREA, REPUBLIC OF
2. Department of Emergency Medicine, College of medicine, Chosun University, Gwangju, KOREA, REPUBLIC OF

Keywords: Urban, Rural, Cardiac Arrest, Video Call

Abstract :

Objective

To compare the survival rate and neurologic outcomes from out-of-hospital cardiac arrest in rural and urban areas of advanced life support for a video call on smartphones, and to investigate the factors associated with these differences.

Methods

The 119 rescue service(Korean emergency rescue system) data bases of 1,654 cardiac arrests, who were transported in 7 pilot areas by 119 rescue services from August 1, 2015 to December 31, 2015, were analyzed.

Results

The median ambulance response time was shorter ($P < 0.001$) and the median distance from cardiac arrest location to the closest ambulance station was shorter ($P < 0.001$) in urban than in rural areas. Rural patients were a median distance of 4.96 km from the ambulance station, compared with 2.64 km for urban patients. We found that cardiac arrest inside the home was more frequent ($P < 0.001$) among the urban patients (74.7%) than among the rural patients (58.3%). But survival rates and neurologic outcomes did not differ between urban and rural cardiac arrest patients in smart advanced life support.

Conclusion

As it is impractical to substantially decrease response times and distance in rural areas, advanced life support using video call on smart phones that may improve outcome after cardiac arrest.

#7265 : Adverse drug events in adult patients visiting emergency department in korea

Preferred format : ePoster

Authors:

Jeong Hun Lee (1), Han Seong Lee (1)

1. , Dongguk university ilsan hospital, Goyang, KOREA, REPUBLIC OF

Keywords: Adverse drug events, prevalence, spontaneous adverse drug effects

Abstract :

Adverse drug events (ADEs) didn't unfrequently happen in both inpatient and outpatient. These events are a significant cause of morbidity and mortality, and results in increasing Institutional care, including and physician visits, and diagnostic tests, medication use, increased emergency department (ED) and hospital admissions. ADEs have been estimated that 5–25% of admissions are drug-related and have been studied mostly among hospital patients. However, ADEs occurring in treated in EDs receive less attention, though nearly 3-fold more patients are treated in EDs for ADEs compared to those admitted. In such a reason, we investigate to determine the prevalence, severity, and preventability of ADEs in patients presenting at EDs in Dongguk University Medical Center Ilsan Hospital for 2 years.

A retrospective registry study which was performed by using the spontaneous adverse drug effects reported data on an electronic medical record for adverse drug effects was conducted on a stratified random sample (n = 204) of adults (≥18 y) who presented to EDs from January 1, 2013 to December 31, 2014.The average age of patients with adverse drug effects in ED 42.6 ± 14.5 years, and Male gender were 35.3%. Drug combination was average 0.9 ± 1.2. Severity of symptoms were severe in 2.9% and non- severe in 97.1%. The reporter was nurses in 58.8%, doctors in 41.2%. The most common symptom was urticaria in 32.5% and the most common drug class was analgesics in 59.0%. Using the spontaneous adverse drug effects reported data on an electronic medical record is worth noting. The future participation of more institutions needs additional study

#7266 : Treating the trauma team

Preferred format : Oral presentation

Authors:

Aukstakalnis Vytautas (1), Jasinskas Nedas (1), Stasaitis Kestutis (1), Dobozinskas Paulius (2), Dambrauskas Zilvinas (1), Vaitkaitis Dinas (2)

1. , Hospital of Lithuanian University of Health Sciences, Kaunas, LITHUANIA
2. , Crises Research Centre, Department of Disaster Medicine, Lithuanian University of Health Sciences, Kaunas, LITHUANIA

Keywords: Trauma team, trauma, emergency medicine

Abstract :

Background

It`s been decades since “golden hour” has been incorporated in trauma patient management and “trauma team” became the front line soldiers of ER. Many studies has shown the benefit on patients outcome after implementation of trauma system. However the best way of maintaining and improving trauma team performance especially on non-technical skills is still not well known. It is known that continues learning, quality measurement and feedback are the foundation of keeping high standards on patients safety.

Methods

Trauma team audit has been carried out in Lithuanian major level III trauma center. We incorporated two new components in trauma audit. First one was continuous simulation learning: every morning all trauma team members had to gather up in the ER for one simulation session. The second was measurement of non-technical skills and giving feedback after simulation learning and real-life experiences. Trauma team performance has been evaluated using our developed evaluation tool. Trauma team members has not been informed about the audit.

Results

Trauma team performance on non-technical skills has been evaluated before the intervention and after using our developed performance evaluation tool.

Conclusion

We still have a far way to a well-balanced and functioning trauma team. But “time offs” at the beginning of a shift seems to be an easily accomplished performance improvement strategy. “Time offs” drills, quality measurement and feedback should become a standard everyday procedure especially in less crowded emergency rooms, were real life practice is not that common.

#7267 : A case of dysarthria caused by Ricinus Communis tea

Preferred format : ePoster

Authors:

Han Sung Choi (1), Seo Kyong Lee (2), Junsoo Seok (1), Kyounghwan Kim (1), Hyeonsong Kim (1), Sungkyoo Kim (1), Young Gwan Ko (3), Seok Hoon Ko (1), Hoon Pyo Hong (1)

1. , Kyung Hee University Hospital, Seoul, KOREA, REPUBLIC OF
2. , Rogen Hospital, Dongducheon, KOREA, REPUBLIC OF
3. , Kyung Hee University Hospital, Young Gwan, KOREA, REPUBLIC OF

Keywords: Ricinus Communis, neurologic deficit, water extracts

Abstract :

The castor oil plant, Ricinus communis, is a perennial scrub of the spurge family Euphorbiaceae. R.communis probably originates from Africa. Nowadays the plant grows wild in tropical and subtropical regions. Castor seeds are a rich source of oil which can be used as an inexpensive fuel for oil lamps and industrial raw material for lubricants, paints, coats and cosmetic products. Ricinus communis is considered to be less toxic in humans. The majority of intoxications were due to direct ingestion of seeds and the most common complaints were vomiting, diarrhea, abdominal pain, and dyspnea in general. But poisoning by water extracts of R. communis with neurologic symptoms have not been reported in the literature so far. Here we report a case of dysarthria caused by drinking tea brewed with R.communis in a 82-year old woman with manifestations of dysarthria. Water extracts of R.communis can cause toxicity and may cause neurological symptoms.

#7268 : P25 peak of the somatosensory evoked potentials as a novel biomarker of neurologic outcome after cardiac arrest.

Preferred format : ePoster

Authors:

Joo Suk Oh (1), Sung Wook Kim (1), Kyoung Ho Choi (2)

1. , The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF
2. , The Catholic University of Korea, Uijeongbu-si, KOREA, REPUBLIC OF

Keywords: SEP, cardiac arrest, neurologic outcome

Abstract :

Introduction

The absence of N20 of the somatosensory evoked potentials (SEP) is recommended as a valuable predictor of poor neurologic outcome in post-cardiac arrest patients(1). However, interpretation of N20 is affected by the background noise levels. Reliable analysis of N20 is limited with high noise levels and artifacts. P25 is a positive deflection of N20 occurring at 25-30 msec. The amplitude of N20 varies widely between individuals while P25 is evident even with an ambiguous N20 in patients with good outcome. We hypothesized that the negative-positive deflection of N20-P25 components is more valuable predictor than the N20 alone.

Participants and Methods

We retrospectively investigated SEP, recorded 72 hours after cardiac arrest in 99 patients treated with hypothermic targeted temperature management. We classified N20 and P25 as normal or abnormal. Abnormal N20 was defined as the bilateral or unilateral absence of N20. Abnormal P25 was defined as the bilateral or unilateral absence of positive deflection occurred after N20 in the 25–30 msec range. A peak was considered absent if the amplitude was less than 0.1 μV. Cerebral performance category (CPC) was determined upon hospital discharge. Poor outcome was defined as CPC < 2. Diagnostic parameters of N20 and P25 were calculated.

Results

72% of the patients with poor outcome (n=67) showed abnormal N20 while 91% showed abnormal P25. None of the patients with good outcome (n=32) showed abnormal N20 or P25. Diagnostic values of N20 and P25 and their 95% confidence intervals were as follows. Sensitivity: 71.6% (59.3-82), 91% (81.5-96.6). Specificity: 100% (89.1-100), 100% (89.1-100). Negative likelihood ratio: 0.28 (0.19-0.41), 0.09 (0.04-0.19). Positive predictive value: 100% (92.6-100), 100% (94.1-100). Negative predictive value: 62.8% (48.1-75.9), 84.2% (68.8-94). Area under curve: 0.86 (0.77-0.92), 0.96 (81.52-96.64).

Discussion

This study revealed that the N20 followed by a positive deflection (P25) is more valuable as a prognostic marker than the N20 alone. According to the recent study, not only the presence of N20 but the amplitude of N20 has also predictive value (2). However, N20 amplitude is variable among patients, and a few patients with good outcome show small N20. Therefore, small N20 cannot identify poor outcome or good outcome of normal variant. No P25 occur without preceding N20, and the amplitude of P25 seems to be closely related to the outcome similar to the N20. It seems that the defective somatosensory pathway resulting small N20 also leads to small P25. However, the amplitude of P25 occurred in the normal somatosensory pathway is not strictly related to the amplitude of N20. In patients with good outcome, small N20 can be followed by a large P25, which makes P25 more reliable marker than N20. Meanwhile, three patients with poor outcome showed very high N20 and P25 amplitude (>3μV). Very high amplitude might indicate poor outcome, which is consistent with a recent study (2). The prognostic value of N20 and P25 needs to be reevaluated in larger prospective studies.

References

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2. Endisch C, et al: Neurology 2015;85:1752-1760.

Acknowledgement

None.

#7269 : CORRECT IDENTIFICATION OF THE SEMIOTICS OF CHEST PAIN IN THE EMERGENCY TRIAGE

Preferred format : ePoster

Authors:

Ainhoa Sánchez Cortés (1), Antonio Prieto Davia (2), MARIA CUENCA TORRES (3), M Jose Cortés Gómez (1)

1. nursing, Hospital Universitario de La Ribera, Alzira, SPAIN
2. Emergency, Hospital Universitario de La Ribera, ALCIRA-ALZIRA, SPAIN
3. Research, Hospital Universitario de La Ribera, ALCIRA-ALZIRA, SPAIN

Keywords: Triage nurse, Emergency Department, chest pain and ischemic heart disease.

Abstract :

Triage is a tool for the classification of patients in the emergency department. Acute Coronary Syndrome (ACS) is the leading cause of death in our country and needs early diagnosis and treatment. Chest pain is the main symptom of ACS, and a frequent reason for consultation in the emergency department. This study describes the importance of a correct identification of the semiotics of chest pain triage by nurses, based on a sample of 548 who demanded urgent attention for this problem in the emergency department at the Hospital Universitario de La Ribera.

To assess the correct semiotics of chest pain by nurses during triage at the Hospital Universitario de La Ribera, Department 11.

This work is a retrospective, observational and descriptive study that was conducted on 11 patients in the health area department at the Hospital Universitario de La Ribera. These patients turned up to triage at the Emergency Department by any susceptible complaint potentially related to ischemic heart disease between 1 August and 31 October 2015. The data were collected using the program “clinical SIAS” with 548 patients included in the study. The variables that we have raised will analyse age, sex, EKG, the priority assigned by the triage nurse DEIMOS, the discharge diagnosis and performing triage EKG.

The average age was 60.13 and a 53.1 percentage of men. 61.13% of patients demanded urgent attention “chest pain”. The most used discriminator was “recent problem” in 54.9% of the cases. The most representative priority assigned was 63.2% from P4. Among the study patients, 37.4% of the total had a history of ischemic heart disease. 50.7% of patients underwent an electrocardiographic test. 68.9% of patients were treated in the query area (examination room); being “chest pain” the most representative discharge diagnosis in 56.93% of the cases studied. 78.6% of the patients were discharged.

Most of the patients in our study were men with an average age of 60.13, but no significant differences were observed regarding sex.

Regarding the electrocardiographic test, the realization of it was not significant among patients in the sample.

The most prevalent priority assigned in most of the cases for the diagnosis of chest pain was “P4”. The most representative reason for consultation was “chest pain” while making the most prevalent high diagnosis.

In the study, the most common discharge diagnosis used was “chest pain”, to which a priority P4 was mostly assigned.

The diagnosis of “anxiety” was most prevalent at a younger age on average. The highest average age belonged to the final diagnosis of “I.A.M.”

In the cases studied, the discharge diagnosis made with electrocardiograms was mainly “chest pain”, while the final diagnosis made with fewer electrocardiographic tests was “anxiety”.

When performing the electrocardiogram, the history of ischemic heart disease was not taken into account, not being significant the realization of the same between both groups of patients.

Emergency nursing did not correctly identify the semiotics of chest pain.

#7270 : Anisakis, an unusual cause of anaphylaxis.

Preferred format : ePoster

Authors:

Marta Jordán Domingo (1), Daniel Sáenz Abad (1), Cristina Baquer Sahún (2), Susana Monzon Ballarin (3), Miguel Rivas Jiménez (4)

1. Emergency, Hospital Clínico Universitario "Lozano Blesa", Zaragoza, SPAIN
2. Emergency, Hospital Clínico Universitario , Zaragoza, SPAIN
3. Allergology, Hospital Clínico Universitario Lozano Blesa, Zaragoza, SPAIN
4. Emergency Department, Hospital Clínico Universitario Lozano Blesa, Zaragoza, SPAIN

Keywords: Anaphylaxis, Anisakis, Abdominal pain

Abstract :

CASE REPORT: A 48-years-old man with any antecedent of interest, presented to the Emergency Department (ED) complaining an episode of 12 hours of evolution of a periumbilical and epigastric pain of moderate intensity without irradiation and associated with malaise. He did not refer fever. In the last hours, he presented as well skin lesions as an urticaria in armpit and abdomen. When the patient arrived to the ED, it highlights hypotension (85/40 mmHg), tachycardia (110 beats per minute), low oxygen saturation (90% baseline) and erythematous lesions in abdomen and armpits, not scaly and confluent. On abdominal examination, it highlights epigastrium pain, without sings of peristonism. With the initial suspicion of anaphylaxis, treatment was initiated with intramuscular adrenaline, antihistamine and corticosteroid and intensive intravenous fluid therapy. Clinical situation was stabilized disappearing itching and skin lesions but not abdominal pain. Analytical results were normal, except for the presence of mild eosinophilia. Due to the persistence of abdominal pain, ultrasound was performed demonstrating the presence of free liquid perisplenic and perihepatic fluid and no evidence of biliopancreatic or anyother alterations. The study was extended by abdominal Computed Tomography (CT), with evidenced thickening of gastrics folds suggesting gastric inflammatory process (Figure 1).

DIFFERENTIAL DIAGNOSIS: complicated hydatid cyst, episode of histaminergic intestinal angioedema, food-induced anaphylaxis, parasitic gastritis, eosinophilic gastritis.

EVOLUTION: Following the findings in abdominal CT, new oriented anamnesis was performed, and the patient recognized intake unfrozen fish (anchovies in vinegar) prior to the start of abdominal pain. Anisakiasis was suspected, and urgent gastroscopy was requested, watching live parasites in the gastric mucosa, predominantly in the body and fundus (Figure 2). Endoscopic removal of all parasites displayed was performed and the patient showed progressive improvement with final disappearance of pain.

FINAL DIAGNOSIS: Anisakis anaphylaxis

DISCUSSION: The Anisakis simplex, the main species causing human anisakiasis complex, has an extensive distribution. It is transmitted to humans by eating raw or undercooked fish. In Spain, the main responsible fish are fresh anchovies, but they have also involved other species: hake, sardines, cod ... Anisakiasis is an underdiagnosis disease in our area, so its actual prevalence is probably higher than documented in the literature. It is produced by the local action of the parasite on the stomach, after a latency period of 24-48 hours from the ingestion of parasitized fish. The most common forms of presentation are gastric, intestinal and gastro-allergic. In the stomach, the parasite attaches to the mucosa, producing local irritation that cause intense epigastric pain, nausea, vomiting and fever within a few hours after that ingestion. It may be accompanied by skin rash. The diagnosis of this parasitosis can be difficult, especially if the history of intake of raw or undercooked fish is not taken into account. The analytical and radiological findings are very unspecific. Endoscopy is diagnostic and therapeutic because it allows the extraction of the parasite and the consequent improvement of symptoms.

#7271 : Parameters in Emergency Department related with increase of hospital mortality.

Preferred format : ePoster

Authors:

Marta Jordán Domingo (1), Daniel Sáenz Abad (2), Cristina Baquer Sahún (3), Carmen Lahoza Pérez (3), Inés Murillo Díaz de Cerio (4), Mercedes Jiménez Casado (3), María Martínez Díez (3), Miguel Rivas Jiménez (5)

1. Emergency, Hospital Clínico Universitario "Lozano Blesa", Zaragoza, SPAIN
2. Emergency, Hospital Clínico Universitario "Lozano Blesa", Zaragoza, SPAIN
3. Emergency, Hospital Clínico Universitario , Zaragoza, SPAIN
4. Emergency, Hospital Clínico Universitario Lozano Blesa, Zaragoza, SPAIN
5. Emergency Department, Hospital Clínico Universitario Lozano Blesa, Zaragoza, SPAIN

Keywords: Hospital mortality, Lactate, Charlson score.

Abstract :

INTRODUCION: Healthcare in patients who are admitted in hospital tries to treat the cause that motivates the income and detect and treat other health problems. The expected impact is to reduce hospital stay, readmissions and finally, the hospital mortality as well. If we could identify the factors present on associated with increased hospital mortality, we could change them earlier and intensify monitoring of those patients.

OBJETIVES: Identify which characteristics of patients on of admission to the emergency department are associated with higher mortality during hospital stay.

PARTICIPANTS AND METHODS: Case-control study. We collected as cases all patients who died in hospital between 1 July and 31 December 2014. Controls were patients discharged during the same period with aged-matched 1:1 with a deviation of ± 5 years. The clinical endpoint was hospital mortality. They were collected prior to entering clinical (personal background, Charlson score, blood pressure (BP), temperature) and analytical variables (glucose, creatinine (glomerular filtration rate (GFR) with CKD-EPI), ions, hemogram and arterial blood gases). Differences with $p < 0.05$ were considered significant.

RESULTS: 1297 patients (650 cases and 647 controls) were included. There were significant differences in cases vs controls at Charlson index (2.9 vs 1.5; $p < 0.0001$), systolic BP (123 vs 135 mmHg, $p < 0.0001$), glucose (155 vs 137 mg / dl; $p < 0.0001$), GFR (54 vs 61 ml / min / 1.73 m2; $p < 0.0001$), sodium (138 vs. 139 mEq / L; $p = 0.009$), O2 saturation (92.6 vs 94 , 3%; $p < 0.0001$), hemoglobin (11.6 vs 12.8 g / dl; $p < 0.0001$), leukocytes (12846 vs 10547 mm3; $p < 0.0001$), pH (7, 37 vs 7.40; $p < 0.0001$) and lactate (3.3 vs 1.9 mmol / L; $p < 0.0001$).

DISCUSSION: There are features on admission (increased Charlson score, arterial hypotension, hyperglycemia, reduced GFR, anemia, hypoxemia, leukocytosis and increased lactate) that are associated with increased hospital mortality. Patients with these characteristics require more intensive monitoring from admission.

#7272 : Practical guidelines and conservation of succinylcholine in unconventional situation

Preferred format : Oral presentation

Authors:

Hugues LEFORT (1), Alexandre ALLONNEAU (1), Alexandre MENDIBIL (1), Franck PEDUZZI (1), Michel BIGNAND (1), René BIHANNIC (1), Karim TAZAROURTE (2), Jean-Pierre TOURTIER (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Pôle Urgences-SAMU 69, CHU Edouard Herriot, Lyon, FRANCE

Keywords: succinylcholine, practical guidelines, storage, allergic risk, conservation modalities, algorithm, unconventional situation

Abstract :

Introduction: in 2012, The French National Pharmaceuticals Agency (ANSM) recalled the need to store succinylcholine +2 to +8°C until administration, assuming otherwise an increased risk of allergy. If this risk has not been formally demonstrated, a conservation algorithm is yet to be established in unconventional situation.

Material and methods: Review of the literature on stability of succinylcholine studies in different storage requirements and allergic risk depending on the expiry date.

Results: since 2012, SAMU has evolved greatly their conservation modalities of succinylcholine (Lefort, ANNFAR 2014), a key drug in pre-hospital medicine. The recommendations are poorly adapted to resuscitation in exceptional environment. Literature helped providing arguments for the responsible use and security while reducing operational and logistical constraints. Conservation should be done between 2 and 8°C as much as possible. Depending on the undertaking time (

Conclusion: succinylcholine is a first-line curare for rapid sequence intubation. Our practical recommendations and the proposed algorithm consider a reasonable alternative to conservation standards/guidelines based on scientific evidence. The use of rocuronium is to be considered a reliable alternative.

#7273 : UTILITY OF LACTATE DETERMINATION AS A DIAGNOSTIC TEST IN PATIENTS WITH SEPSIS IN THE EMERGENCY DEPARTMENT

Preferred format : ePoster

Authors:

Pablo Lafuente Sanchis (1), Silvia Donat Sanjuan (1), MARIA CUENCA TORRES (2), Luis Manclús Montoya (1), Lucia Ciancotti Oliver (3)

1. Emergency, Hospital Universitario de La Ribera, Alzira, SPAIN
2. Research, Hospital Universitario de La Ribera, ALCIRA-ALZIRA, SPAIN
3. Dirección General de Salud Pública, Generalitat Valenciana, Alzira, SPAIN

Keywords: Lactate, sepsis, emergency

Abstract :

INTRODUCTION

Among biomarkers that have aroused more interest in patients with sepsis, lactate has been considered one of the most important. It has been reported that increased levels of lactate in emergency (ER) patients are related with bad prognosis outcome.

OBJECTIVE

To assess the utility of lactate determination for sepsis diagnose in patients attending our ER departments and analyze whether the sex of the patients, the source of infection, ICU admission and exitus are related to their blood levels.

MATERIAL AND METHODS

Retrospective observational study conducted in the ER department of La Ribera University Hospital (Valencia-Spain). A sample of adult patients (n=62) from those attending our ER room during 2015 that were diagnosed with infection or sepsis were included in the analysis.

RESULTS

A total of 63 patients attending the ER presented high levels of lactate (2mmoll), mean age were 73.7 (SD=14.53) years who mainly attended by fever and dysnea .

Respiratory (n=XX, 44%) followed by urinary were the main sources of infection, 21% of these patients were admitted to the ICU and the exitus rate was 6%.

No association between the lactate levels and sex (p=0.735), admission to the ICU (p=0.061) nor source of infection (p=0.796) were detected.

Significantly higher levels of lactate (p<0.001 were related with exitus, with a direct relationship between the likelihood of exitus and lactate levels.

CONCLUSIONS

The direct relationship between mortality and lactate levels demonstrated the usefulness of its determination in patients presenting sepsis in the ER department specially depicting the likelihood of Exitus.

#7274 : Comparation between implementation of Croatian and Norwegian Emergency Call Index in EMCC

Preferred format : Oral presentation

Authors:

Jasna Janeš-Kovačević (1), Senka Štrbo (1), Ana Maričić (2)

1. specialist emergency medicine, Zavod za hitnu medicinu PGŽ, Rijeka, CROATIA
2. bacc. med. tech, Rinels, Rijeka, CROATIA

Keywords: Index of Medical Emergency Assistance, Red response, comparation

Abstract :

Introduction

When someone calls the emergency number (112 or 194) in Republic of Croatia, the call is routed to the nearest Emergency Medical Communication Centre (EMCC). Based on the problem/symptoms/events presented EMCC dispatcher according to "Croatian Index of Medical Emergency Assistence" (Index) will decide about the level of response:red, yelow or green. A Red-response ("Red")is defined as an "acute", with the highest priority. The aim of these study was to analyse the "Red"patients and to compare results of using the Index in Croatia and Norway.

Methods

Analysis includes all "Red" interventions in the 19 EMCC during three month period in 2016., covering 3 318 921 inhabitants in Croatia (78%).Level of life-threatening condicions for the "Red" was based on the NACA score system. All data were collected from "e-Hitna" information sistem.

Results

During these period EMCC dispatchers received 163,484 phone calls. There are 122.801 calls in project .other were excluded for various reasons. 18,734 calls are marked as "Red priority", compared with NACA scoring from eRecords (19 191 patients). Croatian results were compared to Norwegian retrospective study.

The majority of the patients have a non-life-threatening situations: 70% of Red-response patients in Croatia and in Norwegian study (NACA 0-3). 24% of Red-response patients in Croatia were scored to be in a life-threatening situation (NACA 4-6). with 6% dead (NACA 7). In Norwegian study 25% Red-response patients were scored to be in a life-threatening situation. with 4% dead.

Red-response in Criteria Code (Criteria)"Chest pain" was used in 18% in both countries. Criteria "Inconclusive problem" was used in 20% (Croatia) and in 14% (Norway). Criteria "Unconscious>8 years" was used in 8% in both countries. Criteria "Traffic Accidents" was used 6% (Croatia) and in 7% (Norway). Often used Criteria in Croatia were also "Reduced consciousness" in 12 % and "Breathing problems" in 11%. In Croatia there is no Criteria"Ordered mission"which is used in Norway 18%. Criteria "Diabetes", "Back and abdominal pain" and "Accidents" werw used in 2-5% in both countries. 18 Criteria in Croatia and 19 in Norway were represented in less than 1%. 64% of all "Red" in Croatia were represented with 6 Criteria. 67% of all "Red" in Norway were represented with 5 Criteria.

Conclusion

Our study indicated that there is a high degree of similarities in the implementation of Index between Croatia and Norway. both in the scoring of Red-response patients and in the epidemiology of emergencies. Educational program for medical dispatchers is continious process under state control. Croatian Index is a tool used for the reception emergency calls and triage. allows the analysis of the collected data to improve outpatient emergency medicine. and also allows comparison with other countries that use it.

Reference

E.Zakariassen et al "The epidemiology of medical emergency contacts outside hospitals in Norway - a prospective population based study", Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine, 2010

Ministarstvo zdravlja RH, Hrvatski Indeks prijema hitnog poziva, 2011

The National Commitee on Aeronautics (NACA)

Zavod za hitnu medicinu www.hzhm.hr

e-Hitna Rinels www.rinels.hr/ehitna.php

#7275 : DEGREE OF KNOWLEDGE AND ACCEPTANCE OF THE BULLETIN ABOUT MICROBIOLOGICAL INFORMATION AND CONSUMPTION OF ANTIBIOTICS AMONG HEALTH PROFESSIONALS OF AN EMERGENCY SERVICE

Preferred format : ePoster

Authors:

MARIA CUENCA TORRES (1), Javier Colomina Rodriguez (2), Luis Manclús Montoya (3), Miguel Murcia Soler (4), Blanca Folch Marin (5)

1. Research, Hospital Universitario de La Ribera, ALCIRA-ALZIRA, SPAIN
2. Microbiology & Infectious disease, Hospital Universitario de La Ribera, Alzira, SPAIN
3. Emergency, Hospital Universitario de La Ribera, Alzira, SPAIN
4. Pharmacy, Hospital Universitario de La Ribera, Alzira, SPAIN
5. Primary care, Hospital Universitario de La Ribera, Alzira, SPAIN

Keywords: Antibiotic, resistance, bulletin

Abstract :

INTRODUCTION

The National Action Plan on Antibiotic Resistance includes up to 12 vital actions in the fight against bacterial resistance, including local dissemination of information among health professionals is included. Since 2008 the Department of Microbiology broadcasts, biannually and in digital formats and paper, the Microbiological Information Bulletin and consumption of antibiotics, which collects information on the percentages of sensitivity to major antibiotics for clinical use in the most prevalent bacterial species in infectious disease. The aim of this study was to describe the degree of awareness and acceptance of the Microbiological Information Bulletin and consumption of antibiotics among health professionals of an Hospital Emergency Department

MATERIAL AND METHODS

Observational, descriptive and prospective study carried out between January-March 2016 at the Emergency Department of Univeristario Hospital de La Ribera (Alzira-Valencia-Spain)

The information source for data collection was a survey designed specifically for the study consisted of 10 questions developed in order to know the habits of antibiotic prescriptions from the facultative at the emergency department, their degree of concern in relation to the rational use of antibiotics and bacterial resistance, the knowledge of the levels of resistance to two prototype bacteria (Staphylococcus aureus y Escherichia coli), the Microbiological Information Bulletin and consumption of antibiotics knowledge and the usefulness of its format.

RESULTS

The study involved 83% of the staff, 77.3% men with a mean age of 46±8 years. The 82% of them indicated the prescription of antibiotics more than 3 times a day

The degree of knowledge of BIMCA was 91%, but only 18% knew the resistance levels of ciprofloxacin resistance against *Escherichia coli* and 36.4% knew the percentage of de S. aureus methicillin-resistant.

A 82% of the facultative interviewed considered useful, quite useful or very useful for daily clinical practice the Microbiological Information bulletins and consumption of antibiotics. The most suitable formats were the electronic (59%), followed by pocket format (41%) which are the currently employed in the Health Department of La Ribera.

CONCLUSIONS:

There is a high degree of awareness and acceptance of Microbiological Information bulletins and consumption of antibiotics by health staff; however a significant proportion of professionals are unaware of the rates of resistance to commonly used antibiotics in bacteria usually frequent. Other complementary measures are necessary to improve the dissemination of information on bacterial resistance in our Health Area.

#7276 : Clinical and analytical evaluation of the Philips Minicare cTnI assay

Preferred format : Oral presentation

Authors:

Diederick Keizer (1), Lian van Lippen (1), Femke de Theije (1), Danielle Kemper (1), Dave Dekkers (2), Jeroen Nieuwenhuis (1), Veronique Semjonow (1)

1. Handheld diagnostics, Philips, Eindhoven, THE NETHERLANDS
2. , Future diagnostics, Wijchen, THE NETHERLANDS

Keywords: Point of care, AMI, acute myocardial infarction,Troponin, Troponin I, cTnI, POC, POCT, Immunoassay, ED, emergency department, biomarker

Abstract :

Introduction

Cardiac Troponin-I (cTnI) testing is a powerful tool to aid in the diagnosis of acute myocardial infarction (AMI). When the assay can be performed next to the patient, efficient workflows in the Emergency Department (ED) can be realized enabling rapid clinical decision making.

We present the results of first analytical and clinical studies of the new Minicare cTnI assay on the Philips Minicare I-20, which has been designed as a point-of-care immunoassay system for near-patient testing in the acute care setting.*

Methods

The analytical performance of the Minicare cTnI assay was evaluated based on recommendations of the Clinical Laboratory Standards Institute (CLSI). Li-heparin whole blood and Li-heparin plasma samples were used to perform analytical sensitivity, precision, and matrix comparison studies. The 99th percentile upper reference limit (URL) study was performed using Li-heparin plasma, Li heparin venous whole blood and capillary blood samples from in total 750 healthy male (n=373) and female adults (n= 377) , ranging from 18 to 86 years.

To evaluate the clinical performance of Minicare cTnI for the diagnosis of AMI a European multi-center, prospective, non-randomized study was performed in 7 hospitals from 4 European countries, on 465 patients suspected of NSTE-ACS at the ED or CCU. Both Li-heparin whole blood and Li-heparin plasma samples, were drawn at three time points: at presentation at the ED, 2 – 4 hours and 6-24 hours after first blood draw. Diagnosis of AMI was done by external adjudication board of cardiologists.

Results

Limit of detection was determined in Li-heparin plasma at 18 ng/l. The 20% limit of quantification was calculated at 38 ng/l with no significant difference between sample types. Total imprecision was 7.7% - 12% between 109.6 ng/l – 5087 ng/l. The sample type comparison study between capillary whole blood, venous Li-heparin whole blood and Li-heparin plasma samples (n=104) demonstrated a correlation coefficient (r) of 0.99 and a slope between 1.03 – 1.08.

The overall 99th percentile URL was calculated to be 43 ng/l with no significant difference between genders, or sample types.

The incidence of AMI in the studied population was 16%. The clinical sensitivity for the diagnosis of AMI of the Minicare cTnI was 92% and 91% at the 2-4 hour and 6-24 hour time points respectively, with and NPV of 98% and 96%, and AUCs of 95.3% and 96.1%; there were no significant differences in clinical performance (AUC) between sample types (Li-heparin plasma and Li-heparin whole blood).

Conclusion

The Minicare cTnI assay is a sensitive, easy-to-use and precise test that can be used in the ED near the patient. With an AUC of 95%, a sensitivity at 92% and a NPV of 98% for a cutoff at the 99th perc. URL value, Minicare cTnI can be used as an aid in the diagnosis of AMI in a diagnostic protocol including a cTn test at presentation of the patient at the ED and 2-4 hour later (0/3h diagnostic protocol) as recommended in the 2015 ESC guidelines for the management of NSTE-ACS patients.

* Product available in selected countries only

#7277 : INADEQUACY OF THE PRESCRIPTION OF CERVICAL COLLAR TO PATIENTS WITH A WHIPLASH IN AN EMERGENCY DEPARTMENT

Preferred format : ePoster

Authors:

Luis Manclús Montoya (1), María Cuenca Torres (2), María Teresa Galmes Ramirez (1), Joana Guillem Gonzales (1), Almudena Lluch Sastriques (3), José María Tenias Burillo (4)

1. Emergency, Hospital Universitario La Ribera, Alzira, SPAIN
2. Research, Hospital Universitario La Ribera, Alzira, SPAIN
3. Emergency, Hospital Politécnico y Universitario La Fe, Valencia, SPAIN
4. Medicina Preventiva, Hospital Padre jofre, Valencia, SPAIN

Keywords: Whiplash; Whiplash Injuries; Emergency

Abstract :

INTRODUCTION

Despite the extensive bibliography and information about SLC provided by associations and study groups where the attention way to patients with a whiplash are described, the attention in the emergency department to these patients are standardized to the point that almost always a radiography of the patients' cervical spine is taken and they are treated in the same way (muscle relaxant, analgesics and cervical immobilization with a collar, regardless of the severity/exent of the injury.

OBJECTIVE

To know the prescription of cervical collar to patients treated in a hospital emergency department and to analyze if this prescription is adjusted to a clinical practice guide.

MATERIALS AND METHODOLOGY

The study was conducted at Hospital Universitario de La Ribera (Alzira-Valencia-Spain). All the patients diagnosed with a whiplash that were treated between 1st January and 31st December 2015 were included.

The variables selected were: age and sex of the patients, mechanism and severity of the injury and prescription of a cervical collar.

RESULTS:

373 patients were included. A little bit more of a half were females. The age average was 36.84 ±13.76 years old.

The registration of the type of accident was done in the 90.60 % of the cases. The most frequent type of accident was the traffic accident that was suffered by 314 patients.

27.10 % of the patients had a grade 1 injury, 49.60 grade IIa, 23.10 % grade IIb and only one patient with grade III.

61.70 % of the patients were prescribed a cervical collar. This prescription was wrong in the 60.40 % of the patients with grade I, 55.10 with grade IIa and 22.10 with grade IIb.

CONCLUSIONS:

In spite of the recommendations of the Quebec Task Force, the attention to the patient with a whiplash has been standardized in the emergency department to the point that most of the patients are treated in the same way and immobilization with a cervical collar is almost always prescribed without considering the injury grade.

#7278 : A 16-year old girl with impaired vision and instable gait

Preferred format : Oral presentation

Authors:

Evi Van den Kerckhove (1), Sabine Lemoyne (1), Koen Monsieurs (1)

1. Emergency department, Antwerp University Hospital, Edegem, BELGIUM

Keywords: accidental cannabis intoxication, dietary supplements

Abstract :

Introduction

Dietary supplements may cause adverse events but are usually not listed on the patient's medication list. The current case report emphasizes the importance of asking about these products.

Case report

A 16-year old girl presented to the emergency department with impaired vision, impairment of perception of depth and instable gait. She also complained of nausea, vomiting and abdominal and thoracic pain.

She was currently treated for a (classical) Hodgkin lymphoma with chemotherapy (ifosfamide, carboplatin and etoposide). Her current medication consisted of fluconazol, alizapride, lormetazepam and pantoprazol.

Clinical examination revealed a nervous girl who was giggling a lot. She was tachycardic (123 bpm) with a normal blood pressure (140/74 mmHg). Her body temperature was normal (36.3°C) and oxygen saturation was 99%. On auscultation we found normal bilateral breath sounds. She presented with a dry skin and conjunctival injection. Her walking pattern was unstable and she had difficulty maintaining her balance without signs of lateralisation. There were no coordination problems, but an ataxic gait was present.

A routine blood exam, an electrocardiogram and urine toxicology screening were obtained.

A history taken from the parents revealed that her last chemotherapy session was four days earlier after which she had complained of muscle ache (as usual). To relieve the pain, the patient's mother had given her some drops of a herbal medicine she had ordered on the internet. A friend had advised her to buy this claiming that it would be highly effective in substituting minerals in patients undergoing chemotherapy. We were able to trace the drops back to a Spanish company "Terapeutico Dandelions". They consisted of an oily solution of TCH (tetrahydrocannabinol) and CBC (cannabichromene), both derivates of cannabis. The company profiles itself as a 'naturalist shop' and promotes several drugs containing cannabis.

The results of the technical examinations revealed no infection and no liver or kidney impairment. The electrocardiogram was normal. Urine toxicology screening confirmed the diagnosis of acute cannabis intoxication.

Literature key points

A recent study estimated that in the United States 23000 emergency department visits per year may be attributed to adverse events related to dietary supplements. Another study showed that nearly one in five young adults reported using dietary supplements. Furthermore, physicians do not ask after dietary supplements when performing a patient's history.

Conclusion

We report an accidental cannabis intoxication in a young girl caused by a dietary supplement. In a world where everything can be bought online without patients realizing what they are buying, emergency physicians need to remain vigilant and ask their patients actively about any substitutes or food supplements taken. It is important to thoroughly check the composition of these supplements.

#7279 : UTILITY OF AN INTEGRAL PHYSICAL INTERVENTION IN GERIATRIC PATIENTS WITH HIGH COMORBIDITY, FRAGILITY CRITERIA AND FREQUENT ON THE EMERGENCY SERVICES

Preferred format : ePoster

Authors:

Pablo Lafuente Sanchis (1), Sergio Engo Vergara (2), Luis Manclús Montoya (1), María Cuenca Torres (3), Lucia Ciancotti Oliver (4)

1. Emergency, Hospital Universitario La Ribera, Alzira, SPAIN
2. Student, Universidad Católica de Valencia, Alzira, SPAIN
3. Research, Hospital Universitario La Ribera, Alzira, SPAIN
4. Dirección General de Salud Pública, Generalitat Valenciana, Valencia, SPAIN

Keywords: Geriatric Assessment; Emergency Services; comorbidity, Frail Elderly

Abstract :

INTRODUCTION:

For the Emergency Services Department, the fragile ancients suppose a challenge due to the wide symptoms that they present, being in some occasions very varied and unspecific.

OBJECTIVE:

Knowing the possible modification on the number of visits to Emergency of geriatric fragile patients who are frequent in the hospital Emergency Services through an integral intervention which includes physical aerobic, anaerobic activity and equilibrium.

MATERIAL AND METHODS:

Study of community interventions, prospective and quasiexperimental consisting in the application of an integral physical intervention during 5 days a week, one hour a day, leaded by personnel of the nursery for subjects older than 75 years old from a sanitary area.

RESULTS:

The sample was formed by 27 persons, a 67% women with an average age of 82.16 years who decided to participate voluntarily in the study.

The 52% of the ancients presented 3 criteria of fragility, the 37% 4 criteria and the 11% 5 criteria of fragility.

The 15% of the subjects studied were taking alpha blockers, the 19% beta-blockers, a 44% neuroleptics and a 52% benzodiazepines.

In relation to the number of visits before and after the intervention, it was observed that 8 of the 27 patients (30%) didn’t came to Emergency, 8 of them had gone one, 5 had gone twice, 4 of them 3 times ad two persons 5 and 10 times respectively.

After the second evaluation 23 of the 27 (85%) ancients included in the study didn’t come in any occasion to the Emergency Service of the Hospital. One person turned up once and two persons in two occasions.

CONCLUSIONS:

The physical exercise produces beneficiary changes in the health of the fragile ancients, reducing the number of visits to the Emergency Services of the hospital.

#7280 : Identification of severe sepsis at triage, a simple screening tool

Preferred format : Oral presentation

Authors:

Germana Ruggiano (1), Monica Galli (2), Monica Giusti (2), patrizia signoroni (2)

1. U.O. Medicina d'Urgenza, Ospedale S. Maria Annunziata Firenze, Azienda Sanitaria Firenze, Italy, Firenze, ITALY
2. Emergency department Ospedale di S. Maria Annunziata, Azienda Sanitaria Toscana Centro, Florence, ITALY

Keywords: sepsis, triage screening tool, lactates

Abstract :

Sepsis is one of the leading causes of death in hospital patients worldwide. It causes more deaths than prostate cancer, breast cancer and HIV/AIDS combined. It is a medical emergency just like a heart attack or stroke but it can be subtle and difficult to diagnose. Early recognition and prompt treatment is essential to improve survival. Patients with sepsis are high risk and may deteriorate rapidly. It extremely important to identify septic patient at triage and to detect signs of possible unfavourable evolution.

Triage to the emergency department (ED) is the most critical time in the identification of evolving severe sepsis and is the first part of a differential diagnosis. Therefore, it is essential to have simple tools or scales to assist rapid and reliable identification.

A clinically based system of triaging ensures that patients needing priority medical care get it.

The identification of severe sepsis is based on clinical signs but also on laboratory findings.

An early warning indicator is necessary for early identification of patients at high risk of evolution.

Shock Index (Heart Rate/Systolic blood pressure) is a valuable and non-costly tool, that could help identify patients at high risk of evolution at triage as it’s elevation is correlated to an increase in lactates. The prognostic value of isolated lactate measurements and serial measurements has been

investigated in various settings. Shapiro *et al*. found that lactate levels could correctly stratify patients according to mortality. Lactate levels of 0–2.4, 2.5–3.9 and ≥4 mmol/L were associated with mortalities of 4.9% respectively.

In our Emergency department we started a multicentric observational study using SI at triage in patients presenting to our Emergency Department with suspicion of infection. With a Shock Index >7 lactates are measured immediately and if the value is >4 mmol/l the patient is immediately monitored and seen by an expert Emergency Physician. If lactates are >2 mmol/l the patient is seen within 15-30’ by an expert team.

Preliminary results show that implementation of triage algorythm with SI and immediate lactate measurement in adult ED patients with suspected sepsis reduces time to Emergency physician care and to i.v. fluids and antibiotics. We expect also a decrease in mortality and ICU admission.

#7282 : Point of Care Ultrasound for Manipulation of Colles' fracture in the Emergency Department

Preferred format : ePoster

Authors:

Mohit Arora (1)

1. Emergency Medicine, Leeds Teaching Hospitals NHS rust, Leeds, UK

Keywords: Colles' Fracture, Distal Radius Fracture, Ultrasound

Abstract :

Point of Care Ultrasound for Manipulation of Colles' fracture in the Emergency Department

Background: Colles' fracture (distal radial fracture) is a common presentation to the ED and their reduction comes under the scope and competency of Emergency Physicians. It is estimated that 71,000 adults sustain a distal forearm fracture in Britain each year.[1] Fractures of the distal radius are the most common fractures of upper limb, and represent 14% of all fractures treated each year.[2]

Currently reduction and manipulation of distal radial fractures is done with blind manual palpation, with post-reduction x-rays as a guide for adequacy. Pre-reduction the patient is either given a hematoma block, Bier's block or conscious sedation in the Emergency Department. Those with unsatisfactory reduction; the outcome may be (1) a re-manipulation and x-rays, (2) admission under orthopaedic surgery for re-manipulation under general anaesthetic, or (3) accepting the suboptimal position in those where functional issue is less important.

A Medline search found two relevant papers, which suggested ultrasound might be a useful tool for distal radius manipulation. Both were single-centre prospective studies and involved small number of patients.[3,4]

Prospective observational study

8 patients with Colle's fracture underwent manipulation and reduction of fracture in the usual way; but with real time two plane ultrasound guided observation during the procedure.

Method: A linear high frequency probe was used and the distal radius was viewed in long axis in two planes (from dorsal surface and radial surface). Ultrasound was repetitively used during manipulation until the operator was satisfied with position of distal radial fragment. Plaster cast and plain radiograph was performed in the usual way after reduction..

Results: 'No need for further manipulation' was considered as successful reduction. All reductions were satisfactory and none required re-manipulation.

Limitations: 1. Small numbers in the study. 2. No objective measurements (ultrasound or radiographic) used to define successful reduction. 3. No other factors taken into consideration eg. anaesthetic technique used, total time spend in the department, patient experience evaluation.

Conclusion: Ultrasound guided reduction and confirmation of satisfactory reduction prior to applying plaster cast seems a very novel and attractive concept. This might prove beneficial to patients by reducing second exposure to radiation if satisfactory position confirmed with ultrasound, improved patient experience and possible reduction in time spent in the emergency department. A larger multi-centric randomized control study in future would provide better evidence to support this novel concept.

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#7283 : INADEQUACY IN CHANNELING PERIPHERAL VENOUS CATHERIZATION AND ITS RELATIONSHIP WITH THE PRIORITY OF PATIENT CARE IN AN EMERGENCING DEPARTMENT

Preferred format : ePoster

Authors:

MARIA CUENCA TORRES (1), Laura Cortijo Monteagudo (2), Ana Revert Cogollos (3), Marisa Romany Casañ (4), M Jose Esquer Peris (5), Jose Luis Ruiz López (6), Luis Manclús Montoya (6), Pablo Garmilla Ezquerra (7)

1. Research, Hospital Universitario de La Ribera, ALCIRA-ALZIRA, SPAIN
2. student, Universidad Católica de Valencia, Alzira, SPAIN
3. Nursing, Hospital de Valdecillas, Santander, SPAIN
4. Nursing, Hospital Universitario de La Ribera, Alzira, SPAIN
5. nursing, Hospital Universitario de La Ribera, Alzira, SPAIN
6. Emergency, Hospital Universitario de La Ribera, Alzira, SPAIN
7. Emergency, Hospital Universitario de La Ribera, Santander, SPAIN

Keywords: pheripheral venous catherization, priority

Abstract :

INTRODUCTION:

One of the techniques realized by nursing staff presents great incidence in emergency departments in the peripheral venous catherization. However, there are a significant number of non-indicated venous catherizations that imply an iatrogenic risk for the patient, an unnecessary use of material and an increase of the nursing staff´s workload.

AIM:

The main goal of this study was to describe the use of peripheral venous catheterizations registered in the Emergency Department of the Hospital Universitario de LA Ribera and analize its indications depending on the priority of the patients.

METHODOLOGY:

For this purpose, a retrospective observational, descriptive and transversal research has been carried out during January 2015.

A range of the patients' factors were studied such as sociodemographic characteristics, attention priority following Manchester triage system, venous catheterization indication and the destiny of patients after discharge from emergency care.

RESULTS:

1844 patients were included in the study, with a slight preference in female gender (53'5%), with a mean age of 37 years.

In relation with priority, most of the patients were classified following Manchester's triage system with *green priority* (standard priority).

Peripheral venous catheterization was indicated in 87% of patients, with the main function of this device being drug administration.

The majority of peripheral venous catheterization was registered in patients with low priority (69'1%). Patients with high urgent priority obtained the highest percentage of peripheral venous catheterizations indicated(95 %), while patients with little urgent priority had lower percentages of peripheral venous catheterizations not indicated (14.6%)

CONCLUSION:

There is an excessive use of venous peripheral catheterization in non-indicated situations, being those catheterizations in urgent priority the most indicated, whilst those which have low priority, the least.

#7284 : The Emerging Method of Suicide by the Fatal Exposure to Electronic Cigarette Liquid : Case Reports

Preferred format : ePoster

Authors:

Eun Jung Park (1), Eun Jung Park (2), Younggi Min (2)

1. Emergency Medicine, Ajou University hospital, Suwon, KOREA, REPUBLIC OF
2. Emergency medicine, Ajou university hospital, Suwon, KOREA, REPUBLIC OF

Keywords: Electornic Cigarette, Nicotine, Suicide

Abstract :

Electronic nicotine delivery system or electronic cigarette (EC) is a device that aerosolized liquid nicotine by heating a solution of nicotine, glycerol and flavoring agents. The awareness and the usage of EC has been increased in many countries. Due to the online sales and the absence of regulations of EC, the prevalence of EC usage is especially high in adolescents and young adults. Due to the large amount and the high nicotine concentration of EC liquid, the ingestion for suicide easily can lead to cardiac death. We had two patients of 27-year old male who ingested about 23 mg/kg as nicotine and 17-year old female who ingested about 30 mg/kg as nicotine. Both patients had cardiac arrest followed by cardiopulmonary resuscitation and post cardiac arrest care, who discharged as CPC 2 and 4 respectively.

#7285 : Paediatric distal radius and forearm fracture closed reduction - emergency department procedural sedation versus operating theatre manipulation under general anaesthesia

Preferred format : Oral presentation

Authors:

Fiona Gillies (1), Gregor Campbell-Hewson (1), Nick Beattie (2)

1. NHS , Royal Hospital for Sick Children Emergency Department, Edinburgh, UK
2. NHS , Royal Hospital for Sick Children Orthopaedic Surgery, Edinburgh, UK

Keywords: Paediatric emergency medicine, procedural sedation, prospective study, trauma, orthopaedic surgery, manipulation under anaesthesia.

Abstract :

A prospective cohort study of manipulation and closed reduction of paediatric distal radius and forearm fractures - emergency department (ED) procedural sedation versus general anaesthesia in emergency theatre. Single centre study based at the Royal Hospital for Sick Children (RHSC), Edinburgh UK.

Background

Distal radius and forearm fractures are common injuries in the paediatric population. In the subset of these injuries that demonstrate an unacceptable degree of angulation or displacement, closed reduction is the standard practice of care where instrumentation is not indicated. This may be performed under procedural sedation within the ED or under general anaesthesia (GA) in theatre. It is postulated that procedural sedation within the ED may reduce cost and time to treatment when compared to reduction under GA. However concerns currently exist that reduction under procedural sedation within the ED may be associated with increased anxiety and pain, poorer treatment outcomes and complications arising from sedation when compared with inpatient GA. This study aims to compare the outcomes for the closed reduction of forearm and distal radius paediatric fractures under procedural sedation in the ED to those reduced under GA in emergency theatre.

Methods

All patients presenting to RHSC ED from August 2015 with distal radius or forearm fractures appropriate for closed reduction were included. Tertiary referrals and any fractures requiring instrumentation were excluded. Allocation to ED procedural sedation was based on anticipated safety and was assessed by the supervising ED consultant using a departmental standard operating procedure. Sedation agents used varied according to sedationist preference but most commonly were a combination of propofol and opioid. Our measurable outcomes were time to reduction, complications secondary to general anaesthesia or procedural sedation, need for treatment revision, incidence of re-fracture or mal-union/non-union postoperatively.

Results

Over the initial 6-month period, 56 patients aged between 2 and 14 years were included; 43 forearm and 13 distal radius fractures. 34 fractures (61%) were reduced under procedural sedation in the ED, 22 (39%) under GA in theatre. There was a significant difference in mean time to procedure of 15 hours (procedural sedation mean time 3 hours, GA 18 hours; $p<0.05$). There was no difference in complication rate between ED sedation and inpatient GA (n=0) and ED reduction was not associated with an increased rate of reoperation (n=0). Re-fracture rates were comparable in both groups (n=1) and all fractures were united in an acceptable position at follow-up. We will increase the power of this study through a further 6 months of data collection. We are also assessing service user satisfaction and quantifying the financial savings associated with the procedural sedation treatment limb.

Conclusion

Our preliminary data indicates that ED procedural sedation is as effective as inpatient GA for the closed reduction of paediatric distal radius and forearm fractures in those deemed safe for sedation. It appears to provide a more rapid, efficient and cost-effective alternative to inpatient GA reduction. It has shown to significantly decrease time to reduction and avoids hospital admission and the use of emergency theatre slots.

#7286 : EMS Prague – in the heart of Europe

Preferred format : Oral presentation

Authors:

Katarina Vesela (1), Petr Kolouch (1), Jiří Danda (1)

1. , Zdravotnická záchranná služba hl. města Prahy (EMS Prague), Prague, CZECH REPUBLIC

Keywords: Czech republic , EMS, HEMS, Prague, RRV, randez-vous system

Abstract :

Prague Emergency Medical Service was founded almost 160 years ago in the year 1857, which makes it one of the oldest emergency services in Europe. Currently, Prague Emergency Medical Service is a contribution-based organization established by the city of Prague in the very heart of Europe.

Its main purpose is to provide highly qualified urgent medical care. Emergency calls from the whole area of the capital city are being processed through a 155 line free of charge. This line is serviced by Medical Operation Centre which accepts and evaluates emergency calls and consequently sends various rescue services to help the citizens and visitors of the capital.

Emergency Medical Service vehicles (with the driver and a paramedic on board) and Rapid Response Vehicles (with the doctor on board) are the very core of emergency services. These vehicles operate within the so called Randez-vous system.

Apart from these, Prague Emergency Medical Service also operates several special and unique vehicles such as GOLEM vehicle for the purposes of safety insurance during extraordinary events or disasters and the XXL medical vehicle specifically designed to transport significantly obese patients.

Rescue teams are being dispatched by the Medical Operation Centre from 18 stations strategically dispersed across the whole Prague agglomeration, so the urgent care would always be secured for the patients in matter of minutes.

The Emergency Service also operates a special station of HEMS crew provided in cooperation with the Police of the Czech Republic. This station is based on Václav Havel International Airport in Prague.

The HEMS crew provides its services in the capital as well as in the region of Central Bohemia or anywhere else in the Czech Republic if the situation requires so.

The main focus of this lecture is to introduce Prague Emergency Medical Service and its history as well as to give a complex insight into the issue of providing urgent medical care in the very heart of Europe, in Prague, the capital city of Czech Republic.

#7288 : Evaluate the feasibility of a smartphone-based app in the mass casualty incident to simplify the injuries and their dispositions

Preferred format : ePoster

Authors:

Po-Liang Cheng (1), Yung-Cheng Su (2), Yi-Kung Lee (2), Po-Lun Chang (3)

1. Emergency physician, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Tainan City, TAIWAN
2. Emergency physician, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi County, TAIWAN
3. Professor, Biomedical Informatics Institute, National Yang Ming University, Taipei City, TAIWAN

Keywords: mass casualty incident, smart phone, app, medical informatics, mobile health, disaster medicine

Abstract :

Background: Due to the limited information in the early phase of rescue operation, the government, emergency medicine service (EMS) systems and the population in Taiwan usually get the ambiguous information of damage. Utilization of the medical electronics with well-established infrastructure of information communication technology to manage affected population in such scenario is thought to be practical and useful. Currently in Taiwan, paperwork-based documentation remained the major method for the first responders. Due to poorly adapted tools and strategies, responders are increasingly ill-prepared to produce useful knowledge from the flow of information. The aim of the project is managing the dataflow of the patients with mobile devices.

Methods: The information platform as an independent smartphone app was coded by Dr. Cheng with Android Studio 2.0. Instant and editable information will be provided to the clients including the medical responders in the scene, the staffs in the hospitals and the command center. All data in transit will be encrypted because of the security concerns. Subsequently, a table-drill was held to evaluate the efficacy and efficiency. Three voluntary medical students were recruited. A 30-minutes mini-lecture about simple triage and rapid treatment (START) was provided in advance. Two different groups of scenario card were given to these three medical student. In the first group, they were asked to complete triage by using the smartphone. In the second group, they would complete other 25 triage by using traditional paperwork alone. Finally, they must calculate and report the total injuries and their dispositions. The time and accuracy was recorded by comparison.

Results: There was no difference in the total triage time between the smartphone group (1172 seconds) and the paperwork group. (1262 seconds) (p=.643) However, it was significant difference in sorting the information between the smartphone group (29 seconds) and the paperwork group. (184 seconds) (p=0.003) It is time consuming to find out which destination and the transfer time. The accuracy was no significant difference between the smartphone group (25/25, 100%) and the paperwork group (24/25, 96%).

Conclusion: It is feasible to use the mobile phone app to clarify the injuries and their dispositions in the early phase of a mass casualty incident. The limitation in this brief study are the small convenient samples and scenarios.

Reference:

1. Bellini P et al. Mobile emergency, an emergency support system for hospitals in mobile devices: pilot study. JMIR Res Protoc. 2013 May 23;2(1):e19.
2. Bachmann DJ et al. Emergency Preparedness and Disaster Response: There's An App for That. Prehosp Disaster Med. 2015 Oct;30(5):486-90.

Acknowledgements: There was currently no funding or conflict of interest in this study.

#7289 : Effect of physiologic dose of intravenous hydrocortisone in patients with refractory septic shock

Preferred format : Oral presentation

Authors:

Morteza Talebi Doluee (1), Azadeh Mahmoudi Gharaee (1), Majid Jalalyazdi (1), Maryam Salehi (1)

1. , none, Mashhad, IRAN, ISLAMIC REPUBLIC

Keywords: Hydrocortisone, Septic Shock, Adrenal Insufficiency, Cortisol

Abstract :

Objectives: Septic shock is a systemic response to infection with tissue hypoperfusion which does not responding to fluid therapy and eventually lead to organ dysfunction. Diagnosis and treatment of septic shock is an emergency. Clinical suspicion and aggressive treatment of broad-spectrum antimicrobial and supportive measures is the cornerstone of successful treatment. In addition to the main treatment, there are adjunctive therapies. Steroids are one of the treatments being studied septic shock management. Despite numerous studies on the role of steroids in the mortality of severe sepsis and septic shock, still lots of controversies exist. These conflicts are often about the steroid dose and duration of administration.

Method: This is a double-blind clinical trial. Patients referred to Imam Reza (AS) in Mashhad who had refractory septic shock criteria were divided into two groups: 80 patients were included in each group. After obtaining the baseline cortisol level and cosyntropin test, one group treated with intravenous hydrocortisone, and the other group treated with placebo. The response to hydrocortisone and return of shock and mortality at 28 days was studied.

Results: The return of shock and mortality in intervention group patients was more than control group, but it was not statistically significant.

Conclusion: Despite numerous studies in this field, there are various outcomes (mortality rate, rate of return of shock, time of return of shock). These differences can be attributed to high degree of heterogenesity. Perhaps considering the underlying disease and more differentiation could change return of shock and mortality rate.

#7290 : Accuracy and reliability of ultrasound for detecting stomach contents

Preferred format : Oral presentation

Authors:

David Mackenzie (1), Aftab Azad (2), Vicki Noble (2), Andrew Liteplo (2)

1. , none, Portland, USA
2. , none, Boston, USA

Keywords: Ultrasound, stomach, airway, sedation

Abstract :

Background

Identification of stomach content by point-of-care ultrasound can help determine risk of aspiration prior to procedural sedation or intubation. We sought to determine the test performance characteristics and agreement of emergency physician interpretation of gastric ultrasound.

Methods

We performed gastric ultrasound of healthy volunteers randomized to fast for at least 8 hours, or to consume carbohydrates and water. Images of the stomach were obtained using each of the subxiphoid, left upper quadrant, and right lateral decubitus windows. Two emergency physicians with fellowship training in emergency ultrasound, but limited experience with gastric ultrasound, independently reviewed all the examinations. They recorded their interpretation for each window as stomach content present or absent, or stomach not visualized. Test performance characteristics for each sonologist and inter-rater agreement were calculated.

Results

45 gastric ultrasounds were performed. For each of the sonographic windows, the sonologists detected stomach contents with high sensitivity, ranging from 89 – 100% (95% CI 71 – 100%). Sonologist specificity for stomach content was highest using the subxiphoid view (59%; 95% CI 34 – 80%), and lowest in the left upper quadrant window (13%; 95% CI 1 – 53%). Overall inter-rater agreement between the sonologists was good (kappa 0.64; 95% CI 0.5 - 0.78). Agreement was very good using the right lateral decubitus (kappa 0.91; 95% CI 0.74 - 1) and subxiphoid (kappa 0.72; 95% CI 0.51 – 0.94) approaches but only fair for the left upper quadrant window (kappa 0.4; 95% CI 0.1 - 0.67).

Conclusion

Emergency physician sonologists were sensitive but not specific at detecting stomach contents. Sensitivity of the subxiphoid, left upper quadrant, and right lateral decubitus windows were similar. Image interpretation agreement between emergency physicians was very good for the subxiphoid and right lateral decubitus approaches. Gastric ultrasound may be interpreted more readily and accurately using these windows.

References

Perlas A, Davis L, Khan M, Mitsakakis N, Chan VW. Gastric sonography in the fasted surgical patient: a prospective descriptive study. Anesth Analg 2011. 113:93-7.

Van de Putte P, Perlas A. Ultrasound assessment of gastric content and volume. Br J Anesth 2014. 113:12-22.

Acknowledgments

No funding source to report or conflicts of interest to disclose.

#7291 : Necrotizing fasciitis: A case report

Preferred format : ePoster

Authors:

Francesco Borrelli (1), Caterina Zandomeneghi (2), Maurizio Ponz de Leon (2)

1. Emergency Medicine Residency Programme, University of Modena and Reggio Emilia, Modena, ITALY
2. Medicina I, Azienda Ospedaliero-Universitaria Policlinico di Modena, Modena, ITALY

Keywords: Necrotizing Fasciitis, Surgery, Soft tissues infections

Abstract :

CASE HYSTORY:M.G.K. is a 59 yo lady with a prior medical history of type 2 diabetes, hypertension and IV stage chronic renal secondary to post-actinic bilateral idroureteronephrosis.She presented to the ED after a 3hr plane flight complaining of right leg swelling, tenderness to the right hip and fever (38,5°C) since the last hours. A CBC showed leukocytosis with neutrophilia (WBC 17x10^3/mmc, Neu 91%).Routine labs pointed out elevated C-reactive proteine (60mg/dl), elevated D-Dimer and a slightly worsened renal function (creatinine 3,1mg/dl). A doppler ultrasound revealed femoro-popliteal deep venous thrombosis and the patient was referred to our Internal Medicine ward where was started on enoxaparin. Ciprofloxacin was also administered suspecting an UTI due to patient's complaint of typical urinary symptoms. The day after the patient was still febrile, complaining of worsening pain and paresthesias to the right limb. Her WBC count raised to 20x10^3/mmc, C-reactive protein was stable and procalcitonin was 19mg/dl. Moreover, her HbA1c revealed a poor glicemic control with a value of 73 mmol/mol. On clinical examination, except from leg oedema and marked hyperalgesia, nothing relevant was noted. A musculoskeletal US showed diffuse oedema of subcutaneous tissues to the right hip with a liquid layer of 3-4mm surrounding muscular fascia extended for 50mm in lenght. A subsequent TC scan showed thickening of subcutaneous fat and fascial layer next to the greater trochanter , medium and small gluteus and the anterior face of right thigh with contextual lymphadenopathy. Due to worsening clinical conditions the patient underwent emergent fasciotomy on the same day, 12hrs after clinical diagnosis of necrotizing fasciitis has been performed: fascial tissues in the area of clinical findings were greyish and easily detachable from muscular groups, confirming the diagnosis. The patient came back to the IM ward soon after surgery and was started on clindamycin and piperacillin/tazobactam. The day after she developed massive bleeding from fasciotomy and needed urgent transfusions and emergency suture of surgical wound. After an hospitalization of 3months M.G.K. survived and was sent home.

DISCUSSION: Necroting Fasciitis (NF), first described by Confederate Army Surgeon Joseph Jones, is the most lethal form of soft tissues infections, with reported mortality from 20 to 80%, according to different studies. Diabetes represents the most known risk factor, with 90% of prevalence in all cases on NF in literature, but other identified risk factors are EtOH abuse, renal disease,chirrosis and thrombocytopenia. NF is a tricky diagnosis since slight initial clinical findings may appear conflicting with patient's referred pain. Moreover, NF represents a surgical emergency and maximal debridement must be the goal of intervention. Some case-series showed a linear correlation between delay of surgery and mortality.Full spectrum early antibiotic therapy and fluid resuscitation are other cornerstones of treatment. LRINEC score can be helpful for early diagnosis in the ER, but it has been validated only for cervical NF. There is no evidence for recommending some kind of imaging over other, but a multi-technique approach seems to be the most effective to facilitate and support a diagnosis that remains primarily clinical.

#7292 : Early detection of sub massive pulmonary embolism by electrocardiogram

Preferred format : Oral presentation

Authors:

Majid Jalalyazdi (1), Azadeh Mahmoudi Gharaee (1)

1. , none, Mashhad, IRAN, ISLAMIC REPUBLIC

Keywords: pulmonary embolism, electrocardiogram

Abstract :

Introduction: Clotted blood in pulmonary arterial circulation results in PE (pulmonary embolism) [1]. It is presented with various and heterogeneous symptoms [2]. identifying poor prognosis patients with PE is very important and challenging [3]. There are numerous risk stratification scores to identify high risk PE. Electrocardiogram characteristic as the first step for diagnosis of PE is valuable [4]. Common ECG finding in pulmonary embolism are sinus tachycardia, RBBB, T-wave inversion in V1-V4 and S1-Q3-T3 pattern. Here we consider the role of aVR ST-segment elevation in detecting right ventricular dilation.

Method: This is a case control study in Imam Reza hospital Mashhad. Case group were 30 patients with wells score more than 3 who were hemodynamically stable and had ST-segment elevation in aVR lead. Patients who had chronic pulmonary disease, structural heart disease, renal failure and cardiac surgery were excluded. Control group consist of 30 patients selected from patients who presented to the same department with wells score more than 3 who were hemodynamically stable and didn't have ST-segment elevation in aVR lead. They were all matched with case group from age, gender, diabetes mellitus, hypertension, ischemic and valvular heart disease. Both group had gone under chest CT Angiography and echocardiography. Then RV (right ventricular) dilation was evaluated in both groups.

Results: in case group 73.3% had dilated right ventricle bun in control group only 30% had it ($p<0.05$, OR=6.41).

Conclusion: ST-segment elevation in aVR is a good prognostic factor for RV dilation in pulmonary thromboembolism.

#7293 : Spiked Helmet Sign – A mimic of ST-segment elevation myocardial infarction

Preferred format : ePoster

Authors:

Po-Liang Cheng (1), Ting-An Dung (2)

1. Emergency physician, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Tainan City, TAIWAN
2. Emergency physician, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi County, TAIWAN

Keywords: Spiked Helmet Sign, ST-segment elevation myocardial infarction, STEMI

Abstract :

Introduction: Electrocardiogram (ECG) is an important diagnostic tool for the prompt recognition of myocardial infarction. There are some ECG findings of non-cardiac disease in critically ill patients presenting as ST-segment elevation, which might be mimicking as ST-segment elevation myocardial infarction. The spiked helmet sign is a rare and notorious ECG marker because of a high risk of impending death.[1] However, the current prevalence and mechanism remain uncertain. It might be leading into catastrophic result if it is unrecognized and treated in a different clinical management.[2] We presented a rare case with the spiked helmet sign presented with epigastric pain.

Case report: This 38-year-old man has the medical history of alcohol dependence. He presented to our emergency department because of progressive epigastric pain for three days. On physical examination, there were severe tenderness on the epigastrium with obvious rebounding pain. The initial ECG showed a dome and spiked ST-T segment changes T wave on II, III, aVF and atypical V1 to V4 ST-T segment elevation. However, serial ECG which was performed five minutes later showed sinus tachycardia alone without any ST-T segment change after the prescription of intramuscular 5-mg Morphine. The laboratory data showed that there was neither hyperkalemia(3.58 mmol/L) nor troponin-I (<0.01 ng/mL) elevation. The remarkable laboratory abnormality was the elevated lipase level (4124 IU/L). Subsequently, abdominal computed tomography (CT) was arranged and showed swollen pancreas with fat stranding sign, which is referred to the impression of acute pancreatitis. He was discharged without any sequelae after a seven-day hospitalization.

Discussion: Spiked helmet sign, reported by Littmann and Monroe, was linked to a spiked German military helmet. Based on the recent articles, the pseudo-ST segment elevation may imply critical-ill disease and higher mortality.[1] The mechanism of this phenomenon remain uncertain and there are some hypotheses. Certain pathological conditions can rarely cause repetitive contraction of the diaphragm that is simultaneous with the cardiac cycle.[3] The definite mechanism of this pseudo-ST-segment elevation is unknown, however, in the case of inferior ST-segment elevation, the postulated mechanism was diaphragmatic motion or an acute rise in intra-abdominal pressure.[2] In our case, an acute rise in intra-abdominal pressure due to acute pancreatitis may be the reason of the pseudo-ST-segment elevation. Based on our knowledge, this is the first case of spiked helmet sign caused by acute pancreatitis. Furthermore, to settle whether the spiked helmet sign will alter clinical management or just remain an electric curiosity require further researches.

Reference:

1. Littmann L. et al. The “spiked helmet” sign: a new electrocardiographic marker of critical illness and high risk of death. Mayo Clin Proc. 2011;86(12):1245–1246
2. Tomcsányi J et al. ST elevation anterior “spiked helmet” sign. Mayo Clin Proc.2012;87:309.
3. Agarwal A, et al. Spiked helmet sign: An under-recognized electrocardiogram finding in critically ill patients. Indian J Crit Care Med. 2014 Apr; 18(4): 238–240.

#7294 : suPAR predicts readmission and mortality in patients discharged within 24 h

Preferred format : Oral presentation

Authors:

Line Jee Hartmann Rasmussen (1), Steen Ladelund (2), Thomas Huneck Haupt (3), Gertrude Ellekilde (4), Jørgen Hjelm Poulsen (5), Martin Schultz (6), Kasper Iversen (7), Ove Andersen (8), Jesper Eugen-Olsen (9)

1. PhD student, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Copenhagen, DENMARK
2. Statistician, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Roskilde, DENMARK
3. PhD-student, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK
4. MD, Head of Department, Acute Medical Unit, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK
5. MD, Dept. of Clinical Biochemistry, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK
6. PhD student, Dept. of Cardiology, Copenhagen University Hospital Herlev, Herlev, DENMARK
7. MD, Dept. of Cardiology, Copenhagen University Hospital Herlev, Herlev, DENMARK
8. Clinical research director, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK
9. Senior researcher, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK

Keywords: Biomarker, Acute care, Prognosis, Risk assessment, Triage, Inflammation, Emergency medicine

Abstract :

Background

The critical decision of whether to discharge or admit a patient to the hospital is often made at the hospital's acute care department. More than half of the patients that present at our acute care department are discharged within 24 h and not admitted to the specialized wards of the hospital. Still, some of these patients are subsequently readmitted or may die. Therefore, improvement of the current methods to prognosticate and assess patient risk must be improved, in order to avoid discharge of high-risk patients.

In this study, we aimed to determine whether the prognostic biomarker: soluble urokinase plasminogen activator receptor (suPAR) was able to predict readmission and mortality in patients who are discharged from the acute care department within 24 h.

Methods

Between 18 November 2013 and 30 September 2015 20,193 patients were admitted to the acute medical department, Copenhagen University Hospital Hvidovre. Follow-up was carried out for 30 days via Danish national registries. suPAR measurements and registry data on diagnoses, vital status etc. were available for 17,262 patients. The Charlson score was calculated and used as a measure of comorbidity burden. Statistical analysis was carried out using Kruskal-Wallis test and multiple Cox regression analysis.

Results

A total of 9623 patients (4459 men and 5164 women) were discharged within 24 h. Median suPAR was 2.3 ng/ml (Interquartile range (IQR) 1.7-3.2) for patients discharged within 24 h, compared with 3.7 ng/ml (IQR 2.5-5.5, $P<0.0001$) for patients with in-hospital stays longer than 24 h. Median age for patients discharged within 24 h was 52.1 years (IQR 36.0-68.4) and 71.2 years (IQR 57.0-82.0, $P<0.0001$) for patients with longer admissions.

Among patients who were discharged within 24 h, 174 patients (1.8%) died and 1262 patients (13.1%) were readmitted during 30-day follow-up. In comparison, 685 patients (9.0%) died and 1639 (21.5%) were readmitted among patients with in-hospital stays longer than 24 h.

For patients discharged within 24 h, the median suPAR level among those who survived and were not readmitted during follow-up (n=8230) was 2.2 ng/ml (IQR 1.7-3.1). Patients who were readmitted had a slightly elevated suPAR level of 2.8 ng/ml (IQR 2.0-4.0, $P<0.0001$), and those who died had a median suPAR of 6.9 ng/ml (IQR 4.3-9.7, $P<0.0001$).

In multiple Cox regression analyses of log2-transformed suPAR values adjusted for age, sex, Charlson score, and C-reactive protein, the HRs for 30-day mortality and readmission were 2.90 (95% confidence interval (CI) 2.25-3.75) and 1.43 (95% CI 1.33-1.53), respectively, for patients discharged within 24 h. For patients with in-hospital stays longer than 24 h, the HRs were 2.06 (95% CI 1.86-2.28, P 0.0002) for 30-day mortality and 1.21 (95% CI 1.14-1.29, P 0.01) for 30-day readmission.

Conclusion

Patients with short admissions (<24 h) had lower suPAR levels as well as 30-day readmission and mortality rates, however, among these patients, a high suPAR level was associated with an increased risk of readmission and mortality compared with patients with in-hospital stays longer than 24 h.

#7295 : Directing massively and simultaneously numerous terrorist victims in a hospital provided with all surgical specialties: An adapted answer.

Preferred format : ePoster

Authors:

Florent Fémy (1), Anne-Laure Féral-Pierssens (2), Arnaud Follin (3), Philippe Juvin (4)

1. Emergency department, Assistance Publique Hôpitaux de Paris, Georges Pompidou European Hospital, PARIS, FRANCE
2. Emergency department, Assistance Publique Hôpitaux de Paris; Georges Pompidou European Hospital, PARIS, FRANCE
3. Anesthesiology and Intensive care department, Assistance Publique Hôpitaux de Paris; Georges Pompidou European Hospital, PARIS, FRANCE
4. Emergency department, Assistance Publique Hôpitaux de Paris; Georges Pompidou European Hospital and Medicine faculty, René Descartes University, PARIS, FRANCE

Keywords: Terrorist attacks ; Massive victims influx; Gunshot wounds ; ED organization

Abstract :

Study objectives: On the 13th of November 2015, Paris was targeted by multisite terrorist attacks. Triage principles on the field have been applied in order to adapt patients care needs to hospital capacities. The important number of victims forced the first responders to direct simultaneously a tremendous number of patients to few hospitals provided with all surgical specialties. The main objective of our study was to assess if this orientation strategy was adapted or if many secondary transfers have been needed shortly after receiving victims to our center.

Methods: We conducted a monocentric retrospective study in our academic hospital on all attacks victims brought to us during the first 24hours following the attacks. The wounds description and health care resources utilization during the first 48 hours have been collected through the analysis of medical charts. Patients presenting a single psychotrauma have been excluded. Our primary endpoint was the proportion of transfers to another hospital in the first 48 hours du to exceeded capacities. Data are given in n, percentages and mean + standard deviation.

Results: n=41 patients (77.3% of all patients brought to the hospital) were brought to our center, 70.7% with gunshot wounds. Sex ratio was 1.2. Patients were 37,9 ±9,6 years old. They were brought to the hospital between 1:15 and 3:15 AM. Pre hospital services had advised 13 (31.7%) Absolute Emergencies and 28 (68.3%) Relative Emergencies but only 19.6% of our patients had written medical charts with prehospital parameters. When arriving in the Emergency Department (ED), a triage was done and 30 (73.1%) patients were kept in the ED area whereas 11 (26.9%) were brought to Intensive Care. Patients were presenting wounds (90.2%), mainly on members of the body (83.8%) with projectile for half of the cases (48.6%). 29.7% had an open fracture. 30 (73.2%) patients were admitted to the hospital (mean length of stay: 11.8 days [1;101]. 65.8% of all patients have had surgery in our facility in the first 48 hours including 88.9% for orthopedics. At last, all patients needing a surgery had it performed in the first 48 hours including 3 patients needing to be transferred because of exceeded capacities in our hospital. Our proportion of transfers was 7.3%. These transferred patients had members' orthopedics surgeries. Due to spontaneous arrival of senior colleagues in the ED, the medical workforce has increased of +300%. There has been no in-hospital death.

Conclusion: The triage strategy on the field followed by directing massively and simultaneously victims to a hospital provided with all surgical specialties seems to be an adapted answer in front of an important number of patients. A technical platform associated with workforce mobilization allowed us to provide care to almost all victims brought to our hospital from the terrorist attacks. Only 3 patients out of 41 have been transferred to another facility for a minor surgery. No death was to deplore.

#7297 : Assessment of the epidemiology and the management of the patients with acute heart failure diagnosis in Emergency department

Preferred format : Oral presentation

Authors:

Christelle Hermand (1), Jennifer Sobotka (1), Ines Leung (1), Clement Tournon (1), Dominique Pateron (1)

1. Emergency department, Hopital Saint Antoine, Paris, FRANCE

Keywords: acute heart failure, elderly, managment

Abstract :

Background: Majority of acute patients are admitted to the hospital through the emergency department (ED). Acute heart failure (AHF) is a frequent cause of presentation to the ED and increase with age. Emergency physician suggests a potential case to the cardiologist who decides to accept it or not.

Objective: To describe epidemiology and outcome of patients with acute heart failure diagnosis in ED.

Methods: A prospective, observational, monocentric, study was carried out over a 6 weeks period. All patients with AHF diagnosis were included.

Results: From 14/10 to 25/11/2014, there were 4873 emergency department admissions and 55 patients (1%) had AHF diagnosis: 32 (58%) women, 23 men. The average age and median age was respectively 83.7 and 87 year old (58 – 101). Sixty-four percent of patients had conserved autonomy and no cognitive decline. 71% were older than 80 years. The mean and median time elapsed from arrival and medical consultation was respectively 31 and 18 minutes. 41 patients (75%) had AHF only, 14 patients (27.3%) had combined with sepsis pathology. The cardiologist would be called for 36 patients (65%) with mean age 80 year old, among them 5 had combined pathology, 30 had no functional impairment and no dementia. 20 patients (36%) were older then 90, cardiologist would be called for 6 of them. All the patients were hospitalized: 49% in a cardiology unit, 18% in geriatric unit and 33% in medicine department. All the patients with AHF diagnosis at ED had the same diagnosis at discharge. The mortality was 10% (5 patients).

Discussion: Emergency physician’s assessment selected patients to propose to the cardiologist. Age, dementia and functional impairment are limited factors to cardiology department hospitalization.

Conclusion: A high proportion of patient with AHF are aged more than 80 years. The diagnosis is commonly associated with sepsis. Cardiologist call and hospitalization in a cardiologic unit are motivated by absence of comorbidity, functional impairment or cognitive decline.

#7298 : Ability of emergency residents to identify and localize regional wall motion abnormalities in acute myocardial infarction

Preferred format : Oral presentation

Authors:

Peter Croft (1), David Mackenzie (1), Strout Tania (1), Samip Vasaiwala (1)

1. , Maine Medical Center, Portland, USA

Keywords: Ultrasound, Regional, Wall, Motion, myocardial, infarction

Abstract :

Background: The ability of resident emergency physicians to identify regional wall motion abnormalities is unknown. We hypothesized that EM residents would show proficiency with limited training in identifying the presence as well as the location of regional wall motion abnormalities (RWMA) in AMI.

Methods: After reviewing a brief instructional module on RWMA, 9 EM residents analyzed 45 consecutive comprehensive echocardiograms on patients that were taken emergently to the cardiac catheterization suite for ST-elevation MI. For each study, they responded to questions: 1) is there a RWMA present? (Yes, Maybe, or No) and 2) where is the RWMA located? (Anterior, Inferior, Lateral, Septal, or N/A). They received 1 point for a correct “Yes” or “No” answer, and 0 points for an incorrect answer, for a total possible score of 90 points. An answer of “Maybe” was only considered valid if the resident localized the RWMA correctly.

Results: Assuming a competency cut off of 70%, 7/9 ED residents posted a score demonstrating proficiency (Range 57-81%). All 9 ED residents demonstrated proficiency in identifying the presence of a RWMA (Range 73-89%).

Conclusion: EM residents with limited training are able to identify both the presence as well as the location of RWMA in patients that have sustained an AMI. Their ability to identify the presence of a RWMA alone is even more favorable. Phase II of this trial is currently underway and aims to prospectively validate this educational intervention.

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Acknowledgements: No conflicts of interest.

#7299 : Pott's Puffy Tumour

Preferred format : ePoster

Authors:

SARMILA SUBRAMANIAM (1), SARMILA SUBRAMANIAM (1)

1. EMERGENCY MEDICINE, HSE, GALWAY, IRELAND

Keywords: frontal, sinus, abscess

Abstract :

We report the case of a 26year old male who presented to our emergency department complaining of forehead swelling for the past six months which is increasing in size and associated with pressure sensation, on and off headache and blocked nose. No history of fever/chills/seizure. He also did not respond to multiple course of oral antibiotics prescribed by GP in this past six months. Patient has underlying chronic sinusitis.

Investigation:

Plain X-ray revealed soft tissue swelling against the frontal bone and deviated nasal septum. A CT brain was therefore performed, which demonstrated expansile lesion originating from frontal sinus, most likely to be a frontal sinus mucocele or abscess. The lesion was in direct contact with the underlying meninges.

Management:

He was then referred to Beaumont Hospital (Dublin), where he underwent bifrontal craniotomy and excision of frontal sinus abscess. The specimen grew MSSA and Streptococcus Intermedius. He is being treated with IV Flucloxacillin, IV Benzylpenicillin,IV Metronidazole for six weeks.

Discussion:

POTT'S PUFFY TUMOUR

Was first described by Percivall Pott in 1760, its a non-neoplastic complication of sinusitis characterized by subperiosteal abscess and osteomyelitis. It can be associated with extension intracranially with epidural abscess, subdural empyema, meningitis, cerebral abscess, and dural sinus thrombosis. Frontal sinus disease has reduced significantly since the arrival of antibiotics, but it may still occur. Pott's puffy tumour can be caused by Sinusitis(chronic and acute), Trauma, Post-surgery (frontal sinus reconstruction), intranasal substance abuse.

#7300 : Qualitative Data Analysis of a Web-Based Decision Support Tool for the Emergency Department

Preferred format : ePoster

Authors:

Christiane Rosin (1), Alexandra Malinovska (1), Cyrill Schwab (1), Ceylan Eken (1), Christian H. Nickel (1), Roland Bingisser (1)

1. Emergency Department, University Hospital Basel, Basel, SWITZERLAND

Keywords: decision support tool, emergency algorithms, quality management

Abstract :

Background:

www.medstandards.ch, developed at the University Hospital of Basel, is a web-based decision support tool consisting of several hundred algorithms covering common emergencies. As part of a quality management project we conducted a qualitative data analysis of 50 emergency algorithms. The aim of the study was to analyse the structure of the medical algorithms in order to define a so-called “Master-Algorithm” enabling us to use a systematic approach for future creations of new algorithms and revisions of existing algorithms.

Methods:

For data analysis, an adapted version of qualitative content analysis (Mayring 2000) was used, a method that allows reduction and structuring of text for analysis. Step one: the structure of the algorithms was analysed by an expert team defining categories according to medical practice (deductive approach), stating “anchor-examples” for each category and rules to enable the appropriate allocation (e.g. Triage, Red Flags, Monitoring). Step two: 40 algorithms were analysed using mindmup.com* allowing us to allocate text passages into the predefined categories in a three step reviewing process including a medical student, a junior doctor and a senior physician. Text passages, that were similar, were paraphrased (e.g. “Durchblutung, Motorik, Sensibilität, intakt?” and “pDMS testen” were subsumed to “pDMS intakt?”) and subsumed to categories. After each run the “Master-Algorithm” was adjusted by adapting or creating new categories. Step three: a team of 10 senior emergency physicians analysed another 10 algorithms making final adjustments to the “Master-Algorithm”. We are currently in the process of re-analysing all algorithms according to the current “Master-Algorithm”.

Results:

A “Master-Algorithm” was defined containing main categories, sub categories, sub-sub categories and so forth. The structure of the categories resembles sections of a book with a hierarchy in different levels. We are currently in the process of validating the “Master-Algorithm” (qualitative and quantitative data will be presented).

Conclusion:

By using the adapted Mayring Analysis we defined our “Master-Algorithm” with a complex hierarchy of categories. Using the so established framework, we will now revise all existing standards in order to ensure systematically complete algorithms.

Reference:

Mayring, P. (2000) Qualitative Content Analysis [28 paragraphs]. Qualitative Sozialforschung / Forum: Qualitative Social Research [On-line Journal]

*(a free software mind mapping application)

#7301 : The Use of Venous Lactate Levels in the Prehospital Setting

Preferred format : ePoster

Authors:

Brian Walsh (1), Danielle Biggs (2), David Feldman (2), Lisa Clayton (2), Kristen Walsh (1)

1. Emergency Medicine, Morristown Medical Center, Mendham, USA
2. Emergency Medicine, Morristown Medical Center, Morristown, USA

Keywords: EMS, sepsis, lactate

Abstract :

Background and Objective: The aggressive treatment of sepsis has been shown to decrease mortality. Sepsis protocols have been developed in Emergency Departments (EDs) to identify and treat patients quickly and efficiently. It follows that identification of septic patients in the prehospital setting would provide additional benefit. To this end, we recently began obtaining venous lactate levels in the prehospitally. We sought to describe our initial experience and to determine the utility of its use prehospitally.

Methods: Setting: A suburban, hospital-based, two-tiered EMS system in which the Advanced Life Support (ALS) providers treat about 15,000 patients annually. Subjects: Consecutive patients in whom a venous lactate level was obtained prehospitally. Protocol: Beginning in March, 2016, paramedics in our system were able to draw venous lactate on patients prehospitally. Paramedics were instructed by EMS administration to assess lactate levels on patients with “sepsis, shock, suspected infection, or when it might be helpful” -- there are no specific guidelines for its use. We calculated average contact and transport times, vital signs, amount of IV fluids ordered prehospitally, and whether the lactate drawn was “useful.” 95% confidence intervals (CI) were also calculated for each variable. For the purpose of this study, we defined a ‘useful” prehospital lactate as one drawn in a patient with a suspected infection and one of the following SIRS criteria: “hot” skin on exam / fever, elevated respiratory rate >20, or tachycardia >90.

Results: In the first two months of the program, 23 patients had lactate levels drawn. The average age was 74 and 30% were male. 10 calls were dispatched as “Respiratory,” four as “Altered Mental Status,” and two calls each for “Fall,” “Cardiac,” “Medical NOS.” The average total contact time with the patient was 32 minutes (CI: 28, 36) while the average transport time was 12 minutes (CI: 10, 14). Of the patients with lactates drawn, the average SBP was 143 (CI: 128, 159), average was 82 (CI: 74, 90) , average heart rate was 97 (CI: 85, 108), and the average respiratory rate was 21 (CI: 18, 24). 83% (CI 64, 97) of the lactates drawn were considered “useful” under our criteria. Of those with elevated lactate levels, the average amount of IV fluid given was 286 ml (C: 72, 501), and those with normal lactate levels were given an average of 125 ml (-40, 290) (Difference: 161, (CI: -110, 432)).

Conclusion: Although the protocol is new and sample size is small, it appears prehospital lactate levels are being drawn in patients in which it will be useful to ED providers. The results of this testing have not translated into additional treatment prehospitally, and it is unclear if the results will have an effect on treatment in the ED or patient outcomes.

#7302 : A child's adventure in A and E

Preferred format : ePoster

Authors:

Heidi Edmundson (1), Louise Brown (1)

1. , Whittington Hospital, London, London, UK

Keywords: experience, writing, role play, guide book, child's perspective

Abstract :

A guidebook to the children’s emergency department written for children by children

I am an emergency medicine consultant based in an inner city hospital which sees approximately 16 000 children/yr.

Most children’s experience of hospital is either of or involves the Emergency Department.

We have a general assumption that children may find these visits stressful. However I felt that it would be interesting to explore what they really thought and felt about the department and to explore what their hopes, fears and expectations were.

Also , due to its nature, visiting an emergency department is unplanned and unpredictable. We decided to create a guide to prepare both children and their parents for what they might expect or encounter.

I worked with children from Grafton primary school, their writer in residence Diane Samuels and artist in residence Tessa Garland.

Diane and I had sessions with the children during which they asked me anything they wanted to know and they also visited the department. They each selected an accident which they acted out in their drama class. Following this they attended and we role played the management they would receive including waiting.

Throughout they were encouraged to write about everything. From this large body of ‘raw work’ they selected what they wanted to tell other children. They wanted a booklet which had a magazine/comic feel to it.

They worked with artist Tessa Garland on the illustrations and also selected the layout design, font type etc with graphic designer Alex Anthony.

The result , A Child’s Adventure in A + E , is a guide book written for children by children.

During their time with us they became experts in the department having experienced it in a very real way. They noticed a variety of things which had previously escaped myself and other staff members or saw things from a whole different perspective. All of which has been captured in a ‘ Child’s Adventure in A + E ‘

I feel that this project gave us a very interesting insight into the experience of the department from a child’s perspective. Similarly in producing the booklet the children have captured this information in a fun format which will appeal to other children and hopefully improve their experience of the hospital.

Also most children’s experience of hospital is via the emergency department which, by its nature, is unplanned ; very little information/literature exists to prepare children for this experience.

The poster shows highlights from this guidebook all of which are the children’s own words and drawings.

#7303 : The effect of Caffeic acid phenethyl ester (CAPE) on acute renal failure in crush syndrome model

Preferred format : Oral presentation

Authors:

Bunyamin Cuneyt Turan (1), Hatice Gul Sarikaya (1), Filiz Turan (1), İbrahim Gelincik (2), Omer Kurt (3), Mehmet Fatih Erol (4), Ahsen Yılmaz (5), Ahmet Gürel (5)

1. Anesthesiology and Reanimation, Namik Kemal University, Tekirdag, TURKEY
2. Pathology, Namik Kemal University, Tekirdag, TURKEY
3. Urology, Namik Kemal University, Tekirdag, TURKEY
4. Orthopedics and Traumatology, Namik Kemal University, Tekirdag, TURKEY
5. Biochemistry, Namik Kemal University, Tekirdag, TURKEY

Keywords: crush syndrome, caffeic acid phenethyl ester, myoglobulinüria, acute renal failure

Abstract :

Introduction

Crush syndrome is a severe clinical condition caused by rhabdomyolysis which is seen after massive crush injuries like earthquake injuries. this syndrome causes a number of systemic and metabolic disorders including myoglobinuric acute renal failure (MARF). CAPE has strong antioxidant and anti-inflammatory properties. The purpose of the present study was to evaluate the protective effect of CAPE against MARF in crush syndrome on an experimental animal model.

Material and Methods

Four groups were created with 40 well-matched healthy Sprargue-Dawley rats. In group 1 10 mL/kg intramuscular (IM) gliserol was administered to each rat to create the crush syndrome model. Consequently 10 micromole/kg CAPE was administered intramuscularly. The same CAPE dose was repeated at 24th hour of first dose. In group 2 10 mL/kg IM gliserol was administered and a crush syndrome model was created. In group 3 a single dose of 10 micromole/kg CAPE was administered intramuscularly without creating a crush syndrome model. The group 4 was the control group. At the 48th hour of the first CAPE administration of group one cardiac blood samples were obtained and bilateral nephrectomy was carried out and the samples were prepared for histopathological and biochemical evaluations in all 4 groups. Serum urea, creatinine, IL-1β, TNF-α, IL-10 and IL-1Ra were studied on the blood samples. The kidneys were evaluated histopathologicly to investigate any changes related to MARF. To evaluate the oxidative damage malondialdehyde (MDA) nitric oxide (NO) levels and superoxide dismutase (SOD) and catalase(CAT) activities were studies on the renal tissue samples.

Results

Serum urea, creatinine, IL-1β, TNF-alpha, and IL-10 levels were significantly higher in group 2 compared to controls while these values were significantly low in group 1 compared to group 2. Serum IL-1Ra levels were significantly lower in group 1 compared to control group. MD and NO levels of renal tissue samples were higher in group 1 compared to group 2 and control group. SOD and CAT activities were significantly lower in group 2 compared to controls while there was a significant increase of these activities in group one compared to group 2. The changes related to oxidative stress and myoglobinuria were observed in histopathological evaluation of group 1 and group 2. The renal tissue changes were apparently milder in group 1 in contrast to group 2.

Conclusion

Our results reveal that CAPE administration has a diminishing effect on the renal function deterioration and renal tissue changes observed in crush syndrome. We hope that our study lead innovations in the development of new protection or management of renal failure caused by crush syndrome.

#7304 : To load or not to load? Aspirin loading in acute ischemic stroke: a study of clinical outcomes

Preferred format : ePoster

Authors:

Tse-Hsuan Su (1), Yi-Ling Chan (1), Jiann-Der Lee (2), Meng Lee (2), Leng-Chieh Lin (3), Yu-Wen Wen (4), Tsong-Hai Lee (5)

1. Department of Emergency Medicine, Linkou Chang Gung Memorial Hospital, Taoyuan, TAIWAN
2. Department of Neurology, Chiayi Chang Gung Memorial Hospital, Chiayi County, TAIWAN
3. Department of Emergency Medicine, Chiayi Chang Gung Memorial Hospital, Chiayi County, TAIWAN
4. Clinical Informatics and Medical Statistics Research Center, Chang Gung University, Taoyuan, TAIWAN
5. Stroke Center and Department of Neurology, Linkou Chang Gung Memorial Hospital, Taoyuan, TAIWAN

Keywords: aspirin,acute stroke,treatment,loading dose,observational study

Abstract :

Background and purpose:

Aspirin is known to reduce mortality and recurrent vascular events. However, there are no reports about dose-response of loading aspirin in treating acute ischemic stroke. The objective of this study was to compare the effectiveness of different loading doses of aspirin in acute ischemic stroke presenting within 48 hours of symptom onset.

Methods:

This was a retrospective, hospital-based cohort study. Patients were classified as high-dose (160-325 mg) or low-dose (<160 mg) based on the initial loading dose of aspirin at the emergency department. The primary outcome measure was a favorable modified Rankin scale (mRS) score of ≤1 on discharge. Secondary outcomes included in-hospital mortality, stroke progression during admission, and bleeding events. A propensity score with 1:3 matching was used to balance baseline characteristics, and stepwise multiple logistic regression was performed for variables adjustment.

Results:

From a total of 7738 available patients, 3802 patients were included. Among them, 750 patients belonged to the high-dose group. Multiple logistic regression after matching revealed that the high-dose group was significantly associated with a favorable clinical outcome on discharge (odds ratio: 1.49, 95% confidence interval, 1.17-1.89, $p<0.01$), but the associations were not found with mortality and stroke progression. Nonetheless, the high-dose group also experienced more bleeding events, but was significant only in minor but not major bleeding.

Conclusions:

A higher loading dose of aspirin (160-325 mg) can be beneficial in treating acute ischemic stroke in the emergency departments. Although there is an increased risk of bleeding, which, however, is usually minor.

#7305 : She is exhausted. She needs psychological assistance!

Preferred format : ePoster

Authors:

Elke Thijs (1), Adeline Higuet (2), Saartje Thijs (3)

1. Emergency, student Medicine, UZ Gent, Belgium, Gent, BELGIUM
2. Urgences, sint Maria Halle, Belgium, Halle, BELGIUM
3. Interne medicine, student Medicine, UZ Gent, Belgium, Gent, BELGIUM

Keywords: headache, bradypsychia,depression,cavernous sinus thrombose

Abstract :

A 51 year-old woman was brought to the emergency ward by two of her friends. According to her relatives, she was exhausted and had to see a psychiatrist.

She worked as an employee in the administration, lived alone and had always had a lot of energy. But since the hospitalization of her mother for severe depression a few weeks earlier, the patient had stayed the whole day in her bed, lacked energy and didn`t speak anymore. Her friends said: "she is not recognizable anymore and needs urgently psychological assistance".

In regard to her medical past, we noted only a few migraine episodes and one flebitis of the right leg, 3 years before. She took no medication except the pil and paracetamol tablets occasionally.

She complained about having had a headache a week before and therefore her GP had come twice for injection of NSAIDS.

Because of her aggravating symptoms of lethargy, mutisme en bradypsychia she was referred to the ED on a Friday night.

On admission her parameters were stable: a blood pressure of 12/8 mm Hg, a pulse of 60 Bpm, a temperature of 36.5 °C and a Sp02 of 99%. The clinical examination revealed only an altered neurological examination: she was conscious and well-oriented in time and space, her pupils were reflected and isocore. She presented no sign of lateralisation, had symmetrical reflexes and no meningeal signs but she was somnolent, bradypsychique and showed a difficulty with coordination. Laboratory evaluation revealed normale glycemia, normale electrolytes, normale creatinine, normale TSH and T4, crp : 19 mg/L, DD : 6114 ng/ml, GOT 32u/L, GPT 50 u/l, ethanol 0 g/dl.The urinary toxicology analyses showed only the presence of paracetamol in a therapeutical dose.

The head CT was preformed one hour after admission and was negative. The rx-thorax was normal. She was admitted for observation in neurology. On the following days other exams were performed, the EEG was normal, the dupplex of lower limbs was normal, the CT-Angio of the thorax was normal, the head CT scan with contrast showed an empty delta-sign pathognomonic of a veneuse thrombose.A head MRI was performed in emergency and revealed multiple foci of recent ischaemia in the white matter bilaterally and a central venous sinus thrombosis superior sagittal, sigmoideus, rectus and interna cerebri. The treatment was immediately started with low molecular weight heparins at the therapeutic dose of 1mg/kg twice a day before a relay per os and the pil was stopped at live.

In a second time an extended bilan (in gynecology, cardiology , dermatology, ..) was performed and allowed to exclude any malignity. This diagnose had an important impact on her social and professional life. In conclusion, instead of referring the patient too early to the psychiatric ward, a possible diagnosis of an acute central venous thrombosis should always be considered by the emergency physician in case of headache or altered neurological examination with elevated d-dimer.

#7306 : A young woman with severe heart failure

Preferred format : Oral presentation

Authors:

Adnan Yamanoglu (1), Sumeyye Cakmak (1), Ozgur Sogut (1)

1. Emergency Medicine, Haseki Education and Research Hospital, Istanbul, TURKEY

Keywords: peripartum cardiomyopathy, acute heart failure, echocardiogram

Abstract :

Introduction: Peripartum cardiomyopathy (PPCM) is one of the most severe cardiac diseases and is a leading cause of maternal death. PPCM is a non-familial form of peripartum heart failure, and is characterised as an idiopathic cardiomyopathy presenting with heart failure secondary to left ventricular systolic dysfunction in the absence of another cause of heart failure, close to the end of pregnancy or in the first months after the birth (1).

We present a case report of a young woman who suffered from dyspnoea, haemoptysis, and palpitations who was diagnosed with acute heart failure resulting from PPCM in the emergency department (ED).

Case Report: A 25 year-old female gave birth by elective Caesarean section at 40 weeks to her first child. She presented to the ED three days later with dyspnoea, haemoptysis, and palpitations. The patient's initial vital signs were: blood pressure 125/83 mmHg, heart rate 140 beats/min, respiratory rate 20 breaths/min, temperature 36.1, and oxygen saturation 95% on 3-4L/min by oxygen mask. A plain chest film showed pulmonary oedema, and ECG on admission showed sinus tachycardia. Cardiac enzymes were within normal limits. An echocardiogram revealed mitral regurgitation, dilatation of left ventricle, and general hypokinesia with severe left ventricular dysfunction (i.e., ejection fraction of 30%), but no pericardial effusion or cardiac tamponade. The patient was diagnosed as having peripartum cardiomyopathy in pregnancy, based on the echocardiogram and clinical symptoms of congestive heart failure.

Discussion and Conclusion: The diagnosis of PPCM in the current patient was based on the following criteria previously described by Demakis et al and Hibbard et al. (2,3): development of heart failure in the last month of pregnancy or within five months postpartum, no history of pre-existing heart disease, unknown etiology for heart failure, and echocardiography findings that included a left ventricular ejection fraction of less than 45% and/or 30% M-mode fractional shortening, and an end-diastolic dimension of 2.7cm/m^2.

PPCM should be considered in dyspnoeic female patients of childbearing age, and should be diagnosed early to prevent fatal consequences. In addition, PPCM should be excluded from other diseases associated with the reduced ejection fraction. PPCM is a rare disease, but due the risk of acute heart failure it should be considered in patients with suspect symptoms. Physicians should be appropriately educated with echocardiography on PPCM symptoms so that it can be diagnosed and treated early.

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#7307 : MUST - Medical students Ultra Sound Training for 5th Year Medical students: User feedback

Preferred format : Oral presentation

Authors:

Mohit Arora (1), Asoka Weerasinghe (2), Patrick Tung (2), Dean Okereke (2)

1. Consultant Emergency Medicine, Leeds Teaching Hospitals NHS Trust, Leeds, UK
2. Consultant Emergency Medicine, Dewsbury & District General Hospital, Dewsbury, UK

Keywords: Ultrasound, Education, Training, Feedback

Abstract :

MUST - Medical students Ultra Sound Training for 5th Year Medical students: User feedback

The Medical student Ultra Sound Training (MUST) for 5th Year medical students to obtain ultrasound guided vascular access and arterial blood gas sample.

This was the first ever procedural ultrasound training for medical students in the UK. The course has evolved since it was first started in 2013.

The training comprised of e-learning equivalent to 30 minutes teaching session via VLEψ platform, 30 minutes of didactic teaching (lecture with demonstration of procedure and lecture on ultrasound governance) and 120 minutes of supervised scanning. The face-to-face course which runs over one full day gives the students plenty of hands on experience in scanning. This is followed by an end of training formative assessment.

During the year 2015-16 the course was held on 5 days at two locations (Leeds and Dewsbury) and 250 medical students underwent training.

Learning outcomes of the course:

•Basic ultrasound physics & Knobology (VLE)
•How to operate the ultrasound machine and optimizing image
•Ultrasound guided peripheral vascular access
•Governance issues related to ultrasound guided procedures.

The candidates were asked to feedback on a scale from 1 (very disappointed) to 5 (very pleased). The response rate was 92.8%.

	1	2	3	4	5
Ultrasound Physics and Knobology (VLE)		2%	10%	39%	49%
US Guided IV Access and ABG sampling Lecture				18%	82%
Scanning hands-on-practice				11%	89%
Governance Lecture			10%	34%	56%

Comments:

•Lots of opportunity to practice; learnt a skill which will be very useful in the future.
•Great to be taught this - I feel confident to be more useful as an Foundation Year 1 doctor.
•Very friendly staff, very supportive and enthusiastic.
•Excellent structure. Briefing → practice → assessment → debrief → well sign-posted.
•We got plenty of practice and teaching from experienced and knowledgeable clinicians. Also great to practice on each other and with different machines.
•Useful to learn a new skill, which is applicable to working as a junior doctor.
•I really enjoyed learning how to use the probe and practicing my needle technique. The course should definitely be included for the curriculum in future years as it is a very useful skill to know.
•It was good to receive constant feedback.
•Best teaching I've ever had!!
•A refresher session later in the year if possible
•Some practice with sterile procedure while acquiring venous access
•Less rushed for time, a bit longer in each station. Longer presentation of all techniques at the start.

Conclusion

The course has evolved and achieved success over the last few years. Overwhelming positive feedback from medical students has acted as a catalyst to pave the way into integrating ultrasound into the undergraduate curriculum at Leeds Medical School.

#7308 : Difficulties of nurses in the use and handling of port-a-cath in emergency department

Preferred format : ePoster

Authors:

RAQUEL PEREZ CASTILLO (1), pedro Garcia Bermejo (1), Maria Cuenca Torres (1), Jose Luis Ruiz Lopez (1), Asif Muhammad (1)

1. Emergency department, Hospital de La Ribera, Alzira, SPAIN

Keywords: port-a-cath, nurses, emergency department

Abstract :

Every day the emergency department receives patients who are being treated with chemotherapy or other chronic therapies via their por-a caths.

Non channeling of such reservoirs by nurses in emergency departments are often partly due to ignorance and difficulties in handling such devices; trying to make peripheral venous access by way of difficult approach to the technical difficulty involved and the suffering it inflicts the patient.

OBJECTIVE:

Describe the knowledge among nurses about the approach and handling of the Port-a-cath systems when using a central vascular access in the emergency department.

MATERIAL AND METHODS:

A prospective, observational and analytical study was conducted at the University Hospital de la Ribera (Alzira-Valencia-Spain) and health centers in the area of influence emergency service. The hospital has Oncology Service and Day Hospital where they routinely use these devices.

The study population consisted of nurses working in the emergency services of the Hospital de la Ribera and health centers of influence. The main variables analyzed were: gender, age, seniority and knowledge on the use and management of the Port-a-cath before the arrival of a patient with urgent priority.

The data collection procedure was based on the distribution of a specific questionnaire not validated, distributed by researchers and auto completed by the nursing staff. The questionnaire exist about 3 points to fill and 10 closed questions dichotomous. For the distribution of the questionnaire conformity of the Ethics Committee of Research-Investigation Commission it requested the Health Department.

RESULTS:

100% of respondents nurses know what a Port-a-cath or subcutaneous reservoir, because they have well studied in their education.

Nurses with less work experience are those that have not used this reservoir.

Most respondents would choose the peripheral route as a way to channel in a patient presenting with urgent priority, not having skill in handling a reservoir Port-a-cath.

Those who chose Port-a-cath choose this option to ensure a safe and high-caliber track, but here you can see that we only chose those nurses with more work experience and handling of the reservoir.

100% ask for help a colleague if he found any difficulty in addressing and reservoir management.

100% would be willing to take a course of theoretical and practical training

CONCLUSIONS:

Given the volume of cancer patients treated in the emergency department with these devices is increasing; It should be provided on a regular basis training courses and training. So the risk of complications and insecurity staff are minimized.

#7309 : Emergency physician accuracy in interpreting electrocardiograms with potential ST-segment elevation myocardial infarction: is it enough?

Preferred format : Oral presentation

Authors:

Giacomo Veronese (1), Federico Germini (2), Stella Ingrassia (3), Ombretta Cutuli (4), Luca Bonacchini (5), Maura Marcucci (6), Andrea Fabbri (7)

1. Emergency Medicine, Milano-Bicocca University, Milan, ITALY
2. Ospedale Maggiore Policlinico, Fondazione IRCCS Ca' Granda, Milano, ITALY
3. Emergency Medicine, ASST Papa Giovanni XXIII, Bergamo, ITALY
4. Emergency Medicine, IRCCS Azienda Ospedaliera Universitaria San Martino - IST, Genova, ITALY
5. Emergency Medicine, University of Milano-Bicocca, Milano, ITALY
6. Department of Clinical Sciences and Community Health, University of Milano, Milano, ITALY
7. Emergency Medicine, Morgagni-Pierantoni Hospital, Forlì, ITALY

Keywords: Myocardial infarction, Accuracy, Emergency medicine, Electrocardiogram

Abstract :

Background and aims: Rapid recognition of ST-segment elevation myocardial infarction (STEMI) is of utmost importance to pursue a timely restoration of coronary blood flow. As a consequence, electrocardiogram (ECG) interpretation is now widely performed by emergency physicians. We aimed to determine the accuracy of interpretation of potential ST-segment elevation myocardial infarction (STEMI) ECGs when only a few clinical data are available and rapid recognition is necessary, by a cohort of Italian physicians working in the emergency medicine field.

Methods: Italian physicians were recruited to participate in this study during a scientific session of the European Society of Emergency Medicine (EuSEM) 2015 congress (Torino, Italy). Participants were asked to respond to a survey including a total of 36 12-lead ECGs previously resulted in putative STEMI diagnoses. To better represent an emergency situation, all participants were given 60 seconds to define each ECG using a standardized form. The survey included an introductory statement explaining that all ECGs belonged to patients with moderate risk of acute coronary syndrome and asking to focus on whether or not the ECG in question met the diagnostic criteria for a STEMI. Based on the coronary angiogram, a binary outcome of accurate versus inaccurate ECG interpretation was defined. We computed the sensitivity, specificity, positive predictive values (PPV), negative predictive values (NPV), accuracy and their 95% CIs for ECG interpretation for the whole cohort. We then calculated and compared the diagnostic performance according to the reader level of training, working experience and the hospital level of care.

Results: A total of 135 participants interpreted 4603 ECGs. Sixty-seven (49.6%) respondents were fully licensed physicians ("attending"), 49 (36.3%) were emergency medicine residents, and 14 (10.3%) were medical students with an interest in emergency medicine. The majority of participants (n = 49, 36.3%) declared to work in a tertiary care emergency department (ED), 31.8% in a secondary care ED, and 5% in a primary care centre. A total of 62 participants (45.9%) had less than 5 years of working experience in an ED, 15 (11.1%) between 5 and 10 years, 19 (14.1%) more than 10 years. The overall sensitivity to identify "true" STEMI ECGs was 64.5% (95% CI: 62.8-66.3) while participants' specificity in determining "false" ECGs was 78% (95% CI: 76-80.1). Overall accuracy among readers, namely the ability to discriminate "true" STEMI pattern from "false" STEMI ECG, was modest (69.1, 95% CI: 67.8-70.4). There was a trend toward a higher accuracy in ECG interpretation for attending physicians, participants working in tertiary care emergency departments and those having more than ten years of experience.

Conclusion: The study supports the notion that ECG interpretation for establishing a STEMI diagnosis lacks the necessary sensitivity and specificity to be considered a reliable "stand-alone" diagnostic test. We underline the relevance of early adjuvant factors (e.g. history, clinical characteristics, echocardiographic pattern) when establishing a STEMI diagnosis and support the role of targeted educational efforts towards the younger emergency medicine professionals and those working in non-referral centres.

#7310 : ED Presentation of Post Traumatic Appendicitis

Preferred format : ePoster

Authors:

Muhammad Faisal Khilji (1), Qazi Zia Ullah (2)

1. Speaker, First Author, Sultan Qaboos University Hospital, Emergency Medicine, Muscat, OMAN
2. , Sultan Qaboos University Hospital, Emergency Medicine, Muscat, OMAN

Keywords: Appendix, Appendicitis, Computed tomography

Abstract :

ED Presentation of Post Traumatic Appendicitis

Appendicitis and trauma both present in emergency department commonly but their presentation together in same patient is unusual. We present a case of 43years old man brought by emergency medical services (EMS) to the emergency department with complaints of abdominal pain after he was involved in motor vehicle collision, two hours earlier. He was perfectly fine before the accident. His primary survey was normal. Secondary survey revealed tenderness in right iliac fossa with seat belt mark overlying it. Computerized tomography (CT) of abdomen and pelvis was performed which showed 8mm thickening of appendix with minimal adjacent fat stranding. There is also subcutaneous fat stranding of anterior lower abdominal wall possibly due to bruising. Impression of post-traumatic appendicitis was made. Laproscopic appendectomy was done and patient recovered uneventfully. Histopathology showed inflamed appendix.

#7311 : Evaluation of the management of elderly by the mobile emergency care unit

Preferred format : ePoster

Authors:

RAFIKA BEN CHIHAOUI (1), saida zelfani (2), AFEF CHAKROUN (3), slim Ben Dlala (4), CHEDLY GHANEM (5), samir abdelmoumen (2), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, FRANCE
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA
3. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, TUNISIA
4. SAMU-SMUR, c, Tunis, TUNISIA
5. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA

Keywords: elderly management SAMU

Abstract :

Introduction: Taking care of the elderly is a problem that is growing due to the aging population and advances in treatment.

The purpose of this study was to evaluate the management of elderly by the mobile emergency care unit (MECU)

Methods: This was a prospective, observatioenal study over 2 months (July and August 2015), using the MECU-database for all out of hospital elderly patients care, included patients age greater than or equal to 65 years. We studied the demographic characteristics of patients, their care and their outcome. The results were expressed as mean +ou - SD and pourcentage

Results: During the period of study, 100 elderly patients were management by the MECU teams. There were 52 males and 48 females. The median age was 86+ou- 5 years. The calls were received in the morning in 44% of cases; they coming in 89% of cases from the patients home. They were dominated by neurological disorders in 37.5% of cases. The MECU was mobilized in 80% of cases. The most frequent pathologies were dominated by stroke (33%) and respiratory diseases (25%). Ninety percent of patients were admitted to the emergency services and 5% were admitted directly into a cardiac intensive care unit. Overall mortality at 3 months was 31.4%

Conclusion: The survival rate of the elderly managed by the MECU teams was encouraging. This suggests a successful integration into the emergency system.

#7313 : Testicular Fracture: A Tough Nut to Crack Made Easier with PoCUS

Preferred format : ePoster

Authors:

Tyler Holliday (1), Kristine Robinson (2), Nicole Dorinzi (2), Andrew Vucelik (2), Erin Setzer (2), Debra Williams (2), Joseph Minardi (2)

1. School of Medicine, West Virginia University, Morgantown, West Virginia, USA
2. Department of Emergency Medicine, West Virginia University School of Medicine, Morgantown, West Virginia, USA

Keywords: testicle, fracture, ultrasound, trauma

Abstract :

Background: Injuries involving the scrotum and testicles are common in the emergency department. History and physical examination are inadequate to differentiate between surgical and non-surgical testicular emergencies. Early and accurate diagnosis is critical to preserve the structure and function of the testes, and timely ultrasound is essential for rapid, definitive diagnosis. **Objective**: To report a case of testicular fracture diagnosed by an emergency physician using Point-of-Care-Ultrasound. **Case Report**: An 18-year-old male presented to the emergency department with left testicular pain and swelling following an injury where he was accidentally struck in the groin by his opponent during a lacrosse match. Physical exam revealed a tense and swollen left testicle when compared to the right. Due to the nature of his presentation, ultrasonography was immediately performed by the emergency physician, leading to a rapid diagnosis of testicular fracture. For the ultrasound examination, a high-resolution linear transducer (6-15MHz) with Color Doppler was employed. Sonographic findings included heterogeneous echogenic parenchyma in the lower pole, discontinuity of the tunica albuginea, and complex hypoechoic fluid collection within the left hemiscrotum with preserved testicular blood flow including the fractured segment by Color Doppler. Urology was consulted. After their evaluation, the patient was promptly taken to the operating room for scrotal exploration, partial orchiectomy, and debridement of the left testis. **Discussion**: A previous study has shown that emergency physicians can accurately diagnose acute testicular pathologies by utilizing bedside ultrasound. As demonstrated by this case, use of routine bedside ultrasonography for injuries involving the scrotum and testicles by emergency physicians may help expedite diagnosis and can be used to stratify patients on the need for emergent urologic consultation and surgical intervention to improve patient outcomes.

#7315 : Epidemiologic characteristics of carbon monoxide poisoning in Korea : Emergency Department based Injury In-depth Surveillance

Preferred format : ePoster

Authors:

Sohyun Bae (1), Woochan Jeon (1), Kyunghwan Kim (1), Junseok Park (1), Dongwun Shin (1), Joonmin Park (1), Hyunjong Kim (1), Hoon Kim (1)

1. , Ilsan Paik hospital, Koyang, KOREA, REPUBLIC OF

Keywords: carbon monoxide poisoning, suicide, intention

Abstract :

Purpose

The aim of this study is to describe the characteristics of patients with carbon monoxide (CO) poisoning.

Methods

We surveyed the data of Emergency Department based Injury In-depth Surveillance, (2011-2014), Korea Centers for Disease Control and Prevention, retrospectively. We included the patients that mechanism of injury is acute CO poisoning. We surveyed the annual and monthly incidence, gender, age, the result of emergency treatment, the rate of intensive care unit (ICU) admission, the result of admission, association with alcohol, and place of accident. We also surveyed the cause and experience of past suicide attempt of intentional poisoning.

Results

Total 3,405 patients were included, male and female was 2,015(59.2%) and 1,390(40.8%), mean age was 39.83±18.51 year old. The annual number of CO poisoning had been increased. The incidence of unintentional CO poisoning was higher than intentional CO poisoning at January, February and December. The mean age of unintentional CO poisoning was younger than unintentional CO poisoning (38.41 ± 13.03 vs 40.95 ± 21.83). The rates of discharge against medical advice (DAMA), ICU care and alcohol association of intentional CO poisoning were higher than unintentional CO poisoning (36.4% vs 14.0%, 17.8% vs 4.7%, 45.2% vs 5.6%). The most common place of CO poisoning was residence area

Conclusion

The annual incidence rate of CO poisoning had been increased with seasonal variation. DAMA, ICU care, and alcohol association of intentional CO poisoning were higher than unintentional CO poisoning.

#7316 : Inhaled furosemide effectiveness for acute asthma exacerbations: A meta-analysis

Preferred format : ePoster

Authors:

Ryota Inokuchi (1), Yuta Aoki (2), Ai Aoki (3), Hiromu Maehara (4), Yoko Yamaguchi (4), Kent Doi (5), Susumu Nakajima (6), Naoto Morimura (7)

1. Hospital, JR General Hospital, Bunkyo-ku, JAPAN
2. , The University of Tokyo Hospital, Minato-ku, JAPAN
3. Hospital, The University of Tokyo Hospital, Minato-ku, JAPAN
4. Hospital, JR General Hospital, Shibuya-ku, JAPAN
5. assistant professor, The University of Tokyo Hospital, Bunkyo-ku, JAPAN
6. associate professor, The University of Tokyo Hospital, Shibuya-ku, JAPAN
7. professor, The University of Tokyo Hospital, Yokohama city, JAPAN

Keywords: human, lasix, emergency, bronchoconstriction, adult, child

Abstract :

Background: Although inhaled furosemide is expected to be effective for treating asthma exacerbations, previous studies have yielded inconsistent results.

Methods: To test the hypothesis that inhaled furosemide is effective during asthma attack, we performed a comprehensive literature search of MEDLINE, EMBASE, Web of Science, and Cochrane Library databases to identify studies that examined inhaled furosemide effectiveness for asthma attacks by adding it to conventional therapy using a double-blinded randomized clinical trial design. A meta-analysis was conducted by calculating a standardized mean difference from each study and integrating them using a random effects model. Sub-analyses were made for studies that evaluated peak expiratory flow rate (PEFR) and forced expiratory volume in 1 second (FEV1.0). Jackknife sensitivity analysis was also conducted.

Results: Six studies involving 78 patients who received inhaled furosemide and 79 who received placebo were eligible for inclusion in our meta-analysis. This analysis found a significant effect of inhaled furosemide during asthma attacks ($Z = 2.70$; $P = 0.007$). Sub-analyses of studies that reported PEFR ($Z = 2.23$; $P = 0.026$; n = 68/70, inhaled furosemid/placebo) and FEV1.0 ($Z = 1.84$; $P = 0.066$; n = 49/46, inhaled furosemide/placebo) values preserved the significance of inhaled furosemide effectiveness for asthma attacks. Jackknife sensitivity analyses confirmed the replicability of these findings ($P < 0.028$). No adverse events with furosemide inhalation were reported.

Conclusion: Adding inhaled furosemide to conventional therapy for asthma attacks may improve respiratory function without apparent adverse effects.

#7317 : Is Whole Body Non-Contrast Computer Tomography Useful in Blunt Abdominal Trauma? Retrospective Study in Blunt Liver Trauma

Preferred format : ePoster

Authors:

Chia-Hsi Chen (1), Wai-Bun Chan (2), Tak-Yee Wong (2), Jui-Fang Huang (3), Su-Lan Wu (4)

1. Department of Emergency Medicine, St. Martin De Porres Hospital, Chia-Yi City, TAIWAN
2. Department of Radiology, St. Martin De Porres Hospital, Chia-Yi City, TAIWAN
3. Department of Education and Research, St. Martin De Porres Hospital, Chia-Yi City, TAIWAN
4. Department of Nursing , St. Martin De Porres Hospital, Chia-Yi, TAIWAN

Keywords: FAST, liver trauma, non-contrast abdominal computer tomography

Abstract :

Background and Introduction: The estimated percentage of liver injury in multiple trauma patients is about 1% to 8 %. The Focused Assessment Sonography of Trauma (FAST) could be used in the survey of blunt abdominal trauma popularly and the whole body computer tomography (CT) is promoted in the recent papers when the patient is under severe trauma. When patients arrive in the emergency room the renal function result of patients is not usually available. We try to find that the usage of non-contrast CT can be more efficient method in the diagnosis of liver trauma.

Participants and Methods: The results of liver trauma patients are collected from July 2001 to March 2016. There are 118 patients are included in this review study. Patients belong to liver trauma to be included and these patients are confirmed by abdominal CT and graded with Abbreviated Injury Scale (AIS)-90. The FAST examination is performed at the scene of emergency room. Our doctors which are in charge review the finding and take ultrasound reports in the medical history. We review our liver trauma cases and present the different results between FAST, non-contrast abdominal CT and contrast abdominal CT.

Results: Within 118 patients of liver trauma the FAST is performed in 83 patients. In FAST group there are 43.4% patients with negative finding. In cases of negative-liver trauma on non-contrast abdominal CT we find there are 38 cases belonging to grade II liver injury scale after contrast injection. The negative predictive value of non-contrast CT is 52.5% (62/118) in liver trauma. Besides in 36 patients presenting liver trauma on non-contrast CT 9 cases are negative finding on FAST examination. The liver injury scale belongs to grade II and grade III.

Discussion and Conclusion: The CT should play more important roles in diagnosis of major trauma. The FAST scan has limitations at liver trauma diagnosis. The miss diagnosis rate is 25 % and non-contrast CT provide us higher diagnosis rate than FAST but we find that this result is still not satisfactory in clinical usage. The negative predictive rate is so high and usually is under estimated . Combinations of other clinical findings such as biochemical study, vital sign and mechanisms may be most useful. If liver trauma is highly suspected the contrast CT still has be performed.

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#7318 : Coronary Artery Aneurysms after Adult-onset Kawasaki Disease

Preferred format : ePoster

Authors:

Ryota Inokuchi (1), Takahiro Hiruma (2), Kensuke Nakamura (3), Yuta Aoki (4), Takehiro Matsubara (5), Masataka Gunshin (5), Kent Doi (5), Susumu Nakajima (6), Naoto Morimura (7)

1. Hospital, JR General Hospital, Bunkyo-ku, JAPAN
2. Assistant Professor, The University of Tokyo Hospital, Bunkyo-ku, JAPAN
3. director, Hitachi General Hospital, Hitachi city, JAPAN
4. , The University of Tokyo Hospital, Minato-ku, JAPAN
5. assistant professor, The University of Tokyo Hospital, Bunkyo-ku, JAPAN
6. associate professor, The University of Tokyo Hospital, Shibuya-ku, JAPAN
7. professor, The University of Tokyo Hospital, Yokohama city, JAPAN

Keywords: Acute coronary syndromes, Coronary imaging, Computerized tomography and Magnetic Resonance Imaging

Abstract :

We encountered a rare case of adult-onset Kawasaki disease (KD), with coronary artery abnormalities, in a 24-year-old Japanese man. The patient presented with recent-onset chest pain that occurred when he was at rest and no other symptoms. His medical history included hospitalization 2 years previous to the present admission, at another hospital, due to a fever of unknown origin that lasted for 2 weeks, accompanied by polymorphic exanthema, cervical lymphadenopathy, nonpurulent conjunctivitis, strawberry tongue, and finger tip desquamation. At that time, the patient was diagnosed with adult-onset Still's disease. Based on that diagnosis, he was treated with steroid pulse therapy, alone, and his symptoms were alleviated. After 2 months, he received oral steroid therapy, and was assumed to have been successfully treated. However, the patient was admitted to our hospital 20 months after concluding the oral steroid therapy.

Upon admission to our hospital, KD was suspected because of his past history of "strawberry tongue" which is unique to this disease. The chest pain was associated with an abnormal electrocardiogram that showed an abnormal Q wave in the inferior (II, III, aV_F) electrocardiographic zones. A cardiac three-dimensional computed tomography scan showed an aneurysm of the proximal right coronary artery, with tight postaneurysmal stenosis. The scan also showed proximal aneurysms of the left anterior descending artery and the proximal circumflex artery. He was treated with percutaneous coronary intervention and discharged on day 28, without any complications.

Typical KD findings in both adults and children include fever, conjunctivitis, pharyngitis, skin erythema progressing to a desquamating rash on the palms and soles, and strawberry tongue. Adults more frequently present with cervical adenopathy, hepatitis, and arthralgia. In contrast, adults are less frequently affected by meningitis, thrombocytosis, and coronary artery aneurysms.

KD is a common vasculitide of childhood, but adult-onset KD is extremely rare. No specific diagnostic tests are available for KD; the diagnosis is based on the presence of characteristic clinical findings. Once a differential diagnosis excludes the possibility of rheumatologic disorders or autoimmune disease, steroid therapy is often administered. However, treatment with steroids, alone, might have adverse effects in KD patients, causing progression of coronary lesions. In the present case, only steroid therapy was administered to the patient at the time of his initial hospitalization, 2 years earlier, and may have resulted in an exacerbation of the patient's coronary artery abnormalities. Thus, the present report suggests that adult-onset KD should be considered as a differential diagnosis in cases presenting as rheumatologic disorders or autoimmune disease to prevent adverse effects caused by steroid treatment in adult-onset KD patients.

#7321 : Misdiagnosed cases of acute aortic dissection in the emergency department

Preferred format : ePoster

Authors:

Tomoko Shigekiyo (1), Taizo Nakanishi (2), Makoto Sera (3), Hideya Nagai (3), Shinsuke Tanizaki (3), Hideyuki Matano (3), Shigenobu Maeda (3), Hiroshi Ishida (3)

1. General medicine, Tannan Hospital, Fukui city, JAPAN
2. Epidemiology and Preventive Medicine, Monash University, Melbourne, AUSTRALIA
3. Emergency department, Fukui Prefectural Hospital, Fukui, JAPAN

Keywords: aortic dissection, emergency department, chest pain

Abstract :

【Background】

Acute aortic dissection (AAD) is a life-threatening disease and nearly 33% of patients die within the first 24 hours without treatment. We considered patients with AAD who were misdiagnosed at the first visit in Fukui Prefectural Hospital (FPH).

【Methods】

We retrospectively analyzed 68 patients with AAD who visited the emergency department of FPH between April 2010 and March 2015. We identified patients diagnosed promptly at the first visit (Group A) and those misdiagnosed (Group B). We compared the following items statistically using Fisher test and Mann-Whitney test; sex, age, mortality, Stanford type of dissection, presenting symptoms, use of emergency medical services and time to definite diagnosis with CT.

【Results】

Group A was 54 patients (81%) and Group B was 13 patients (19%). Median time to definite diagnosis with CT was 25 min (interquartile range, 16.25 to 35.75 min) in Group A and 100 min (60 to 120 min) in Group B ($P<0.001$). Group B was older (Group A: median 69.5 years, Group B: 77 years, $P=0.03$) and had more Stanford type A dissection patients (Group A : 46.3%, Group B : 84.6%,$P=0.001$). Stanford type A patients complained chest and/or back pain less compared with type B patients ($P=0.004$). Misdiagnosed patients were diagnosed at the first visit as gastrointestinal disease (four cases), acute myocardial infarction (three cases), musculoskeletal disease (two cases), cerebral infarction (one case) and others (three cases).

【Conclusion】

Older age and Stanford type A dissection was associated with misdiagnosed AAD in our study. Further our study indicates that we should not remove AAD from differential diagnosis even in the patients without chest or back pain, especially in the elderly.

#7322 : Impact of using point of care creatinine device prior to contrast enhanced computed tomography in emergency department.

Preferred format : ePoster

Authors:

Shotaro Kawamura (1), Hidetoshi Watanabe (1)

1. Emergency department, Ichinomiya nishi hospital, Ichinomiya, JAPAN

Keywords: point of care device, contrast enhanced computed tomography

Abstract :

Background

Contrast-enhanced computed tomography (CECT) is essential to diagnose some fatal emergent diseases. However, lack of the kidney function data may often delay CECT in emergency department and as a result, patients have to receive plain CT prior to the CECT thus time and cost may double in some patients. StatSensor® Creatinine Xpress™ Meter, which is one of the point-of-care (POC) creatinine devices, can provide quantitative data on a patient's kidney function within 30 sec. We introduced this device from Jan 2015 in our emergency department and have used it routinely since then. The purpose of this study is to assess how POC creatinine device have affected the number of CECT or "double CT" in emergency department.

Material and methods

Between Jan 2014 and Dec 2015, the data of thoracic and abdominal CT ordered from emergency department was collected retrospectively. CT that was taken between Jan 2014 and Dec 2014 were grouped as "before POC" and CT taken between Jan 2015 and Dec 2015 were grouped as "after POC". The rate of CECT, rate of patients who had plain CT prior to the CECT, and rate of diagnoses that were corrected or confirmed after added CECT were compared between these two groups. The chi-square test was used for statistical analysis, and the values of $P<0.05$ were considered significant.

Results

The total number of CT in "before POC" and "after POC" were 1373 and 1358, respectively. The rate of CECT were 150/1373 (10.9%) for "before POC" and 232/1358 (17.1%) for "after POC" showing significant increase after the introduction of POC ($P<0.001$). The rate of CECT added after plain CT in "before POC" and "after POC" were 21/1223 (1.7%) and 20/1126 (1.9%), respectively (n.s.). The rate of cases that diagnoses were corrected or confirmed after added CECT were 11/21 (52.3%) in "before POC", and 7/20 (35%) in "after POC" (n.s.).

Conclusion

The use of POC creatinine device significantly increased the rate of CECT in emergency department. This may have assisted an accurate diagnosis of fatal diseases within limited time. However, in contrast, diagnosis made after added CECT have not been decreased and this may have added unnecessary CECT as well. Further investigation is essential to analyze the efficacy of additional CECT to assess the real usefulness of POC creatinine device in emergency department.

#7323 : Bedside Percutaneous Cecostomy, a Candidate Treatment Option for 'Acute Tension Megacolon' at ED: a Case Report

Preferred format : ePoster

Authors:

Sung-Bin Chon (1), Intaek Lee (2)

1. Department of Emergency Medicine, Sheikh Khalifa Specialty Hospital, Ras Al Khaimah, UNITED ARAB EMIRATES
2. Department of Surgery, Sheikh Khalifa Specialty Hospital, Ras Al Khaimah, UNITED ARAB EMIRATES

Keywords: Percutaneous cecostomy, Needle decompression, Ileus, Ogilvie's syndrome

Abstract :

Introduction

The treatment of Ogilvie's syndrome begins with usual conservative treatment of ileus followed by neostigmine administration and/or colonoscopic exsufflation, with surgery as the last choice. We report a case, for which bedside percutaneous cecostomy, a rarely utilized method, was tried at ED.

Case presentation

A 20-year-old, uncommunicable, bed-ridden male patient with cerebral palsy and epilepsy on levetiracetam presented at ED. According to the caregiver, his abdomen began to distend 3 days ago with constipation. The next day, he vomited twice. One day ago, fever developed. Nothing was given via the PEG since then. He had undergone mediastinal tracheostomy and percutaneous endoscopic gastrostomy (PEG) for aspiration tendency.

He looked acutely ill, slightly drowsy, and cachexic (168cm, 36kg). Vital signs were 129/76mmHg-140/min–20/min-39.0°C. Abdomen was distended, tense, and hyper-tympanic on percussion. Metallic sound was heard. PEG drained brown to dark green fluid. There were no pressure ulcers. Chest x-ray was non-specific. Abdomen x-ray revealed megacolon. Routine laboratory findings were normal except leukocytosis ($15.31*10^3/\mu l$) and high CRP (22.2*mg/dl*).

Suspecting ileus-related sepsis, we initiated full hydration and empirical antibiotics (ceftriaxone and metronidazole). PEG was naturally drained. A rectal tube was inserted. Abdomen CT revealed megacolon (maximum diameter: 11.5cm) without obstructing mass, free air, or meaningful peritoneal fluid. On consultation, with possible laparotomy in mind, the general surgeon inserted a 40mm-long, 22 gauge needle vertically at 3cm above the umbilicus, where the megacolon abutted abdominal wall. He compressed abdomen very gently for 10 minutes for the gas inside the megacolon to come out. The width and height of abdomen, at the umbilicus level, decreased from 26.0cm to 22.0cm and from 22.5cm to 19.0cm, respectively. The patient looked comfortable and was admitted to a general ward with stabilized vital signs: 118/68mmHg-90/min-20/min-37.8°C.

Colonoscopic exsufflation was also performed. However, the patient got unstable and received oxygen and meropenem from the 2^{nd} hospital day (HD). Two days later, he underwent right hemicolectomy. The remarkably dilated ascending colon showed ulcer and perforation at its right lateral aspect with generalized peritonitis and adhesions. (The needle decompression puncture site, far from these lesions, was undetectable.) Despite intraabdominal abscess, which was drained percutaneously for 3 weeks (14^{th}-36^{th} HD), he has improved steadily and will be sent home soon as of the 50^{th} HD.

Discussion

As no obstruction nor colitis caused megacolon, this case could be defined as Ogilvie's syndrome, acute colonic pseudo-obstruction (ACPO). In case of ACPO, supposedly caused by decreased parasympathetic activity, neostigmine and colonic exsufflation are recommended additionally. For this bed-ridden patient with malnutrition, surgery was to be delayed, if possible, considering high postoperative mortality rate (40%). Bedside needle decompression, which has been reported for treatment of ACPO, was tried initially. Although surgery was performed finally, percutaneous cecostomy seems to have delayed the septic process. It remains to be answered whether a retention catheter placement might have obviated the need for surgery.

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#7324 : Influences of clinical spectrum and cultural background on antibiotic prescription in febrile children. A European observational study in emergency care.

Preferred format : Oral presentation

Authors:

Elles van der Voort (1), Santi Mintegi (2), Henriette Moll (3), Alain Gervaix (4), Rianne Oostenbrink (3)

1. General Pediatrics, Erasmus MC - Sophia, Rotterdam, THE NETHERLANDS
2. Pediatric Emergency, Cruces University Hospital , Bilbao, SPAIN
3. Dept. General Pediatrics, ErasmusMC - Sophia, Rotterdam, THE NETHERLANDS
4. pediatrics, University Hospital, Geneva, SWITZERLAND

Keywords: fever, children, antibiotic use, clinical presentation, culture

Abstract :

On behalf of the SHIVER group (Studies in cHIldren with feVER) from Research in European Pediatric Emergency Medicine (REPEM) network.

Background

Fever is the most frequent reason for a child to attend pediatric emergency care (ED). We have a high antibiotic prescription rate in febrile children; often broad-spectrum.
The majority of febrile children, however, suffer from self-limiting illness; bacterial infections comprise pneumonia and urinary tract infections mostly. Aim: evaluating antibiotic prescription in febrile children at EDs focusing on variability among countries and clinical symptoms.

Methods

Design: Prospective observational multicenter study between October 2014-February 2016.
Population: Febrile children aged 1 month-16 years visiting the pediatric ED.
Outcomes: antibiotic prescription rate (primary); antibiotic type, geographical background, clinical symptoms (secondary). Data collection: each center registered clinical data and treatment (one randomly selected day per month, during 12 consecutive months).

Results

Preliminary results are based on 4544 children from 28 hospitals, 11 European countries. Median age was 2.4 years (25^{th}–75^{th} percentile 1.1–4.9); 2488 (55%) male. Working diagnosis was definite bacterial in 204 children (5%) and probable bacterial in 1181 (26%). Infections were located in upper airway most frequently (n=2777, 61%); followed by lower aiway (n=561, 12%) and enteric (n=506, 11%). The majority was managed ambulatory (n=3979, 88%). Antibiotics were prescribed in 1440 (32%), with (amino)penicillin (36%) and amoxicillin-clavulanic acid (39%) most frequent; cephalosporins in 15%. Two countries could be classified into low MRSA prevalence of <5% (223 ED visits), 7 countries into MRSA prevalence 5-25% (3267 ED visits), and 2 countries into high MRSA prevalence of >25% (1054 ED visits). Antibiotic use was 23% and 25% for low and intermediate MRSA prevalence countries, and 58% in countries with high MRSA prevalence rates. Small spectrum antibiotics were applied in 45% and 49% in low and intermediate MRSA prevalence countries respectively, but in only 17% for high MRSA prevalence countries. Antibiotic use was also related to younger age, the presence of abnormal vital signs and ill appearance, but not related to the presence of meningeal signs or petechiae. Diagnostic tests (serum-CRP, blood leukocyte count, urine dipstick and chestradiographs) were more frequently performed in those who had antibiotics prescribed. Results of chestradiographs or urine tests were not related to antibiotic prescription. A combination of clinical variables explained 4% of antibiotic prescription variation.

Conclusions In a multicenter study among European EDs, a minority of febrile children is at risk for bacterial infections. Antibiotics were prescribed in 32%, with (amino)penicillin and amoxicillin-clavulanic acid most frequently. Antibiotic use in febrile children is most related to MRSA prevalence rates, but also to the clinical presentation. The performance of diagnostic tests, but not the result of chestradiographs or urinetests are related to higher antibiotic prescription rates. International best practices need to be identified for management of acute febrile children.

#7325 : Multiple casualty training for university hospital emergency department staff

Preferred format : Oral presentation

Authors:

Aleksejs Visnakovs (1), Anita Slokenberga (2), Solvita Stabina (1), Aleksandrs Garins (1)

1. Emergency department, Riga East clinical university hospital, Riga, LATVIA
2. Administration, Riga East clinical university hospital, Riga, LATVIA

Keywords: emergency, multiple casualty, training, military

Abstract :

Introduction

Multiple casualties can occur in different ways, and military conflicts are considered to be a special type of them. We present a disaster training model designed in collaboration with USA military forces located in Latvia. The aim of this exercise was to verify the emergency responce of civil university hospital in case of three simultaneous explosions at military bases located across Latvia with all casualties converging onto the Riga East clinical university hospital emergency department.

Material and methods

Training for multiple casualties in emergency department.

Results

The legend of training was unknown for emergency department personnel. The day of training was Monday with usual overcrowding during afternoon hours. All patients converging onto Riga East clinical university hospital Emergency Department to do the best training for both US and Latvian personnel. Totally 28 international casualties were transferred to the emergency department within 3 hours after notification of crisis situation. 21 of them were evacuated by US army helicopters, 2 - by Latvian borderguard helicopter and 5 - by ambulances of Latvian national armed forces. All patients were re-triaged upon arriving. 14 patients had red tags, 10 patiens - yellow tags, 2 patients - green tags and 2 patients - black tags (dead upon arriving). It was important for emergency department personnel to continue working with or transfer current patients to other departments and increase emergency related staff to bolster capabilities. During exercise 14 casualties were transferred directly to the operation rooms (time from triage to transfer 9 – 27 minutes), 12 casualties didn’t need immediate surgery and were referred from emergency department to intensive care unit (6) or to the surgical departments (6). All casualties underwent emergency diagnostic and life-threating procedures according to in-hospital trauma protocol. Per limitations of the exercise, the staff and systems maintained life for all living patients received.

Conclusion

The only way to check the emergency responce, capacity and resources of civil hospital in case of multiple casualty event is well organized and realistic training. Collaboration between military and civilian medics, communications , pre-hospital care, time of transportation , emergency department readiness and resources play very important role and have to be improved during regular trainings.

#7326 : How to perform the care of the acute ophthalmological case coming in A and E ?

Preferred format : ePoster

Authors:

Elke Thijs (1), Adeline Higuet (2), Saartje Thijs (3)

1. Emergency, student Medicine, UZ Gent, Belgium, Gent, BELGIUM
2. Urgences, sint Maria Halle, Belgium, Halle, BELGIUM
3. Interne medicine, student Medicine, UZ Gent, Belgium, Gent, BELGIUM

Keywords: fluorescine, corneale erosion, glaucoma,arteritis, thrombose, retinal detachment

Abstract :

Introduction

Ophthalmology is a small part of the job in emergency but as emergency physicians we shouldn`t miss a reversible disease with a potentially catastrophic consequence on the vision of the patient, we have to recognize early an acute ophthalmological problem and try to treat it and or to transfer the patient if needed asap to the specialist.

Which is the population coming with an acute oftalmological problem to ED? When are they coming to ED ? How are they managed by the ED physician? How many are then referred? How to perform this acute care from the emergency point of view for a better collaboration with the oftalmologist?

Materiel,methods and results

We proceeded to a prospective study in a general hospital where the oftalmologist is not on call locally. We registreted all the patients with a problem with his eye from the 3/04 until the 30/04/16. An inform consent is signed by the patient. We recensed 51 patients. An excel tabel recenses the following data: 29% were referred by de GP, only 29% of the patients come to the ED during the working-hours (from 8 am untill 17 pm) , 29% of the pathologies were non-traumatic and 71% were traumatic disease (corneale erosion in majority) , an anamnesis is performed in 94% but in 88% relevant questions about the vision of the patient are lacking, examination with fluorescine is done in 94% . 52% are in a second time referred to the oftalmologist.

Discussion

We notice a high percentage (70,5%) of out-of hours patients.That means that on this moment the ED is the only solution for this patients and we decide if this problem could be postponed. This important role makes us responsible for not missing any reverseable pathology.

The emergency physician doesn't encounter to care with traumatic eye problem (95% of corneale erosion) but have more difficult to manage a non-traumatic eye disease
and this patient is quickly referred but without right anamnesis to estimate a real risk as glaucoma, retinal detachment, thrombosis or arteritis.

88% of the doctors performed a minimal anamnesis without enquiring about the basic questions about the vision, the factors to estimate the risk of a reverseable dangerous pathology.

Conclusion:

Even acute oftalmology is a small part of hour job, 7/10 patients with this problem wil come to us because of the hours, and we will the firt and potental doctor to see this.

This reason is enough to encourage the emergency physician to increase his knowledge in this area and perhaps to create in collaboration with the ophthalmological ward a flow chart to
summarize the relevant questions to estimate the risk of reverseable pathologies.

We see the patient but how well can the patient see? Good question indeed !

#7327 : Contrast induced nephropathy after computer tomography of the pulmonary arteries in emergency settings

Preferred format : ePoster

Authors:

Jevgenijs Kravcuks (1), Olegs Sabelnikovs (2)

1. Emergency department, P.Stradiņš University Hospital, Rīga, LATVIA
2. Department of Intensive Care, P.Stradiņš University Hospital, Rīga, LATVIA

Keywords: Contrast induced nephropathy, pulmonary embolism, tomography

Abstract :

Introduction

Contrast-induced nephropathy (CIN) is defined as iatrogenic deterioration of renal function following intravascular contrast media administration in the absence of another nephrotoxic event. CIN is one of the leading causes of hospital-acquired acute kidney injuries.

Contrast-enhanced computed tomography (CECT) of the pulmonary arteries is one of the most common imaging studies performed in the emergency department to evaluate patients with suspected pulmonary embolism (PE). The aim of this study was to define if CIN followed CTPA.

Methods

We analyzed medical records of patients who received intravenous contrast for CECT in the emergency department (between January 2016 and April 2016). The outcomes measured were as follows: an increase in serum creatinine ≥ 44.2 mkmol/l or ≥ 25% 2 to 7 days after the contrast administration, severe renal failure with or without acute hemodialysis and renal failure as a contributing cause of death.

Results

A total of 137 patients underwent CTPA, with acute PE in 46 patients (33,6 %) and 112 patient being hospitalized after CECT. We analyzed 90 hospitalized patient's medical records and measured post procedural serum creatinine level. Preliminary data shows that the incidence of CIN is 14.4 % (n=13 of 90), including 4 with acute PE. One patient (1.1 %) developed acute renal failure which required acute hemodialysis. 7 patient died and the development of CIN was observed in 3 of deceased patients. CIN developed in 4 patients (9.3 %) with acute PE. Risks factors for CIN including age over 70, anemia, arterial hypertension, coronary artery disease associated with higher CIN development ; whereas other vascular diseases (peripheral, renal or cerebral), congestive heart failure, pre-existing renal disease, diabetes mellitus, the malignancy associated with CIN was not significant.

Discussion/conclusion

The number of CIN incidences is high among emergency department population undergoing CTPA. CIN should be considered before emergency imaging requires intravenous contrast media in patients with suspected PE. Alternative investigation method must be applied when dealing with patients having pre-existing risk factors.

#7328 : Comparison of theoretical clinical approach and validated clinical predictive tools in the diagnose of acute pulmonary thromboembolism

Preferred format : Oral presentation

Authors:

Bruno Sousa dos Santos (1), Ieva Krieva (2), Sandra Seimane (2), Aleksejs Visnakovs (2)

1. Emergency department, Riga Stradins University, Riga, LATVIA
2. Emergency department, Riga East clinical university hospital, Riga, LATVIA

Keywords: Computer Tomography Pulmonary Angiography; Wells Score; clinical theoretical approach; D-dimers

Abstract :

Background / Introduction: Validated clinical predictive tools for acute pulmonary thromboembolism (PTE) have shown their efficacy in estimation pretest probability for patients whom acute PTE is considered. Latest best practice advice (European Society of Cardiology, 2014), (American College of Physicians, 2015), recommend the use of such tools as a main estimation tool for acute PTE. However, some doctors still prefer a clinical theoretical approach to acute PTE as the main strategy, this same approach is used at the emergency department (ED) of Riga East Clinical University Hospital (RECUH).

Objectives: To evaluate the possibility of using recommended validated clinical predictive tools in the diagnosis of acute PTE at ED. To improve patient safety and to save time in diagnosing by avoiding excessive examinations when not required.

Participants and Methods: Retrospective analysis of 220 cases, when Computer Tomography Pulmonary Angiography (CTPA) performed to suspected acute PTE at the ED during one year (2014). Calculation of Wells' score risk groups, for each case. For each risk level D-dimers and CTPA results were analyzed to estimate the number of possible unnecessary CTPA and/or D-dimers.

Results: From 220 CTPA cases, 100 (45,5%) were male and 120 (54,5%) female patients. Mean age 66.20 for male and 77.18 for female. 149 (67,7%) cases were PTE negative and 71 (32,3%) – positive. Wells' risk scoring showed 22 (10 %) low risk cases, 139 (63,2%) intermediate risk cases and 59 (26,8%) high risk cases. From 22 low risk patients 1 was PTE positive and 21 – negative, D-dimers were elevated in 21 out of 22 low risk patients. From 139 intermediate risk patients 103 (74,1%) were PTE negative (with elevated D-dimers in 96 (93,2%) cases) and 36 (25,9%) positive (all with elevated D-dimers). From 59 high risk patients 25 (42,4%) were PTE negative and 34 (57,6%) positive (all with elevated D-dimers). From 71 PTE positive cases 68 (95,8%) were with elevated D-dimers (in 3 cases D-dimers were non-taken). From overall 149 (67.7%) negative to PTE with d-dimers elevated in 140 (94.0%) and non-elevated in 4 (2.7%), non-taken in 5 (3.4%) cases.

Conclusion: For low and intermediate risk groups if "Wells' score" was used the non-elevated D-dimers should not undergo CTPA. Negative D-dimers match the international data supporting a predictive negative CTPA (NICE, 2015). In our data all CTPA done within high risk group the D-dimers where hundred per cent elevated, but D-dimers elevated do not predict a positive CTPA (P = 0.630). Recommendation for use of validated clinical predictive tools in estimation pretest probability for patients whom acute PTE is considered.

#7329 : A Case of Rheumatoid Arthritis and Multiple Myeloma

Preferred format : ePoster

Authors:

Rushabh Shah (1), Raajul Shah (1)

1. , Milton Keynes University Hospital, London, UK

Keywords: Rheumatoid Arthritis, Multiple Myeloma

Abstract :

Clinical case report

A 77-year-old female with sero-positive erosive rheumatoid arthritis (RA) presented with a one month history of fatigue, night sweats, nocturnal pruritis and spontaneous bruising with bleeding gums. She denied weight loss, fever, epistaxis, haemoptysis, haematuria or recent infection. She was diagnosed with RA in 1985, on treatment with Methotrexate and Etanercept and her RA was in remission with no swollen and no tender joints.

On examination, she had a non-blanching, petechial, non-palpable, pruritic rash affecting her face and neck. There was no hepatosplenomegaly or lymphadenopathy. Vital signs and general examination were unremarkable.

Her routine bloods showed a normocytic anaemia (Hb 92g/l) and a new acute kidney injury (creatinine 249 µmol/L). White cell count, platelets and calcium were normal. Her CRP was normal but ESR had risen to 55mm/hour. She had significant proteinurea of 3g/l with no microscopic haematuria. Further blood tests revealed normal haematinics, fibrinogen and complement levels. An ultrasound of the abdomen was normal.

History and investigation suggested a paraprotenemia as the differential diagnosis. A myeloma screen identified an IGA lambda paraproteinemia with immunoparesis and raised B_2 microglobulin. A skeletal survey was normal. She had a bone marrow trephine biopsy which demonstrated lambda restricted neoplastic cells consistent with a diagnosis of multiple myeloma. She was diagnosed with multiple myeloma and a myeloma kidney and started on dexamethasone, allopurinol and bortezomib. She responded well and her renal function recovered fully.

Discussion

It is well recognised that patients with RA are at increased risk of developing lymphoma. So does RA increase the risk of developing multiple myeloma? A meta-analysis of 18 studies has shown that RA does not increase the risk of developing Multiple Myeloma. Furthermore, is the RA treatment including biologic therapy a risk for multiple myeloma? A meta-analysis of 63 randomised controlled trials showed that the use of biologics does not increase the risk of malignancy.

Conclusion and learning points

This case demonstrates that we should be cautious of ascribing symptoms to the chronic inflammatory disease as it is easy to attribute symptoms of lethargy and anaemia to a flare of the RA. Listening to the patient is of paramount importance and this lady was adamant that her symptoms were not due to a flare of the arthritis but a new condition. Pattern recognition is important as the new acute kidney injury and the lack of RA disease activity suggested a new disease process was occuring and prompted further investigation.

This case illustrates that diagnosis of myeloma is not straightforward especially on a background of chronic inflammatory disease. The new acute kidney injury suggested a new pathological process and a diagnosis of multiple myeloma was made with the patient making a good recovery.

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#7330 : Successful Medical Treatment of May-Thurner Syndrome

Preferred format : ePoster

Authors:

Hsu Chi-Feng (1), Tsai Ming-Jen (1)

1. Department of Emergency Medicine, Ditmanson Medical Foundation Chia-Yi Christian Hospital, Chia-Yi City, TAIWAN

Keywords: May-Thurner Syndrome, Medical treatment

Abstract :

May-Thurner Syndrome is a rare but prevalent condition in post-mortem examinations. It is characterized by an anatomical variable condition resulting in compression of the left common iliac vein by the right common iliac artery and underlying spine, which lead to the development of left deep vein thrombosis (DVT). The acute manifestation of DVT included swelling and pain over the affected limb. It has been associated with prolonged immobilization, dehydration, contractive therapy, surgical procedure for abdominal, gynecological, or spinal pathology, multiple pregnancy, and post-partum period.
Pharmacological treatment, endovascular intervention, and surgical management had all been proposed as treatment, but haven't had consensus at the current time. Also, definitive treatment should be tailored in each patient as their condition varies.

Here we described a 45-year old lady, presented to our emergency department with the chief complaint of swelling and pain of left calf for 2 days. She had a huge uterine myoma with hypermenorrhea for couple of years, and been given Diane (an oral contraceptive, Cyproterone) by gynecologist in recent 16 days. She denied previous medical disease, recent trauma, recent abdominal operation, nor long term immobilization. A physical examination revealed swollen and painful left calf. A blood test revealed normal cell count and coagulation profile, but significantly elevated D-dimer (>10000). Following left lower limb untrasonography revealed left femoral-popliteal DVT with non-compressible vein, which then confirmed by contrast-enhanced computed-tomography(CT) venography. The CT scan also revealed compression of left common iliac vein by the huge uterine myoma and right common iliac artery. A variant of May-Thurner syndrome was impressed. After admitted, thrombolytic therapy with urokinase and anticoagulant were initiated. Her condition improved rapidly and was discharged uneventfully 3 days later. She was refered to a gynecologist for surgical evaluation of the huge uterine myoma, because the recurrence of DVT may happen if the anatomical lesion was not fixed.

Physician should be familiar with the May-Thurner syndrome as an etiology of unilateral DVT. The recurrence of thrombosis, pulmonary embolism, and postthrombotic syndrome may happen in this disease which may lead to significant morbidity and mortality. The key to successful treatment in May-Thurner syndrome related DVT is to fix the anatomical lesion along with removal of the clot and use of anticoagulation.

#7331 : Reliance on Self-reporting of Fever in Emergency Patients Might Miss Severe Illness

Preferred format : ePoster

Authors:

Alexandra Malinovska (1), Christian H. Nickel (1), Roland Bingisser (1)

1. Emergency Department, University Hospital Basel, Basel, SWITZERLAND

Keywords: Fever, Subjective Fever, Risk stratification, In-hospital Mortality

Abstract :

Introduction:

The patients' medical history, physical examination and vital signs are essential components in the evaluation of emergency patients. However, subjective feeling and self-assessment of patients might differ from the actual health condition. One important example is self-report of fever. Some patients might be feeling feverish, but their temperature is not altered. Conversely, patients not complaining about fever can have an altered temperature.

Studies showed a good accuracy of the subjective feeling towards the actual health condition. Yet, the study population was consisting of young adults with a low rate of comorbidities. Therefore, we set out to determine the accuracy of fever history in an all-comers emergency department (ED) population. Further, we compared outcome of patients who complained about fever with and without altered temperature and patients who denied having fever with and without altered temperature.

Methods:

We acquired data for this prospective consecutive study during 6 weeks at the ED of the University Hospital Basel. All patients were interviewed by medical students, who received training in obtaining systematic histories by the staff physicians of the ED. Students filled in a comprehensive questionnaire regarding the patients' symptoms and vital sign measurements upon arrival. Altered ear temperature was defined as greater than 38.3°C or lower than 36.0°C according to SIRS criteria. Information on age and outcomes were obtained from the hospital's database.

Results:

During 6 weeks, 5634 patients presented to the ED, 4654 patients were enrolled in the study, and in 2348 cases patient's questionnaire and temperature measurement was fully recorded. 342 of patients reported suffering from fever. In 140 of these patients an altered temperature was detected. Patients reporting fever with an altered temperature were older than patients reporting fever without altered temperature (median age of 54 years vs. 45.8 years respectively). The sensitivity of self-reported fever was 43.6% (95% Confidence Intervall (CI): 38.1% – 49.2%). In the group of patients (2006) not reporting fever, altered temperature could be detected in 181 patients. These patients had a median age of 68 years. In 1825 patients, who "truly" denied fever, median age was 55 years. The negative predictive value was 90.9% (95%CI: 89.6%-92.2%). Patients not reporting fever while having an altered temperature had the highest rate of intensive care unit transfers and in-hospital mortality.

Conclusion:

We found a surprisingly low sensitivity of detecting altered temperature in self-reported fever in our cohort. Despite the good negative predictive value, the patient´s denial could lead to missing severe illness.

#7332 : The evaluation of pain reduction and nerve block efficacy in extremities with injury among patients in a teaching hospital emergency department

Preferred format : Oral presentation

Authors:

Amir Nejati (1), Leili Behrooz (1), Seyed Hossein Hosseini Davarani (1)

1. Emergency Department, Tehran University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: pain management, nerve block, ultrasound guided

Abstract :

Background:

Pain is one of the most common complaints in the emergency room (ER) but it is poorly controlled. In addition to patients enter in pain , many procedures that take place in the ER need local anesthesia, sedation and tranquilizers to achieve patient's pacification and cooperation.

Considering the importance of pain for patients and the high prevalence of pain in the ER makes it necessary to work more on this issue. The purpose of this study is to investigate patient's as well as physician's satisfaction from nerve blocks as a pain management technique in the ER.

Methods:

Study conducted at the biggest teaching hospital around the country which contains more than 800 beds with emergency department annual entrance of 45000. Forty-six patients who referred to the emergency room with injury in upper or lower extremities were enrolled in the study. Patients received either femoral, axillary or sciatic nerve block based on the site of their injury. Ultrasound-guided nerve block performed by emergency physicians with 1.5 mg per kg of Bupivacaine plus distilled water. Patients were asked about their level of pain before (NRS1) and after (NRS2) receiving the nerve block based on numerical rating scale. The difference between NRS2 and NRS1 was calculated (NRS3). Patients as well as the physicians were asked about their satisfaction from the nerve block in 5-level Likert scale. All patients were monitored for 2 hours afterwards for any complications. Patients' blood pressures and pulse rates were measured before and after the nerve block for possible changes.

Results:

High levels of satisfaction were seen in both patients and physicians. There was a significant decrease in NRS after the nerve block. Mean NRS1 was decreased from 8.066 to 2.044 in NRS2 after the nerve block. 87% of the patients and 83.3% of the physicians were satisfied and highly satisfied from the procedure and its effects. There was a significant relationship between NRS3 and patients' satisfaction as well as physician's satisfaction. There was a significant statistical reduction in both blood pressure and pulse rate after the nerve block, however it wasn`t clinically important.

Conclusion:

Considering the fact that both patients and physicians were appropriately satisfied with the results and also the fair reduction in patients' pain after the nerve block, it can be concluded that Ultra sound-guided nerve block has proved to be an effective and safe method for analgesia in the ER.

#7333 : The Nomogram is a pre-CT scan clinical tool to predict and stratify the individual risk of intracranial lesion after Minor Head Trauma

Preferred format : Oral presentation

Authors:

Gianni Turcato (1), Antonio Bonora (1), Alice Dilda (1), Gabriele Taioli (1), Massimo Zannoni (1), Domenico Veraldi (1), Giorgio Ricci (1), Mariano Belloni (1), Claudio Pistorelli (1), Francesco Buonocore (1)

1. Emergency and Intensive Care Department, University Hospital of Verona, Italy, Verona, ITALY

Keywords: Minor Head Trauma, Predictive tool, CT-Scan, Intracranial post-traumatic lesion.

Abstract :

Background: *The management of patients observed in the Emergency Department for minor head trauma (MHT) remains controversial. Up to now all the main decision rules, NOC and CCHR, are focused to identify the risk of intracranial lesions suitable for neurosurgery in selected patients, those with loss of consciousness and/or amnesia. As a consequence, a clinical tool able to stratify for every patient the individual risk of all intracranial lesions, either neurosurgical or not, still lacks.*

Aim: *The aim of our study was to create a predictive tool able to estimate the risk of intracranial lesion after MHT: the nomogram. This would be a fast and reliable tool to stratify the individual likelihood of traumatic sequences in every patient observed in Emergency Department.*

Methods: *We considered 3538 patients consecutively observed for MHT and the submitted to CT scan in the Emergency Department of the University Hospital of Verona (Italy) between January 2014 and June 2015. All baseline features, common risk factors and CT findings of every patient were collected and then registered. First step was directed toward the construction of nomogram. All the risk factors associated in the univariate analysis with the outcome (CT scan positive) were candidates for the multivariate analysis. The final model was then used to explain the nomogram. Second step was the validation of the nomogram on an independent dataset, after discrimination (C-index, ROC curve) and calibration (calibration plot) were verified.*

Results: *The eleven risk factors significantly associated with all intracranial lesion in the multivariate model resulted to be: suspect of skull fracture (OR 69.56 IC 95% 19.88 – 243.35), dangerous mechanism (OR 4.61 IC 95% 3.04 – 7.00), vomiting (OR 3.97 IC 95% 2.35 – 6.71), GCS < 15 (OR 5.85 IC 95% 3.83 – 8.94), post-traumatic LOC (OR 3.23 IC 95% 2.09 – 4.96), previous neurosurgery (OR 3.79 IC 95% 1.61 – 8.92), focal neurological deficit (OR 5.55 IC 95% 2.48 – 12.45), amnesia (OR 2.25 IC 95% 1.56 – 3.48), age over 65 years (OR 2.26 IC 95% 1.45 – 3.50), visible signs of trauma (OR 1.72 IC 95% 1.17 – 2.52), antiplatelet therapy (OR 1.93 IC 95% 1.29 – 2.89). The nomogram gave each risk factor a likelihood rate of intracranial lesion and the individual risk level was defined by the amount of risk factors reported in every patient. The predictions of the nomogram appeared to be accurate and to have good discriminatory abilities, since it generated an area under ROC curve of 0.85. As matter of fact, the nomogram achieved a high predictive negative value (0.96) in low risk patients (< 5%), while high specificity (0.92) in high risk ones (> 20%).*

Conclusions: *Risk factors can be combined into risk profile to predict the likelihood of traumatic sequences. This predictive tool, the nomogram, can be used to stratify all the minor head trauma patients according to a growing risk of intracranial lesions.*

#7334 : Validation of BAP-65 score for prediction of in-hospital death or use of mechanical ventilation in patients presenting to the emergency department with acute exacerbations of COPD: a retrospective multi-center study from the SIMEU study group.

Preferred format : Oral presentation

Authors:

Federico Germini (1), Giacomo Veronese (2), Giulia Maria Azin (2), Massimo Zacchino (2), Maura Marcucci (3), Daniele Coen (4), Andrea Fabbri (5)

1. Geriatric Unit, Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico, Milano, ITALY
2. Department of Emergency Medicine, ASST Grande Ospedale Metropolitano Niguarda, Milano, ITALY
3. Department of Clinical Sciences and Community Health, University of Milan, Milano, ITALY
4. Department of Emergency Medicine, Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico, Milano, ITALY
5. Department of Emergency Medicine, Ospedale Morgagni-Pierantoni, Forlì, ITALY

Keywords: COPD, acute exacerbation, BAP-65 score, validation, emergency department

Abstract :

Background Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) require frequent hospitalization, may necessitate mechanical ventilation (MV) and are associated with a remarkable in-hospital mortality. The BAP-65 score is based on information easily available (elevated blood urea nitrogen [BUN], altered mental status, pulse > 109 beats/min, age > 65 years), and may serve clinicians as a simple risk-stratification tool. We aimed to describe the characteristics of patients attending EDs for an AECOPD, the management of events and the final outcome. We further validated the BAP-65 ability to predict in-hospital death or the need for mechanical ventilation (MV) in a large cohort of AECOPD patients admitted to the ED.

Methods We report the preliminary results of a retrospective analysis of data from 13 Italian EDs in a 12-month period (January-December 2014). Patients aged ≥ 40 years presenting to the ED with either a principal diagnosis of AECOPD or acute respiratory failure with a secondary diagnosis of AECOPD were included in the study. Information on patient demographics, clinical characteristics, including chronic COPD-related treatment, comorbidity burden according to the Charlson Comorbidity Index (CCI), presenting symptoms, BUN level, and ED management was collected. Disposition following ED admission was retrieved. In-hospital mortality or the need for MV served as composite primary outcome. Association between a BAP-65 and the occurrence of composite outcome was investigated through univariate and multivariate logistic regression. We assessed the discrimination of BAP-65 via the area under the receiver operating characteristic curve (AUROC) and the prognostic performance of a BAP-65 score ≥ 4 for the primary outcome.

Results A total of 2098 patients were included in the study; 789 (37.6%) were female, mean age was 74±15 years. Comorbidity burden was low (CCI 0) in 623 (29.7%) cases, moderate (CCI 1-2) in 909 (43.3%), and severe (CCI ≥3) in 566 (26.9%) patients. Almost half cases (n = 1100, 52.7%) required the intervention of the emergency ambulance services. Following the ED visit, 621 cases (29.6%) were sent home; 153 cases (7.3%) received a short-term observation; 1172 (55.9%) were admitted to hospital wards. In-hospital death occurred in 74 patients (3.5%), MV was deemed necessary in 27 (1.3%) cases. Five centres (680 patients) were not able to provide data on BUN and were excluded from the validation analysis. A total of 273 (19.2%) patients had a BAP-65 score ≥ 4. The multivariable analysis showed a significant association between the BAP-65 score and the primary outcome (OR 1.65, 95% CI 1.08-2.53). The AUROC for BAP-65 was 0.67 (95 % CI 0.60-0.75). The sensitivity of BAP-65 score ≥ 4 to predict the composite outcome was 92.5% (95% CI 91.1-93.8), the specificity was 21.6% (95% CI 19.5-23.8)., the positive predictive value was 4.4% (95% CI 3.3-5.4), and the negative predictive value was 98.7 (95% CI 98.1-99.3).

Conclusion: We confirmed BAP-65 score to have high sensitivity and negative predictive value for short-term mortality or use of MV in patients with AECOPD. Our findings suggest that it can be safely used as triage instrument at ED to identify low risk patients.

#7335 : Treatment of skin and soft tissue infections on a Belgian emergency department: a retrospective analysis of 159 patients

Preferred format : ePoster

Authors:

Ruben De Vos (1), Marie De Leeuw (1), Marc Gillis (2)

1. , none, Leuven, BELGIUM
2. , none, Bonheiden, BELGIUM

Abstract :

BACKGROUND: Skin and soft tissue infections (SSTI) are among the most commonly seen infections on the emergency department (ED), with an increasing incidence. European and more specific Belgian treatment guidelines are not available although they could improve patient outcome and reduce cost. We performed a retrospective analysis of patients who were treated for a SSTI in a Belgian ED and developed a protocol for our emergency department based on the available literature.

SETTING: ED of an inner city teaching hospital (Bonheiden, Belgium).

METHODS: We performed a retrospective case series analysis of patients who presented at the ED from June 2013 to March 2016 with the tentative diagnosis of SSTI. We investigated if these patients indeed had a SSTI, if they were hospitalized or received outpatient treatment, which antibiotics and/or local treatment were used and if follow-up was provided either by general practitioner or on the ED. Subsequently we performed an extensive PubMed literature search. Based on the available literature we developed our protocol for the management of SSTI's on the ED.

RESULTS: 159 patients with the tentative diagnosis of a SSTI were included (76 males, 83 females, all adults). Further examination showed that 136 patients (86%) indeed had a SSTI. Of these, 99 (73%) were hospitalized and 37 (27%) received outpatient treatment. The most frequently used antibiotic in both groups was amoxicillin/clavulanate (51% in the outpatient group and 43% in the hospitalized group). In addition, clindamycin was more commonly used in the hospitalized group opposed to moxifloxacin in the outpatient setting. In the outpatient group follow-up was provided for 18 patients (49%). The mean time to follow-up by general practitioner was 78 hours (n = 14). On the ED all patients were reevaluated within 24 hours (n = 4). Local treatment of the infection (silver-containing foam dressing, polyvidone-jodium, silver sulfadiazine or chlorhexidine) was provided for 38% of patients in the outpatient setting.

Based on the available evidence in literature we developed a protocol for the treatment of SSTI's on the ED. Key fact in this protocol is the identification of complicating factors both patient related as well as linked to the aspect of the skin infection.

CONCLUSION: Our retrospective analysis showed major interindividual variation in treatment strategies for SSTI's on the ED. These results confirm the need for a treatment algorithm. In our opinion the proposed protocol can improve patient outcome, lead to more rational use of antibiotics, less hospitalization and reduction of costs. The implementation and hospital specific use of this protocol can be subject of further prospective studies.

#7336 : Life threatening slow and fast heart rate disturbances in prehospital environment

Preferred format : ePoster

Authors:

Andreescu Gabriel (1), Wandschneider Alexander Josef (1), Taran Ana Daniela (1)

1. Emergency Department, UPU-SMURD Sibiu, Sibiu, ROMANIA

Keywords: heart rate,arrhythmias,tachycardia,bradycardia

Abstract :

Life threatening slow and fast heart rate disturbances in prehospital environment

Author: Andreescu Gabriel (Paramedic, Medical Student)

Co-Author: Wandschneider Josef Alexander (Paramedic, Medical Student)

Coordinator: Dr. Taran Ana Daniela (Specialist Emergency Medicine)

Key words: heart rate, arrhythmias, tachycardia, bradycardia

Background:

Rhythm disturbances represented by paroxistic tachycardia and extreme bradycardia, are amongst top causes of circulatory shock and subsequently leading to sudden cardiac death, thereby taking an enormous role in the cases of emergency medicine. Our study tries to collect and analyse data from actual cases encountered by the organisation SMURD-TIM Sibiu (Mobile Emergency Service for Resuscitation and Extraction Intensive Care Unit). With this data in mind we try to optimise current treatment and assessment of these potential lethal rhythms.

Material and Method:

This is a retrospective observational study conducted on a group of 366 patients located on Sibiu county area, who needed emergency assistance at various locations, for treatment of slow and fast arrhythmias during the time interval of 01.01.2013 – 31.12.2015.

Results:

From a total of 366 patients assisted by SMURD-TIM Sibiu 174 were men (48%) and 192 women (52%).

Based on living environment, patient are distributed: 284 (77%) in urban areas and 82 (23%) in rural areas.

Depending on fast or slow heart rhythm, there were 152 cases (41%) of extreme bradycardias with heart rate under 40 beats per minute and 214 cases (59%) of paroxistic tachycardia with heart rate above 140 beats per minute.

Classified on age interval we obtained the following results: 48 (13%) patients were between the age 13 to 20 years, 16 (5%) between 21 to 40 years, 80 (22%) between 41 to 60 years and 222 (60%) above 60 years.

The main rhythm disturbances encountered by our specialists were paroxistic supraventricular tachycardia and atrial fibrillation with high ventricular response amongst other rapid rate arrhythmias.

For bradycardic rhythm disturbances, the top pathologies were third-degree atrioventricular block and atrial fibrillation with slow ventricular response alongside other slow rate arrhythmias.

Conclusions:

We observe that women are more susceptible to heart arrhythmias then men.

People from urban areas tend to solicit medical assistance more then those from rural areas.

We have a predominance of fast heart rate arrhythmias than slow heart rate arrhythmias.

Rapid and slow heart rate arrhythmias tend to appear at very young or old adults, with only a few cases of young adults between 21 an 40 years.

From our results we infer that a better patient screening of patients with potential hearth risks conducted by general practitioner and referring them to a cardiology consult, alongside with use of heart rate monitoring gadgets (bracelets) would result in decreased risk of developing life threatening situation represented by sudden cardiac death and also a increase in patients reassurance.

#7338 : Social network analysis of international collaboration in emergency medicine researches

Preferred format : Oral presentation

Authors:

Ching-Hsing Lee (1)

1. Attending Physician, Chang-Gung Memorial Hospital, Taipei, TAIWAN

Keywords: Social network analysis, international collaboration, academic, publication

Abstract :

Background:
Diversity and collaboration facilitate the development of human society. The effects of national diversity and international collaboration on the impact of emergency medicine (EM) researches are not studied.

Objectives:
This study aims to evaluate the effect of international collaboration on EM researches impact and determine the hub countries of international collaboration by social network analysis (SNA).

Methods:
Design: This study was an observational study.
Setting: All of the data were collected from SciVerse Scopus database.
Type of participants: All of the articles published in journals of EM category (2013 Journal Citation Reports) before 2015 were enrolled.
Data Collection: A computerized literature search was conducted in March, 2015. We collected data on publications including publication year, author's affiliated country, document type, and cited times for further analyze. The publication's origination was classified according to the first author's nationality. The international collaborative research was defined as the authors were affiliated with two or more countries.
Data Analysis: The demographic data were analyzed by descriptive statistics. Linear regression was used for trend analysis. The cited times difference between single nation and international collaborative publications were analyzed by Wilcoxon rank-sum test. NodeXL were used to calculate SNA metrics of international collaborative publications (In-degree: co-author numbers; Out-degree: leading author numbers; Betweenness centrality: connectivity of hub country; Eigenvector centrality: ranking of linkage to influential hub countries) and create visualization graphs.

Results:
A total of 94925 publications were enrolled and 4480 (4.72%) were international collaborative publications. The number of international collaborative publications increase from 0 in 1961 to 511 (8.92%) out of 5734 in 2014. The trends of international collaborative publications and ratio of international collaborative publications to all EM publications from 1961 to 2014 were 7.04, and 0.002, respectively (all $p<0.001$). The average cited times of single nation and international collaborative publications were 9.61 and 12.42 ($p<0.001$). The United States, United Kingdom, Canada, Germany, and Australia were leading five countries in international collaboration. The social network metrics of leading ten countries in international collaboration were in Table.

Conclusions:
International collaboration in EM researches was increasing and the impact of international collaborative researches was greater than single nation researches from the perspective of cited times. The leading countries were the hubs of international collaborative EM researches which were in North America and Europe. From the perspectives of EM journal editors, accepting more international collaborative publications may enhance the academic influence of journals. From the perspectives of international EM, implement strategies that strengthening international collaboration in EM researches may enhance global academic excellence in EM, especially countries outside the hubs. Further analysis of the characteristic of international collaborative publications such as funding support, leading authors' past academic contribution could identify factors that enhance researches' impact and facilitate EM specialty development.

#7339 : Effect of intranasal ketamine on patients with musculoskeletal pain, a double blind randomized clinical trial

Preferred format : ePoster

Authors:

Amir Nejati (1), Seyed Hossein Hosseini Davarani (1), Zohreh Feili (2)

1. Emergency Department, Tehran University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Emergency Department, Mashhad University of Medical science, Mashhad, IRAN, ISLAMIC REPUBLIC

Keywords: pin management, musculoskeletal pain, intranasal ketamine

Abstract :

Background Ketamine was developed in the 1960s as an anesthetic agent, and is given intravenously or intramuscularly for procedural sedation and anesthesia especially in children. It is also used as an adjuvant to opioids in the treatment of none-acute refractory pain. Recently ketamine uses via other routs, such as intranasal.

Objectives The main goal of this study was determining the pain reducing effect of intranasal ketamine on musculoskeletal injuries at emergency department.

Methods A prospective double-blind randomized clinical trial was performed on alert hemodynamically stable patients arriving at the ED of a teaching hospital during March and August 2013. The subjects had musculoskeletal pain with NRS ≥4 in extremities, limbs, back, and hips. The patients were divided into two groups; the ketamine group received 25mg intranasal spray of ketamine, while distilled water was sprayed in the nasal cavity of the control group. Also, to alleviate the pain of all patients the physician administered a 325 mg acetaminophen tablet to every patient. Then, the NRS would be assessed along with reporting any complication or side effect during consecutive 15-minutes time periods until 45 min after the initial administration of the ketamine or placebo. Vital signs and O_2 saturations of patients were measured every 15 minutes.

Results One hundred and thirty three patients passed the inclusion criteria and 124 remained after excluding base on exclusion criteria. Four of them did not sign written consent form and finally one hundred and twenty subjects were enrolled in the study, 60 in each group. 84 of them were female. There was a significant difference between the pain score of the ketamine and control groups (3.37±1.87 vs. 0.85±1.01). Both groups experienced equal complications such as nausea and vomiting, which have controlled spontaneously.

Conclusion Intranasal ketamine spray is an effective agent in reducing musculoskeletal pain among patients without serious underlying illness. Although the drug is moderately efficient, complications are negligible.

#7340 : Is there a correlation between qSOFA criteria positive patients and microbiology-positive sepsis?

Preferred format : ePoster

Authors:

Linas Darginavicius (1), Kestutis Stasaitis (2), Aida Mankute (2), Nedas Jasinskas (2)

1. , None, Kauno r., LITHUANIA
2. , None, Kaunas, LITHUANIA

Keywords: Sepsis, qSOFA, quick SOFA

Abstract :

Background & objectives

Early sepsis diagnostics is still challenging in emergency department due to variety of symptoms presented. What is more, sepsis rates are still increasing and mortality rates remain significant despite optimal care. Many sepsis scores were created to evaluate risk for sepsis mortality, but recently qSOFA score was released for evaluating risk for mortality due to sepsis without laboratory findings. This study aim was to retrospectively evaluate correlation between microbiologically positive sepsis patients and their qSOFA validity on arrival to emergency department.

Methods

A retrospective observational study was performed in adult emergency department in tertiary, university-affiliated hospital. Patients were included in study if microbiological test and first antibiotic dose were initiated in emergency department for suspected sepsis and quick SOFA score was calculated. Exclusion criteria was trauma patients and departure to other hospitals.

Results

Much more patients were suspected for having a sepsis by qSOFA criteria based protocol. Further study results will be presented.

Conclusions

qSOFA is much promising score with ability not only recognising high risk mortality sepsis patients in hospital but also in emergency department or even pre-hospitaly without using laboratory tests. This study was created for accepting or refusing qSOFA criteria in emergency department, especially in poorly finansed emergency deprtments.

#7341 : Hemodynamic evaluation in patients with undifferentiated shock in the Emergency Department : validation of a simple goal-directed ultrasound based protocol.

Preferred format : Oral presentation

Authors:

Philippe Le Conte (1), Pierre Leroux (1), Idriss Arnaudet (1), Philippe Pes (1), Frédéric Vignaud (1), Emmanuel Montassier (1)

1. Urgences, Hôtel Dieu, Nantes, FRANCE

Keywords: shock, lung ultrasound, focused echocardioraphy

Abstract :

Introduction

Shock state (SS) is a life-threatening condition which frequently occurs in Emergency Medicine. It requires a prompt treatment based on an accurate diagnosis. Usual strategy including clinical exam, biological and radiology exams is frequently conclusiveness. A treatment as a fluid loading can be life-saving in a case and deleterious in another.

The goal of this study was to validate a protocol based on B-mode echocardiographic views and lung ultrasound (EPU).

Patients and methods

Inclusion criteria

Age > 18 years

Shock defined by systolic arterial pressure < 100 mm Hg

exclusion criteria

clinically evident hemorrhagic or anaphylactic shock

Acute coronary syndrome

Documented end of life

Methods

EPU included the four usual cardiac views and lung ultrasound. Possible treatments were : fluid loading (FL), inotropic agents (IA), thrombolysis (TH), pericardiocentesis (PE) and unknown. Associated diagnosis were: hypovolemic (including early severe sepsis) (HV), cardiogenic(CA), cardiac tamponnade (CT), right ventricle overload (RV) and unknown (UN).

This non interventionist study was approved by the Ethics committee. After informed consent and clinical exam, the EP stated the diagnosis hypothesis (H1), the treatment (T1) without applying it and the certainty (C1). He realized the EPU and stated again the diagnosis hypothesis (H2), treatment (T2) and certainty (C2). Duration of realization and difficulty evaluated on a scale from 1 (very difficult) to 10 (very easy) were recorded. T2 was applied to the patient's care. Reference diagnosis (H3) and treatment (T3) were determined by a 3 experts panel with the whole patient's file.

Primary objective: concordance between T1, T2 and T3

Secondary objectives :

Concordance between H1, H2 and H3

Analyze of duration, difficulty and certainty

The required number of subjects for a concordance of 0.6 between T1 and T3 and 0.8 between T2 and T3 with alpha risk 0.05 and beta 0.10 was 44.

Statistical method

Values stored in Microsoft Access were analyzed with PASW. Numerical data expressed as mean + SD were compared by a Student t test. Categorical data by a Khi2 test. Concordances were analyzed using Kappa coefficient. P< 0.05 was considered significant.

Results

50 patients were included, 22 women and 28 men, aged 73+12 years. Final treatments were 37 FL (74%), 5 TH (10%), 4 IN (8%), 3 PE (6%) and 1 UN. Corresponding diagnosis were 37 HV, 5 RV, 4 CA, 3 CT and 1 UN. T1- T3 and T2-T3 Kappa were 0,17 [0.05-0.28] and 0.95 [0.90-0.99] respectively, $p < 10^{-4}$. H1-H3 and H2-H3 were 0.35 [0.25-0.44] and 0.95 [0.90-0.99] respectively, $p <10^{-4}$. C1 and C2 were 3.6+2.3 and 9.2+1.1

respectively, $p < 10^{-4}$. Duration was 14+5 min and difficulty 6.4+1.9. Appropriate treatments were 62% before EPU and 96% after, $p = 8\ 10^{-5}$.

Discussion

Concordances were bad (T1-T3) and poor (H1-H3) for the usual approach while they were excellent for the EPU (T2-T3) and (H2-H3). Almost 40% of intentions of treatment were inappropriate after the usual approach. Face to a shock, a simple visual ultrasound exam enhances the diagnosis procedure and allows to determine the right treatment in a very short delay.

#7342 : Emergency Physician's perception on the introduction of Video-Laryngoscope as a training tool for direct laryngoscopy

Preferred format : ePoster

Authors:

Zenab Abdel Rahman (1), Alhady Yusof (2)

1. Trauma/Critical Care Fellow, Hamad Medical Corporation, Doha, QATAR
2. Emergency Medicine-Intensive care Medicine, Hamad Medical Corporation, Doha, QATAR

Keywords: Video-Laryngoscope-Endotracheal intubation-Direct laryngoscope-Resident supervision

Abstract :

Emergency Physician's perception on the introduction of Video-Laryngoscope as a training tool for direct laryngoscopy.

An educational initiative to improve patient safety and trainee supervision

Abstract

Background

Conventional endotracheal intubation (ETI) is challenging and requires high level of individual skills and experience. At the same time we are also committed to provide ETI training for Emergency Medicine Residents (EMR). Video laryngoscope (VDL) like the C-MAC is designed to have a similar blade to the normal Macintosh blades (size 3 and 4). It has a bright light source and blade thickness that allow direct laryngoscopy (DL) and hence ETI under direct vision. We organised several sessions of ETI training using an intubating manikin. We found that the view from the C-MAC screen captured by the C-MAC video camera is the same view described by the operator doing the DL.

There were enough consistencies reported during several training sessions that we decided to use the C-MAC for DL in real cases of ETI in the resuscitation room. We have done several 'live' cases and all intubations successfully as DL, with the added benefit of 'video supervision' and 'video confirmation' of the tube positioning. We also used the video recording and playback functions to give feedback to the EMR at the end of the procedure. After 6 months of introduction in our Emergency Department (ED), we conducted a "physician survey" to broadly assess their opinion in using VDL as a ***training tool for DL.***

Method

In this educational poster, we describe a step-by-step laryngoscopic picture guide and ETI view seen on the C-MAC screen during one of our airway training sessions with the manikin. We also include several views of possible poor techniques in laryngoscopy that may result in a failed intubation attempt. We conducted our survey via an online survey tool. The respondents of our survey were from all groups of Emergency Physicians: 14% residents, 20% Fellows, 41% specialists, 24% consultants.

Survey Results

These are the subjective perception of Emergency Physicians regarding the introduction of C-MAC VDL in our clinical practice

1- **Feasibility**, **usefulness** & **improving performance: 34%** of respondents agreed for **Excellent**, **45% good, 16% Average**, **4% Fair.**

2- Improvement of **quality** and **safety** to intubation by ***trainee:*** **47%** strongly agreed, **43%** agreed, **3%** disagreed, and **6%** strongly disagreed.

3- **Added value** of using **VDL** in **training:**

(a) reassurance to supervisor **67%**

(b) reassurance to operator **60%**

(c) ability to save/review/live pictures **78%**

Discussion

We discuss the potential patient safety and quality benefits in conventional ETI using C-MAC VDL, as well as its utilization in training program of Emergency Medicine.

Conclusion

We conclude that promoting the use of this technique in ED, especially for ETI undertaken by a trainee clearly gives the physician perception of improved patient safety and trainee direct supervision.

#7343 : Evaluation of a diagnosis protocol in elderly patients with acute respiratory failure using cardiac and lung ultrasound : prospective non interventionist study

Preferred format : Oral presentation

Authors:

Philippe Le Conte (1), François Javaudin (1), Emmanuel Montassier (1), Idriss Arnaudet (1), Philippe Pes (1), Laure de Decker (2)

1. Urgences, Hôtel Dieu, Nantes, FRANCE
2. Pôle de Gériatrie, Hôtel Dieu, Nantes, FRANCE

Keywords: acute respiratory failure, elderly, lung ultrasound, focused echocardiography

Abstract :

Introduction

Acute respiratory failure (ARF) in elderly patients is a common situation in Emergency Medicine. Usual diagnosis procedure (UDP) with clinical exam, chest X ray and biological samples is frequently inconclusive. Vital prognosis is worsened in case of bad initial diagnosis. The goal of this study was to investigate the performances of a echographic diagnosis procedure (EDP) including cardiac views and lung ultrasound performed by an emergency physician (EP).

Patients and methods

Inclusion criteria

age > 75 years

ARF defined by respiratory rate > 25/min and SpO2 < 90% in room air

Exclusion criteria

indication to immediate tracheal intubation

documented end of life

more than one reference diagnosis

Method

EDP included the four usual cardiac views, mitral and tissular Doppler and lung ultrasound. Possible diagnosis were acute cardiogenic pulmonary edema (ACPE), community acquired pneumonia (CAP), chronic obstructive pulmonary disease (COPD), cardiac tamponnade (CT), right ventricle overload (RV), other (O) and unknown (UN).

This non interventionist study was approved by the Ethics committee. After informed consent and UDP, the EP stated the diagnosis hypothesis (H1). The EDP was then performed in a blind fashion by the investigator and the new diagnosis hypothesis (H2) was stated. H2 was applied to the patient's care. Reference diagnosis (H3) was the final one stated in the patient's file.

Primary objective: concordance between H1-H3 and H2-H3

Secondary objectives : hospital mortality, frequency of diagnosis

The required number of subjects for a concordance of 0.7 between H1 and H3 and 0,9 between H2 and H3 with alpha risk 0.05 and beta 0.10 was 42.

Statistical method

Values stored in Microsoft Access were analyzed with PASW. Numerical data expressed as mean + SD were compared by a Student t test. Categorical data by a Khi2 test. Concordances were analyzed using Kappa coefficient. P< 0.05 was considered significant.

Results

82 patients were included, 11 secondary excluded because of more than 2 diagnosis. Included patients were 84+5 years old, 45 women and 26 men. H3 were mainly ACPE 33 (46.5%), CAP 16 (22.5%), COPD 9 (12.7%), RV 8 (11.3%), CT 2 (3%). Overall sensitivity and specificity for H1 were 0.56 [CI95% 0.45-0.67] and 0.94 [CI95% 0.90-0.96] respectively and 0.93 [CI95% 0.83-0.97] and 0.99 [CI95% 0.97-0.99] for H2 ($p < 10^{-3}$ for sensibility). Kappa coefficient was 0.41 [CI95% 0.34-0.48] for H1-H3 and 0.90 [CI95% 0.86-0.94] for H2-H3 respectively ($p<10^{-3}$). Overall mortality was 35%. After regrouping, mortality were PAC 66%, ACPE 28%, COPD 25%, others 23%, respectively (p 0.03)

Discussion

Final diagnosis were conformed to published studies. Concordance was poor for the UDP while it was excellent for the EDP. Face to an ARF in elderly patients, EDP with simple cardiac and lung ultrasound enhances the diagnosis procedure and allows to determine the appropriate treatment.

#7344 : Accuracy of emergency physician renal ultrasound in the diagnosis of hydronephrosis : prospective study in comparison with radiologist ultrasound.

Preferred format : ePoster

Authors:

Philippe Le Conte (1), François Mounier (1), Idriss Arnaudet (1), François Javaudin (1)

1. Urgences, Hôtel Dieu, Nantes, FRANCE

Keywords: focus ultrasound, renal colic, acute renal failure

Abstract :

Introduction

A renal ultrasound (RUS) is mandatory in renal colic (RC), acute pyelonephritis (AP) and acute renal failure (ARF) in search of a hydronephrosis because management would be different. Studies have explored performances of emergency physician (EP) renal ultrasound (EPUS) compared to computed tomography (CT) but not compared to radiologist ultrasound (RUS). The goal of this study was to evaluate performance of EPUS compared to RUS in the diagnosis of hydronephrosis. EP had different formations and experiences.

Patients and methods

Inclusion criteria

suspected RC, AP or documented ARF

Exclusion criteria

US almost done

absence of RUS

end of life

Methods

It was a non interventionist study which was approved by the Ethics committee. After inclusion and informed consent, an EPUS was performed. A RUS was then performed, the radiologist being blind to EPUS result. Only the RUS result was used for the management of the patients

The primary objective was sensitivity and negative predictive value (NPV). Secondary objectives were specificity, positive predictive value (PPV) and quantification of the hydronephrosis. The required number of subjects for sensitivity 0.9 with alpha risk 0.05 and beta 0.10 was 38.

Statistical methods

Values stored in Microsoft Excel were analyzed with Graphpad. Numerical data expressed as mean + SD were compared by a Student t test. Categorical data by a Khi2 test. $P< 0.05$ was considered significant.

Results

55 patients were included, 5 excluded because of lack of RUS. Age was 47 + 22 years, sex ratio 1. There was 31 RC, 9 AP and 10 ARF. Sensitivity and NPV were 100% (CI95% [79.1-100%]) and 100% (CI95% [81.5-100%]) respectively. Specificity and PPV were 67.9% (IC95% [47.6-83.4%]) and 71% (IC95% [52.8-81.5%]), respectively. For 19 patients with hydronephrosis, measurement was done in 16, there was no difference (p=0.71)

Discussion

In our department, sensitivity and NPV allow to not confirm the normal result by a RUS. However, in case of hydronephrosis found at the EPUS, a confirmation by a RUS or a non injected CT is warranted because of the lack of specificity. The absence of difference between hydronephrosis measurements could be due to a lack of power. Although non evaluate in this study, the time saving would be important in case of EPUS alone. Formation of the EP has to be improved to enhance the specificity.

#7345 : Delays in being admitted from an emergency department to an inpatient ward increase the risk of 30-day mortality: a retrospective database analysis of two emergency departments.

Preferred format : Oral presentation

Authors:

Sally-Anne Wilson (1), Paul Jarvis (2), Mohamed Mohammed (3)

1. , None, Leeds, UK
2. , None, LEEDS, UK
3. , None, Bradford, UK

Keywords: mortality, exit block, crowding

Abstract :

Introduction: Emergency Department (ED) exit block, which is a manifestation of poor patient flow in hospitals, undermines patient safety, quality of care, staff morale, and ED performance. The extent to which exit block undermines patient survival in NHS hospitals is less well known.

Aim: To determine the relationship between the time patients have to wait in the ED for an inpatient bed to become available and thirty-day mortality.

Method: Retrospective analysis of consecutive ED attendances at two EDs between 1st June 2013 and 23rd February 2015 (633 days). The mortality of patients who were admitted to a bed was modelled using a multivariable Poisson regression model which controlled for age, gender, ambulance transportation to the ED, case-mix profile, day of week, season of attendance and ED site attended. The risk ratio per hour of ED exit delay was determined.

Results: 52 987 patients were admitted from 243 499 attendances across two EDs. The mean (SD) ED exit delay (hours) for deceased patients was 2.31 (2.04) vs 1.46 (1.67) for non-deceased patients. About half the patients experienced a median exit delay of 1+ hour and 7.7% waited for more than 4 hours. ED exit delays were associated with a 10% increase in risk of death per hour of exit delay (Risk Ratio 1.10 (95% confidence interval 1.08 to 1.12)), after controlling for seasonality, day of week, case-mix profile and hospital ED.

Discussion: ED Exit block is associated with an increased risk of death. Further work to understand how and why increased delay leads to increased risk of death is required. Strategies to reduce unnecessary delays from ED to inpatient beds in hospitals are urgently required.

#7347 : Fascia iliaca block: training and teaching emergency medicine residents in Lithuania

Preferred format : ePoster

Authors:

Simona Sabulyte (1), Dinas Vaitkaitis (1), Justinas Stucinskas (2), Sarunas Tarasevicius (3)

1. , Department of Emergency Medicine, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania, Kaunas, LITHUANIA
2. , Department of Trauma and Orthopedic, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania, kaunas, LITHUANIA
3. , Department of Trauma and Orthopedic, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania, Kaunas, LITHUANIA

Keywords: Fascia iliaca block, training,

Abstract :

Background & Objectives

Hip fractures, commonly in older patients, follows moderate or high level of pain. Systemic analgesics, often prescribed to relieve pain after hip fractures, have huge side effects, can delay surgery and may worsen the outcomes of the surgery. We analyze the role and efficacy of alternative forms of analgesia like fascia iliaca blocks (FIB) and assess the feasibility of a service delivered by emergency medicine residents, after given a short course about this block.

Methods

All emergency medicine residents were trained on administering FIB through a teaching presentation from a senior emergency medicine resident, followed by supervised training in theatre by a senior anesthesiologist. Once after the training, residents were permitted to administer a FIB for a patient with suspected or diagnosed hip fracture. The short video file, containing summary of the training course, was created, in order to give the resident a “time off” and ability quickly flick through the most important points according to this procedure. Video file is always available in emergency department. The questionnaire for the residents was given to know how confidence they feel performing this procedure. The questionnaire was given 1, 3, 6 months after the course. The course was repeated 3 months after training, especially for those residents, who did not perform the procedure in 3 months period time. The pain was measured 30 minutes and 2 hours after procedure, if needed additional analgesics were prescribed.

Results

The short video about this block and a “time off” before a procedure helps to memorize the most important things. Residents who performed this procedure more than 10 times feel confident to perform this procedure alone. Residents, who performed it less than 10 times, need a back up help while performing a procedure and exposed the wish to repeat the course, in order to build their confidence, and better understand this block.

Conclusion

Different training techniques have been evaluated in literature. We suggest that repeated courses in short time and quick “time offs” before a procedure, is a valuable thing and could help achieve the best performance, quicker and more sustainable skills retention.

#7348 : Extrapyrimidal Symptoms (EPS); A rare side effect of Lignocaine!

Preferred format : ePoster

Authors:

Mustafa Mehmood (1), Orla Smithwick (1), Zahid Khan (1)

1. Emergency Medicine, University Hospital Galway, Galway, IRELAND

Keywords: Lignocaine, Lidocaine, EPS, Extrapyrimidal Symptoms

Abstract :

Introduction:

Extrapyramidal symptoms (EPS) area well recognized group of side effects of antipsychotic medications, most commonly seen with drugs such as chlorpromazine, haloperidol etc. Side effects include Dystonia, Akesthesia, Tradive Dyskinesia and Parkinsonism (1). Other drugs such as Metoclopramide (2) has been also reported to cause EPS. EPS after the use of Lidocaine has seldom been reported (3). Here we present a case with EPS after the use of small dose of 1% Lidocaine.

Case Report:

18 years old male came in to Emergency Department with a wound on the left hand. He was given 3 mls of Lidocaine as local anesthetic around the wound, subcutaneously, for exploration and repair. Soon after the Lidocaine patient started rocking movements to and fro in the trolley. There were no signs to suggest an allergic reaction. Also patient was vitally stable, fully conscious with GCS 15/15. The movement subsided after 10 mg of Procycldine. Laboratory investigations showed a CK of 704, confirming EPS.

Discussion:

Mechanism by which Lidocaine can cause an EPS cannot be explained but the rocking movement after subcutaneous administration of lidocaine, improvement after Procyclidine and increased CK of 704 suggest EPS.

Conclusion:

Although the benefits of Lidocaine clearly outweigh the rare side of Lidocaine but all Emergency Physicians should keep in mind the rare side effect of Lidocaine

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#7349 : Heart at the time of impact; A new mystery!

Preferred format : Oral presentation

Authors:

Mustafa Mehmood (1), Brian McNicholl (1)

1. Emergency Medicine, University Hospital Galway, Galway, IRELAND

Keywords: Heart rate, Impact, Cycle, GPS, GPS heart rate monitor, Cycle crash, Real time heart rate motinoring

Abstract :

Introduction Heart rate is an important indicator of injury after trauma. Tachycardia is associated with blood loss, pain, physiological and psychological stress (1). However what happens to heart rate at the time of impact in a crash is unknown and has never been recorded. The advent of heart rate monitors allows constant real time recording of heart rate and speed while exercising.

Case ReportA competitive 45 year old triathlete was on kilometre 8 of a 40 km journey at a speed of 30km/hr (recorded by his GPS tracker), when he skidded on ice and fell on his left side, skidding five metres along the road. He got up immediately and went to the side of the road to recover. He rested for five minutes and then proceeded to visit a local doctor. He was diagnosed with bruising of the left hip and acromioclavicular joint.

At the time of impact his Heart Rate Monitor showed rapid deceleration over a period of 30 seconds. During these 30 seconds pulse dropped from a high of 130/min to 50/min and then within 8 seconds returned to normal.

On another event, he was cycling at a slower speed when he hit the corner of a footpath & stopped abruptly. His pulse again showed a rapid drop from 130/min to 70/min immediately after the crash which then went up to 120 over the next few seconds before normalising to 88/min.

In this exercising athlete the heart rate drops and quickly returns to normal after crashing despite the associated pain and stress.

DISCUSSION

There are no other recorded episodes of heart rates at the time of impact in the literature. Tachycardia is a normal physiological response to exercise with heart rates up to 220 beats per minute being recorded in elite athletes. Such heart rates usually return to normal rapidly during recovery (2). Tachycardia is also a response to stress while racing cars with rates averaging 168 being recorded while rally driving (3). While tachycardia is a sign of blood loss after trauma, it is unlikely to be present at the time of injury- as the blood loss has only begun.

In this case we can see that exercise related tachycardia returns to normal rapidly after a cycling crash. We can also ascertain that physiological stress such as exercise and impact do not cause persistent tachycardia in athletes after a crash.

If tachycardia persists after a crash an alternative should be sought and a major injury with haemorrhage or an arrhythmia needs to be excluded.

Real time heart rate monitoring and GPS tracking have opened a new chapter of research. This will lead to unfolding of many cardiovascular mysteries previously unknown to man, just like the case mentioned above.

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#7351 : Pre hospital care of elderly patients: gender differences

Preferred format : ePoster

Authors:

Dorra Chtourou (1), saida zelfani (2), RAFIKA BEN CHIHAOUI (3), AFEF CHAKROUN (4), samir abdelmoumen (2), CHEDLY GHANEM (1), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA
3. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, FRANCE
4. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, TUNISIA

Keywords: elderly prehospital gender differences

Abstract :

Introduction: The aim of this study was to identify gender differences of elderly patients who received care by the mobile emergency care unit (MECU).

Methods: This was a prospective, observational study over 2 months (July and August 2015), using the MECU-database for all out of hospital elderly patients care, included patients age greater than or equal to 65 years. The Ki2 test was used to compare differences in relation to gender (significance level=0.05).

Results: During the period of study, 100 elderly patients were management by the MECU teams. There were 52 males and 48 females. Significant differences between genders were observed regarding medical history of diabetes (46% versus 48%; P=0.045), initial autonomy (6.6 +ou- 2.2 versus 6.2 +ou- 1.4; P=0.04) and in hospitalization rate (24.5% versus 50%; P=0.005). We didn't show gender related differences in overall mortality (25% versus 31%; P=0,7).

Conclusion: During prehospital care, mortality among elderly patients was not influenced by gender. Despite a higher frequency of women hospitalization and a higher initial autonomy of men.

#7352 : e-cigarettes acute intoxication: a retrospective study from a french control poison center

Preferred format : ePoster

Authors:

Amish Seeruttun (1), Christine Tournoud (2), Eric Bayle (2), Pierrick Le Borgne (1), Charles-Eric Lavoignet (1), Hakim Slimani (1), Claire Kam (1), Pascal Bilbault (1)

1. Urgences Adultes, Hôpital de Hautepierre, CHU Strasbourg, Strasbourg, FRANCE
2. Centre Antipoison et de Toxicovigilance, Nouvel Hôpital Civil, Hôpitaux Universitaires de Strasbourg, Strasbourg, FRANCE

Keywords: e-cigarrettes, intoxication, control poison center

Abstract :

Introduction:

The electronic cigarette is a nicotine-delivering device available since 2003. The e-liquids contain glycerol, propylene glycol, flavoring agents and nicotine, at concentrations below 20 mg/ml in France. The purpose of this study was to analyze the cases of acute intoxication by e-liquids reported to a french poison center.

Methods:

We conducted a monocentric and retrospective study, of the e-liquid poisoning cases collected at the poison center of Strasbourg from 01/01/2014 to 31/12/2014.

Results:

53 cases were registered during the study period. The intoxications were more frequent among children aged less than 11 years (39%) and adults (56%). Unintentional poisoning represented 81% of the cases, and voluntary intoxications represented 19%. The sex ratio was 3.6 among adults and 0.6 for children. Exposures occurred through ingestion (73%), dermal exposure (15%) and ocular exposure (9%). 74% of the patients were symptomatic. Poisoning occurred via the device for 65% of adults and via refills for 68% of children. 85% of poisonings were of low severity regardless of the concentration of nicotine in the liquid. 75% of patients were monitored at home and 19% consulted at an emergency department. On voluntary intoxications, exposure was mainly oral: women were more concerned than men (SR 0.25). 60% of these patients were symptomatic. 20% of these intoxications were of mild severity, according to the Poison Severity Score.

Discussion:

The amount of e-liquid responsible of poisoning was often not available. The lethal dose of nicotine by ingestion, estimated previously about 60 mg for adults, is currently being revised. The majority of e-liquid poisonings are usually accidental and mild. Children are poisoned via refills because of the attractiveness of these small bottles without safety device. For adults, it is often mishandling or poor quality of the devices that are responsible for the poisoning.

Conclusion:

In our study, regardless of the circumstances, acute poisoning by e-liquid mostly have mild consequences, as found in the literature review. We noted that after a raise in the number of acute intoxications with a peak in 2014, the numbers are levelling down (27 cases in 2015). The medium and long-term effects are still unknown due to the recent introduction of this product on the market and the relative lack of knowledge about the combustion products of e-liquids.

#7360 : Pre-hospital management of severe trauma patients: are we respecting the golden hour?

Preferred format : ePoster

Authors:

Dorra Chtourou (1), saida zelfani (2), Amina Jebali (1), Yosra Manai (1), Samia Arfaoui (1), sana dridi (2), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA

Keywords: pre hospital severe trauma patient golden hour

Abstract :

Introduction: Time is considered as an essential determinant in the initial care of trauma patients.

Our purpose was to evaluate the delays in out of hospital management of severe trauma patients by the mobile emergency care unit (MECU) and their adhésion to recommandations.

Methods: This was a prospective, observational study over one year (from January to December 2015), using the MECU-database. We analysed prehospital time intervals for trauma patients according to their lavels.

Results: There were 87 severely trauma patients management by MECU teams. Of these patients, 30 were evaluated level 1, 26 were evaluated level 2 and 31 were evaluated level 3. The mean time from injury occurence to arrival in the emergency department (ED) was 50 min. Only 24 (27.6%) patients reached the ED within 30 min. Delays were different according to patient's level: it was exceed 30 min to 30% of patients level 1; 19,5% of patients level 2 and 27.6% of patients level 3.

Conclusion: The median time to care for severe trauma patients was similar to recommandations. However, more than half of patients were beyond this period. The most serious patients were those for which periods were longer. Focus should not be on the type of prehospital care delivered only, but also on rapid transport.

#7361 : Aortic dissection in the Emergency Department

Preferred format : Oral presentation

Authors:

Cruz Saleme (1), Karla Hernandez (1), Hector Montiel (1)

1. Emergency Department, ABC Medical Center Methodist Network, Mexico, MEXICO

Keywords: Aortic dissection, Emergency Department, chest pain, algorithm for diagnosis

Abstract :

Dissection of the aorta is a condition that usually occurs suddenly, and in most cases, arise from an incidental finding, during a secondary abdominal pain or acute chest assessment. This condition is not as common as other causes of chest pain, but it is essential to maintain a high index of suspicion based on adequate knowledge of this entity.

The objective of this study is to describe the prevalence of this disease in our population and thus identify risk factors and demographic characteristics thereof with special interest in the timely diagnosis. Based on this we propose an algorithm of action in the ED. Methodology: Transversal, retrospective descriptive study on the epidemiological, clinical, with special attention to the presentation, diagnosis in the emergency department at our center.

The importance of this study is to propose an early diagnosis for better patient outcomes. Within our sample, 77.77% of patients were male. The most common symptom that led to emergency room patients was chest pain by 100%. The initial clinical suspicion, after making history and examination was 11.1% for dissection prior to any diagnostic, in other cases another diagnosis was assumed, so the patients were admitted to hospital, diagnosed with "chest pain in study" in a 9.09%.

The 66.6% of patients were operated. The hospital mortality was 22.2%.

The sudden onset of severe, retrosternal or interscapular chest pain, sometimes referred to as tear and subsequent progression downward or toward the back region would typically wait picture. 100% of the cases had chest pain related to the range described in the literature (14-55%).

The use of complementary diagnostic tests, differs markedly from a serious to others, explained by the availability depending on the center and experience in use, varying from one center to another and even from staff is on call in the emergency services .

So an algorithm care is proposed to these patients from the perspective of the emergency department, integrating the most important data of clinical and suggesting the most simple and effective guidelines for care before chest pain suggestive of aortic dissection applicable to all emergency services..

#7362 : Do not ask me again, I have not give me a Knock!!!

Preferred format : ePoster

Authors:

MARTA MERLO (1), JUAN LUQUE (1), PATRICIA BAZÁN (1), RAQUEL CASERO (1), ELENA AZNAR (1), CÉSAR VERGARA (2)

1. A&E, HOSPITAL UNIVERSITARIO GETAFE-MADRID, MADRID, SPAIN
2. PRIMARY CARE, SESCAM, TOLEDO, SPAIN

Keywords: Hematoma,Emergency service,Myositis

Abstract :

A 80-year-old men with diabetes was attended in A&E department for pain and hematoma in his right shoulder that appeared ten days earlier and was treated with antibiotics for suspected cellulite. Despite treatment the hematoma volume was increasing without pain or inflammatory signs. The patient denied trauma, effort or bite at that location. No pain in the rest of the right limb or volume increase .No fever. No dyspnea or chest pain. No palpitations.

PHYSICAL EXAMINATION

Temperature: 36,5ºC Heart rate: 85lpm Blood pressure: 138/70mmHg SpO2: 98%.

Hematoma with varicose veins in supraescapular región(10x10cm). No tenderness of bony prominences. Normal joint mobility . Painful abduction. No loss of strength and sensitivity. Pulses present. No swelling or erythema in right forearm.
Mobile painless lump in infraescapular region(5cm).

TEST

* Laboratory test: Glucose 368mg/dl, Creatinine 1.29mg/dl, Creatinine Kinase 129U/L, PCR 140mg/dl, Hemoglobine 13,3mg/dl, Leucocites 20230.

* Chest X-Ray: No atelectasis, no edema.

* Right shoulder X-Ray : no acute bone injury

*Ultrasonography: homogeneous solid lesion, encapsulated, unfilled. No hematomas or abscess.

EVOLUTION
He was discharged from hospital with antibiotic and we request a resonance to complete the study. After 12days the patient returned to the hospital by worsering of his condition. We perform MRI. The result was: Piomiositis abscessed / Abscess Hematoma in right deltoid and supraspinatus complicated with osteomyelitis of the right acromioclavicular joint.

Pyomyositis is an acute infection of skeletal muscle common in the tropics. In primary forms it is accepted that muscle abscess is formed from hematogenous spread of a muscle previously altered. Usually occurs in children or young adults (20-45years).

There are predisposing factors such as diabetes mellitus, alcoholic liver disease, treatment with corticosteroids, immunosuppressive diseases and HIV infection among others.

The pathogen most often implicated is Staphylococcus aureus , followed by Streptococcus group A.

The clinic is usually subacute and early stage only produces localized muscle pain. In the late phase signs of muscle inflammation, erythema, edema, fluctuation and functional impotence, fever and malaise. Fulminant forms are rare and when they occur, the organism involved is most often Streptococcus group A.

Among the highlights laboratory abnormalities neutrophilic leukocytosis, unlike tropical forms is rare eosinophilia and increased sedimentation rate.

It is not often elevated muscle enzymes despite the extensive muscle destruction. In non-tropical piomiositis bacteremia ranges from 5-35%.

Imaging techniques such as ultrasound, CT scan and MRI are useful to identify the number, size, extension, location of abscesses and guide the needle stick.

The microbiological diagnosis is based on blood cultures and culture of the sample of muscle abscess whose sensitivity is 100%. The differential diagnosis includes muscle trauma, DVT, osteomyelitis, cellulitis, septic arthritis and malignant tumors.

Treatment is medical-surgical, antibiotic therapy and surgical drainage of abscesses; The prognosis is favorable with appropriate treatment. Mortality ranges from 1-10% depending on the underlying disease, rapid diagnosis and initiation of treatment.

Is an unusual case that happens in a male in the eighth decade of life which have predisposing factors, but we have not been able to filial origin.

#7363 : Reduction in Emergency Department Visits after Implementing a Care Plan in Patients with Drug Seeking Behavior: Five Year Analysis

Preferred format : ePoster

Authors:

Fred Fiesseler (1), Renee Riggs (2), Dave Salo (1), Brian Walsh (1), Paul Szucs (1), KJ Rapp (1)

1. , Morristown Medical Center, Morristown, USA
2. , Rutgers Medical School, New Brunswick, New Brunswick, USA

Keywords: care plans, opioid, emergency medicine

Abstract :

Study objectives: Patients with drug seeking behavior can be both labor and resource intensive to the emergency department. We determined the change in number of Emergency Department (ED) visits for five consecutive years following a care plan initiation for individuals who displayed drug seeking behavior.

Methods: A retrospective, cohort observational study. Location: a suburban teaching hospital with an annual census of 85,000 patients. A care plan was initiated for patients flagged by ED staff as concerning for drug seeking behavior. An ED administrator then collaborated with the patient's primary doctor regarding their concerns. If the primary doctor concurred, a plan of care was initiated, which typically restricted narcotic administration. Patients subsequently received a certified letter regarding their plan. Copies of the letters were placed alphabetically by name in binders residing in the ED, and charts were flagged when patients presented to the ED. The first 20 patients in each of 3 binders were included in the study population (N=60). The numbers of ED Visits were determined one year prior, and for the five subsequent years following care plan, based on letter posting date. Exclusion criteria: unclaimed letter, incomplete data, or non-drug seeking care plan. Statistics: Two-tailed Wilcoxon signed-rank test with significance of $p<0.05$. This study was approved by our IRB.

Results: Sixty patients were analyzed. Exclusion criteria: incomplete data (N=3), did not receive letter (N=2), and non-drug seeking care plan (N=3). This left 52 patients for analysis. Mean age was 38 years, (IQR-27-46 yrs). Male gender comprised 48% of sample population. Overall, there were 425 visits for study patients the first year and 26 during the fifth year. Mean yearly ED visits prior to care plan initiation were 8.2 (95% CI 6.7-9.7). Mean visits following implementation of care plan were: one year, 2.5 (95% CI 1.6-3.3); two years, 1.5 (95% CI 0.9-2.2); three years, 1.1 (95 % CI 0.2-2.0); four years, 0.8 (95% CI 0.4-1.3); five years, 0.5 (95% CI 0.2-0.8) ($p=<0.0001$). The mean reduction of visits 1 year following implementation was 5.3 ($p=<0.0001$). The five year reduction in visits was by 7.7 ($p=<0.0001$). A significant reduction in visits occurred between one year and two years following implementation with a mean reduction of 0.9 ($p=0.01$) and between two years and three years with a mean reduction of 0.4 ($p=0.02$). There was no significant reduction in number of visits from three to four years with a mean reduction of 0.3 ($p=0.88$), or four to five years with a mean reduction of 0.3 ($p=0.14$).

Conclusion: Care plans are effective as a long-term means of reducing ED visits in patients with drug seeking behavior. ED visits were significantly decreased up to three years following care plan initiation.

#7366 : A Fatal Case of Unintentional Colchicine Intoxication

Preferred format : ePoster

Authors:

Seo Youngwoo (1), Tae Chang Jang (1)

1. Emergency department, School of Medicine, Daegu Catholic University of Daegu, Korea, ., Daegu, KOREA, DEMOCRATIC REPUBLIC

Keywords: Colchicine, Intoxication

Abstract :

Colchicine is widely used in the treatment of gout, Behçet’s syndrome and other disease. Colchicine intoxication, although rare, can cause symptoms ranging from mild gastrointestinal complaints to severe toxic conditions resulting in death. we reported a 32-year-old woman who had Behçet’s syndrome and presented to the emergency department after ingesting 30 tablets(18mg) of colchicine in attempt to alleviate her abdominal pain. Initially, she just complained of abdominal pain and nausea. Gastric lavage was performed and activated charcoal was administered immediately. On admission, The patient hematologic and biochemistry laboratory test result was normal. But she exhibited many progressing features of colchicine intoxication, such as gastrointestinal symptoms, colitis in CT scan, leukopenia, rebound leukocytosis, elevated liver enzymes, multiple organ failure and so on. Fifty hours after ingesting the colchicine, she complained of chest discomfort and dyspnea, and developed cardiac arrest immediately thereafter. Despite cardiopulmonary resuscitation, she was expired unfortunately. This case showed that overdose of colchicine is associated with rapid progression and sudden cardiac arrest. It is important that we have to know benefits and potential dangers of this drug. Careful prescription and explanation maybe needed.

#7368 : After acupuncture: Acupuncture-associated pneumothorax

Preferred format : ePoster

Authors:

Wei Lin Tallie Chua (1), Corinne Lau (1)

1. Emergency Medicine, Singhealth, Singapore, SINGAPORE

Keywords: acupuncture, pneumothorax, alternative medicine, complementary medicine

Abstract :

Introduction

Acupuncture is proven to be relatively effective in chronic pain treatment.[i] [ii] With its increasing popularity, Emergency Physicians (EPs) should be aware of its complications. We report 2 cases of acupuncture-induced pneumothorax presenting to our hospital emergency department in Singapore over a 2 week period.

Case 1

A 72 year-old lady presented with dyspnoea 20 minutes following acupuncture to the chest. She was a non-smoker with no pulmonary-related co-morbidities. On arrival to the Emergency Department (ED), the patient was tachypneic and had SpO2 of 98% on 2Litre oxygen. Other vital signs were normal. X-ray showed a large right simple pneumothorax. A chest drain was inserted in the ED with symptom resolution and re-inflation of the lung on repeat x-rays. She was discharged the next day following removal of chest tube.

Case 2

An 81 year-old gentleman with no history of smoking or respiratory disease presented with chest tightness and dyspnea 1 hour after acupuncture to the back. He went to the acupuncturist for treatment of back pain from lumbar radiculopathy. He was hemodynamically stable. X-ray revealed a large right simple pneumothorax. Chest drain insertion was performed in ED. He, too had his chest tube removed after resolution of his symptoms and was discharged well the following day.

Discussion

Common[iii] complications of acupuncture such as pneumothorax, penetrating injuries to other organs like the heart, haemorrhage, and infection can be life threatening. Since these patients often present to ED, knowledge and awareness of potential complications of alternative therapies like acupuncture is crucial. Furthermore, with increasing practice of complementary medicine worldwide[iv] [v], such knowledge also allows EPs to better manage, counsel, and educate patients.

Of the severe complications that arise from acupuncture, pneumothorax seems to be commonest[vi]. While the cases we reported were simple pneumothoraces with good recovery and outcome, extreme cases of bilateral tension pneumothoraces have been published[vii][viii]. In the medial scapular or midclavicular line regions, the lung surface is only 10 to 20 mm beneath the skin[ix]. This explains how improper needling of acupoints in this region could possibly lead to lung puncture. A review published by the World Health Organization reveals that most traumatic complications in China occurred after the sessions were performed in village clinics and rural hospitals, where acupuncturists rarely receive formal education in medical colleges[x]. This suggests that training may play a role in improving the safety profile of acupuncture.

More proper training programs are now available[xi] [xii] [xiii] and this seems to be associated with increased safety[xiv] [xv]. In Singapore, the Traditional Chinese Medicine Practitioners Act passed in 2000 requires registration of practitioners with the government. This is an example of a step forward for better regulation and safety standards in the practice of complementary medicine. In future, with proper regulations and legislation, we hope that the practice of alternative medicine will become safer.

#7369 : Comparison of tibia and humerus infusion rates using the NIO Intraosseous Infusion System on the adult cadaver model

Preferred format : Oral presentation

Authors:

Szarpak Lukasz (1), Truszewski Zenon (1), Smereka Jacek (2), Krajewski Pawel (3), Fudalej Marcin (3)

1. Department of Emergency Medicine, Medical University of Warsaw, Warsaw, POLAND
2. Department of Emergency Medical Service, Wroclaw Medical University, Wroclaw, POLAND
3. Department of Forensic Medicine, Medical University of Warsaw, Warsaw, POLAND

Keywords: intraosseous, intravasvular access

Abstract :

Background.

Rapid intravascular (IV) access is a prerequisite component of emergency care and cardiopulmonary resuscitation (CPR). However, attempting to establish IV access in patients with low cardiac output (CO) is more difficult without interrupting CPR. Gaining intraosseous (IO) access during CPR is relatively easy because IO space as well as marrow cavity, unlike peripheral vessels, does not collapse in the presence of circulatory failure.Therefore our goal was to compare the IO access success rates of the proximal tibia and the proximal humerus using NIO intraosseous device (NIO; Waismed Ltd., Herzliya, Israel) in an adult cadaver model during simulated CPR.

Participants and methods.

We performed a randomized crossover interventional study in 15 cadavers. Fifty paramedics participated and performed IO access in proximal tibia and proximal humerus using NIO device in random order. Outcome variables were IO insertion success rates, location of IO access and procedure related problems. Procedure time was defined as the duration of picking up the prepared set of IO device from the shelf, to first successful administration of infusion solutions through the newly established vascular access. To simulate CPR we use LifeLine ARM (ARM; DefibTech; Guilford, USA) mechanical CC device.

Results.

Success rates on first attempt were higher for tibial IO access than humeral (93.3% versus 73.3%, p=.108) and procedure times were significantly lower for tibial access (20 [IQR,14-31]sec) compared to humeral 27[21-31 sec] (p=.038). Smaller effectiveness to humeral IO access due to the incorrect location of the humeral head. No mechanical problems were encountered in any of the groups.

Conclusion.

In our study, tibial IO access was found to have the highest first-attempt success for vascular access and the most rapid time to vascular access compared with humeral IO access.

#7370 : Hypoglycaemia in the emergency room of béja's regional hospital (tunisia)

Preferred format : Oral presentation

Authors:

Jobrane MANSOURI (1)

1. Emergency room, University teaching hospital La Rabta, Tunis, TUNISIA

Keywords: Hypoglycaemia, emergency room, diabetes

Abstract :

Background : Although educational practices and prevention have been expanded, hypoglycaemia was the most common complication, potentially the greatest and most feared threat. This is due to its possible but rare consequences (coma, sudden death, irreversible neurological damage, traumatic accident).
Objectives : The objective of this study was the description of hypoglycaemia's clinical and biological features, patient's education and of everyone in his social circle on clinical manifestations and circumstances of hypoglycaemia, encourage them manage themselves particularly self-monitoring the blood sugar, and emphasize the higher frequency and potential severity of hypoglycaemia in elderly diabetic patient due to the co-existence of contributing factors.
Methods : That cross-sectional study was done from 30th of december 2010 to 21st of may 2011 in the emergency room of Béja's Regional hospital. It covered 49 patients (21 women and 28 men). The threshold chosen to support hypoglycaemia's diagnosis was 3.3 mmol/l (0.6 gr/l) for diabetic patients treated, and 2.8 mmol/l (0.5 gr/l) for non-diabetic patients. A questionnaire was completed.
Results : The mean age of patients was 63.1 years. 82.6 per cent of patients had personal history of diabetes. In 17.4 per cent of the cases, hypoglycaemia occured in the absence of personal history of diabetes. 76 per cent of diabetics questioned of our sample were taking insulin. 24 per cent were taking oral antidiabetic drugs only. 70.8 per cent of questioned patients did not perform self-monitoring of blood sugar. Five patients had impaired renal function without personal history of diabetes, of whom one on hemodialysis. The average blood glucose of all patients was 2.22 mmol/l. 87.7 per cent of patients had greatly evolved after administration of glucose. It had been noted some residual neurological damage aphasia type in a single female patient. Five patients (10.2 per cent) died, including 3 non-diabetics, within hours or after a couple of days. The mean age of patients who died was 77.3 years. The average blood glucose level in deceased patients was 1.34 mmol/l. In 66.6 per cent of patients, the cause of hypoglycaemia was non-compliance with diet. An error while filling the insulin syringe was involved in 25 per cent of patients. It was the first hypoglycaemic incident in 24 per cent of all patients.
Conclusion : Hypoglycaemia is more common in elderly diabetic patient due to the frequently found co-existence of many contributing factors. The risk of hypoglycaemia is greater in insulin-treated patients. Severe hypoglycaemic attacks may have serious consequences in elderly patients. Education of the patient and his entourage, along with self-monitoring the blood sugar and respect of dietary laws, are crucial to the prevention.

#7371 : Analysis on the regulating activity of psychiatric files. Do they last so long?

Preferred format : ePoster

Authors:

roger kadji (1), stephanie polini (1), jean-pierre rossi (1), Anne Sophie Furet-Pignon (1), david sapir (1), jean christophe robart (1), aurelia rochedreux (1), francois-xavier laborne (1)

1. samu 91, CH sud Francilien, corbeil essonne, FRANCE

Keywords: EMS call centre, Psychiatric, regulating activity

Abstract :

Introduction

At the EMS call centre, management of phone calls for psychological or psychiatric distress seems often complex and tend to monopolise a lot of the resources of the regulating team regulation team. We present here the results of our analysis of this activity.

Material and method

Retrospective analysis of the files entered in the call centre from 2011 to 2014. Selection of files related to psychiatric cases such as psychoses, neurosis, addiction, intoxication... comparative analysis to other cases. taking into account their evolution during this time period using as criteria: number of files, their regulating duration (i.e. period of time between the start and the end of a call), identification of the physician regulator and decision Comparison via Chi-2 tests for the qualitative variables and with mean of Wicoxon[CDa1] 's tests for the regulating duration.

Results.

On 671.421 files (167.855 files per year), 4,8% were identified as a psychiatric distress. Their annual number has increased by 50% between 2011 and 2014, while the global activity did increase by only 7%. The median duration of the regulation was 50 min for psychiatric files against 34 min for the other files ($p<0,0001$). This median duration [CDa2] of regulation had constantly decreased while it had been relatively stable for the non-psychiatric files (respectively between 55 and 35 min in 2011, 47 and 34 min in 2014). In 2011, 0,3% of the psychiatric files did not have any identified regulator physician against 10% in 2014 ($p<0,0001$). In 2014, while 26% of the studied cases (25% for the non-psychiatric) ended in a simple advice to the callers, 63% of them were taken to hospital (52% for the non psychiatric $p<0,0001$).

Discussion and conclusion

Calls to the EMS call centre for psychiatric distress had clearly increased during the the past few years, requesting a new distribution of this workload among the different actors of regulation. Those call cases generated a meaningful time of regulation, even if the trend was decreasing. Some improvements could come through actions such as organising the call flow, training the teams, establishing networks, writing procedures, switching to others operators (psychologist, nurse...), which all may reduce the impact of this activity on the EMS call centre.

#7372 : Stroke code in emergency department between 2009 and 2015: can we do it better?

Preferred format : Oral presentation

Authors:

Domingo Ribas Segui (1), Jesus Galvez Mora (1), Ana Pellisé Guijoan (2), Albert Moreno Destruels (1), Doina Soltoianu (1), Gilmar Pugnet (1)

1. Emergency Department, Hospital Joan XXIII, Tarragona, SPAIN
2. Neurology Department, Hospital Joan XXIII, Tarragona, SPAIN

Keywords: Acute ischaemic stroke, Emergency medicine, Thrombolysis, Stroke code

Abstract :

INTRODUCTION:

Intravenous thrombolytic therapy after ischaemic stroke significantly reduces mortality and morbidity. Reperfusion therapy is time-dependent and is by itself a main exclusion criteria. Evaluate the state of the art about thrombolysis rates and door to needle times in our hospital are critical and allows to design future strategies in order to shorten times.

METHODS:

Descriptive cross-sectional study by systematic search for all patients admitted in emergency department as stroke code activation in Hospital Universitari Joan XXIII, Catalonia, Spain. From 2009 to 2015 data concerning age, neurological status evolution (National Institute of Health Stroke Scale (NIHSS) at arrival, 24 h and 3 months), onset-to-door times, door-to-neurologist examination times, and door to needle times (DTN) were collect. All statistical analyses were performed by using IBM SPSS statistics.

RESULTS:

A total of 263 patients with acute ischaemic stroke treated with reperfusion therapies were evaluated. The mean age was 67,28 years (STD 12,89). Onset-to-door at emergency department was 40,75 minutes (STD36,41) and neurological examination were perform in 8,46 minutes (STD 22,53). The median door to needle time was 60,55 minutes (STD 21,47). DTN times decreases by years: from 70 minutes (STD 25,2) in 2009 and 60minutes (STD 18,6) in 2010 to 53,5 minutes (23,3 STD) in 2014 and 58 minutes (STD 2,8) in 2015. Neurological status calculated by NIHSS scale at arrival to emergency department was 14 (5,79 STD, RANGE 3-31). NIHSS score at 24h after thrombolysis was 7 (6,60 STD, RANGE 0-24) and after 3 months NISHSS score were 1 (STD 3,34, RANGE 0-9) with Rankin score of 2 (STD 1,942).

CONCLUSION:

Thrombolysis should be given as son as possible. Our door-to-needle times are around 60 minutes, as international and national standards. Over the years, probably due to staff experience, times decreases but improve delays in thrombolysis need to be done. Analazing our present situation should allow us to design new procedures to shorten times once the patient arrives at hospital. Emergency physicians have an essential role to improve results as we are responsible for the first evaluation of patients with activated stroke code.

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#7373 : Evaluation of pre-hospital triage of trauma patients

Preferred format : ePoster

Authors:

Dorra Chtourou (1), saida zelfani (2), Amina Jebali (1), Samia Arfaoui (1), HELA MANAI (3), slim Ben Dlala (4), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA
3. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, TUNISIA
4. SAMU-SMUR, c, Tunis, TUNISIA

Keywords: trauma patient evaluation pre-hospital

Abstract :

Introduction: Pre-hospital triage is a key element in a trauma system that aims to admit patients to the most suitable trauma center, and may decrease intra-hospital mortality.

the aim of this study was to evaluate the performance of a pre-hospital procedure and the efficacy of a triage protocol

Methods: This was a prospective study using the mobile emergency care unit (MECU)-database for all severe trauma patient's management from January to December 2015. Each patient was graded A (instable dispite resuscitation), B (stabilized after prehospital resuscitation or anatomic criteria) or C (stable with high-kinetic circumstances or medical history) by an emergency physician, according to the seriousness of their injuries at presentation on scene. The assessement of severity was based on Vittel criteria.

Results: There were 87 calls for severely trauma patients. They were evaluated and cared by MECU teams then transported living to the emergency department. The mean age was 36.7 +ou- 17 years and the sex ratio was 3.8. Of these patients, 80% were ejected and 10% were fallen from more than 6 meters. MECU teams evaluated 34.5% of patients grade A, 26% grade B and 35.5% grade C. These patients were re-evaluated in emergency department: grade A (18%), grade B (19%) and grade C (60%).

Conclusion: Using Vittel criteria in prehospital managment of trauma patients induces an over-triage rate. These data highlight the imperative need to evaluate the effect on outcome of such organization.

#7374 : Could bitter melon extract decreaseblood sugar in case of emergency hyperglycemia? A randomized clinical trial

Preferred format : ePoster

Authors:

Farangis Ghanavati (1), Foad Moradi (2), Reza Mosaddegh (3)

1. Associated Professor, Seed and Plant Improvement Institute, Karaj, IRAN, ISLAMIC REPUBLIC
2. Assistant profesor, Agriculture Biotechnology Research Institute of Iran (ABRII), Karaj, IRAN, ISLAMIC REPUBLIC
3. Assistant profesor of Medicine, Emergency Department, Firoozgar Hospital, Emergency medicine management Research center, Rasoul-e-Akram Hospital, Iran university of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: bitter melon, diabetes mellitus, hyperglycemia

Abstract :

Could bitter melon extract decreaseblood sugar in case of emergency hyperglycemia? A randomized clinical trial

Authors:

Farangis Ghanavati, Associated professor of Botany, Seed and Plant Improvement Institute (SPII), Karaj, Iran

Foad Moradi, Assistant professor of Plant Physiology, Agriculture Biotechnology Research Institute of Iran (ABRII), Karaj, Iran

Reza Mosaddegh, Assistant professor of Medicine, Emergency Department, Firoozgar Hospital, Emergency Medicine Management Research Center, Rasoul-e-Akram Hospital, Iran university of Medical Sciences, Tehran, Iran

Introduction: Diabetes Mellitus is a common metabolic disease in Iran and its prevalence is about 10%. Emergencies related to diabetes are common causes of referring patients to the Emergency Departments. In traditional medicinal plant of Iran, bitter melon (*Citrullus colocynthis*) is used to treat and control diabetes. This experiment was conducted to use bitter melon extract for decreasing blood sugar level in type 2 diabetic patients when they do not respond to other prevalentmedications.

Methods: One kilogram of dried fruit bitter melon was mill and 10 liters 50:50 water – alcohol was added and placed in 60° C water bathfor 4 hours, then filtered. Extract was concentrated to one liter at 30° C. Obtained solution was poured in 50 ml spray bottles and was given to 20 type 2 diabetic patients while control solution (without the extract) was given to 20 other patients. All the patients asked to if their blood sugar level were above 350 mg/dL, to spray solution (10-12 puffs) on their feet and then wear socksafter drying.Blood sugar level was measured at times of spray (0), 15, 30, 60, 180 and 360 minutes after.

Results: In patients who used this extract, blood sugar level after 15, 30 and 60 minutes wasdecreased respectively by 12.3 ± 4.1, 32.1 ± 6.3, 53.7% ± 6.5 with P-value <0.05 to its initial level, but after 180 and 360 minutes, blood sugar level rose again and reached to 24.9 ± 7.1 and 20.9% ± 2.3 of its initial level (P-value <0.05).

Conclusion: The survey results show that this treatment modality can be used as an emergency treatment to decrease blood sugar level in diabetic patients who do not respond to other medications, but to hold down blood sugar level in these patients other methods are needed as well.

Keywords:bitter melon, diabetes mellitus, hyperglycemia

#7375 : Life-threatening complication of warfarin: lingual hematoma

Preferred format : ePoster

Authors:

Zerrin Defne Dundar (1), Mehmet Ergin (1), Mustafa Kursat Ayranci (1), Sadik Girisgin (1)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY

Keywords: warfarin, lingual Hematoma, endotracheal intubation

Abstract :

Introduction: Warfarin sodium is an anticoagulant drug. It disrupts the usual production and destruction of vitamin K. By the existence of warfarin, coagulation factors are producing but their transforming for functional shapes are inhibited so it acts as an anticoagulant. Warfarin is being used for prophylaxis at cardiovascular and thromboembolic diseases. The most frequent complication of warfarin usage is hemorrhage. The hemorrhage is often seen at genitourinary system, gastrointestinal system and central nervous system. Lingual hematoma is a rare complication and it threats the life. In this case, we aim to present intubation caused by lingual hematoma.

Case: 87 years old female patient had presented to a health institution with swelling of her tongue and alteration of mental status which had been started 8 hours ago. When she admitted to our emergency department we learned that she was using warfarin for 5 years. In her physical examination, arterial blood pressure was 160/95 mmHg, pulse rate was 108/min, temperature was 37.2°C, oxygen saturation was 91%, Glasgow coma score was 11, there was neurological deficit on her left upper and lower extremities. Her tongue was edematous and ecchymotic. In laboratory tests, WBC was 18,000/uL, hemoglobin was 12.0 g/dL, platelet was 203,000/uL, INR was 11.41 and APTT was 50.7 seconds. Brain computed tomography scan revealed intracerebral hemorrhage. The patient was intubated to ensure the airway security. 2 units of fresh frozen plasma and 10 mg intravenous vitamin K were administered. The patient was consulted with neurosurgery and admitted to intensive care unit. The patient was followed up till the regression of lingual hematoma and intracerebral hemorrhage.

Conclusion: Skipping warfarin doses, releasing the drug, oral or intravenous vitamin K, fresh frozen plasma, concentrated prothrombin complex administration are therapeutic modalities used in patients with chronic intoxications of warfarin. In the literature, there are case reports of patients with lingual hematoma due to warfarin. But most of the patients' intubations may be challenging because of the large tongue. Early provided intubation is lifesaving in cases with large lingual hematoma. Alternative surgical airway methods like cricothyroidotomy and tracheostomy should be considered.

#7376 : Carbon monoxide poisoning due to water pipe smoking: case series

Preferred format : ePoster

Authors:

Abdullah Osman Kocak (1), İlker Akbas (1), Zeynep Cakir (1)

1. Department of Emergency Medicine, Ataturk University, Erzurum, TURKEY

Keywords: carbon monoxide poisoning, hookah, hyperbaric oxygen treatment

Abstract :

Introduction: Hookah is a different form of tobacco consumption. In recent years, hookah usage has become increasingly widespread. The thought that it is less harmful than cigarettes increases its usage. Long-term exposure to high carbon monoxide (CO) levels due to hookah consumption may cause CO poisoning.

Case reports:A-18-year-old male patient admitted to emergency room. His complaint was syncope. He sat for 3 hours with friends in a café for hookah smoking, but he had to use hookah. After he had left the café, he said he had had head pain and dizziness then he could not remember what happened. He was described syncope lasted about 5 minutes. His physical examination and vital signs were normal. At his arterial blood gas analyses, the level of carboxyhemoglobin was 18,7% (normal range:0,5-1,5%) and other laboratory values were normal.

A-21-year-old male patient was admitted to emergency room with head trauma. At his anamnesis, he said he had felt dizziness after smoking hookah and bumped his head. His physical examination and vital signs were normal. His cranial CT scan was normal. At his arterial blood gas analyses, the level of carboxyhemoglobin was 29,2%.

A-29-year-old male patient admitted to hospital with nausea, vomiting, dizziness and palpitation. At his medical history, the complaints had started after smoking hookah. His physical examination and vital signs were normal. At his arterial blood gas analyses, the level of carboxyhemoglobin was 34,1%.

A-28-year-old male patient was admitted to hospital by relatives due to confusion. Vital signs were normal. His Glasgow Coma Scale point was 12 (E: 3, V: 4, M: 5). He had no neurological deficit. Other systems were normal. At his arterial blood gas analyses, the level of carboxyhemoglobin was 35,5%. His cranial CT scan was normal.

All patients were administered a session of hyperbaric oxygen therapy and normobaric oxygen therapy during follow-up in the emergency room. After recovering their clinical status, they were discharged.

Conclusion: Hookah consumption is the most observed form of tobacco consumption in the Eastern-Mediterranean Region, and second in the US. Although it’s considered that all toxic agents are filtered while hookah smoke passes through water, hookah consumption increases levels of carcinogen, CO, nicotine, and tar in the blood compared to smoking. It’s striking that COHb values of our cases are as high as, even higher than stove poisoning cases. It must be kept in mind that non-specific symptoms following hookah consumption may be symptoms of CO poisoning.

#7377 : Hepatic venous gas: A case report.

Preferred format : ePoster

Authors:

JIHENE AOUAM (1), MEHDI CHARFI (2), SALOUA HOUIMLI (3), MOUNA TITEY (1), DORSAF BELLASFAR (1), RIM HASSINE (4), ABDELMAJID BEN ROMDHANE (3)

1. Emergency Department, Internal Security Forces Hospital, tunis, TUNISIA
2. department of radiology, internal Security Forces Hospital, tunis, TUNISIA
3. Emergency Department, Internal Security Forces Hospital, Tunis, TUNISIA
4. Department of General Surgery, internal Security Forces Hospital, Tunis, TUNISIA

Keywords: Septic Shok, Peritonitis, Mesenteric Ischemia, Hepatic Venous Gas.

Abstract :

Introduction : Hepatic portal venous gas is an ominous and late radiological sign indicating severe intra-abdominal pathology, with the most common cause being mesenteric infarction. The mechanism inducing this gas in the portal vein is not well understood. The prognosis is more influenced by the severity of underlying disease rather than hepatic portal venous gas itself.

Case report: A 75-years-old female with medical history of anemia and thrombocytopenia. She presented to the emergency department, nine days after surgery, for generalized abdominal pain and fever. She was operated for caecal adenocarcinoma associated with multiple adenomatous polyps in the left colon. A total colectomy with primary anastomosis performed. She was discharged at home six days post-operative. Physical examination revealed a body temperature 39 C, blood pressure 11/6, a pulse rate 130 beats/mn, a respiratory rate 40 cycles/mn. The abdomen was distended with no bowl sounds, generalized tenderness with rebound. Laboratory studies revealed a hemoglobin level at 10g/dl, a white blood cells count of 22900 cells/ul and a prothrombin time of 43.1%. His creatinine level was 54 umol/l and his c-reactive protein level 186 mg/l. A contrast enhanced abdominal CT showed a multiple branching radiolucencis in the periphery of the liver, large amount of gas in the portal and superior mesenteric vein. It showed also an important pneumoperitoneum, ascites and small bowel distension. These finding strongly suggested post-operative peritonitis. Emergency surgery followed. Laparotomy showed a generalized purulent peritonitis with anastomotic leak. Peritoneal wash and closure of rectal stump were performed and ileal stoma constructed. The patient died twenty fours hours after surgery by septic shock.

Conclusion : Porto mesenteric venous gas is a nonspecific radiological sign. Its causes are various but mesenteric infarction and intra-abdominal sepsis were the most common. Abdominal CT allows the diagnosis with high degree of sensitivity and sensibility and identifies the underlying cause. Urgent laparotomy is mandatory without delay to improve the prognosis. The mortality rate remains high and is related mainly to the etiology.

#7378 : Suicides masked in a scene of motor vehicle accidents

Preferred format : ePoster

Authors:

Virgiliu Cezar Bologa (1), Alexandra Bota Crisu (2)

1. EMERGENCY PHYSICIAN, UPU-SMURD SIBIU, Sibiu, ROMANIA
2. PHYSICIAN, Forensics Department Sibiu, Sibiu, ROMANIA

Keywords: suicide, motor vehicle accident, violent death

Abstract :

Background

Compared with suicide, death by accident is much easier to be accepted by both family and society, often for religious reasons. Prehospital emergency teams could be misled by suicides masked by the scene of a motor vehicle accident. Dynamics of production circumstances of deaths due to violence, followed over a period of time at a population level, a geographic area shows interesting trends.

Material and method

Retrospective observational study is based on a total of 1610 autopsies performed at the Forensic Clinical Service Sibiu County, between 01.01.2011 - 31.12.2015.

Results

Of all autopsies performed in the study period, 1031 were of violent deaths.Motor vehicle accidents deaths were 199, representing 19.3 % of violent deaths.Deaths by suicide were 243, representing 23.56 % of all the violent deaths.The distribution by years of death by motor vehicle accidents is: 2011-47 (23.61 %); 2012-38 (19.095 %); 2013-34 (17.08 %); 2014-48 (24.12 %) and 2015-32 (16.08 %).The distribution by years of suicide is: 2011-59 (27.24 %; 2012-53 (21.81 %); 2013-51 (20.98 %); 2014-37 (15.22 %) and 2015-43 (17.69 %).

Conclusions

Dynamic motor vehicle accidents show a steady decline in their number from 47 (23.61 %) in 2011, to 43 (17.69 %) in 2015. Year 2014 is an exception, with the highest number of deaths from motor vehicle accidents: 48 (24.12 %).Suicide dynamics indicate a steady decline slowly, over the study period, from 59 (27.24 %) in 2011, to 43 (17.69 %) in 2015 with a sharp decline, accentuated at 37 (15.22 %) in 2014.During the study, dynamic of motor vehicle accidents deaths and the dynamic suicides show in 2014 variations, with a decrease of 10 to 14 cases of suicides which increase of the deaths caused by motor vehicle accidents. This may be because of the difficulty of identifying, in certain circumstances, a suicide masked in a scene of a motor vehicle accident.The effort to decrease mortality by accident has been effectively demonstrated by the constant decrease during the study of road accident deaths.

#7379 : Changes in urine biomarkers of acute kidney injury among amateur long-distance runners: a prospective cohort study

Preferred format : ePoster

Authors:

Monique Van der Lugt (1), Rick Van der Doelen (1), Nathalie Peters (1), Loes Janssen (1), Jos Le Noble (1)

1. , VieCuri Medical Centre, Venlo, Venlo, NEDERLAND ANTILLES

Keywords: running, kidney injury, urine biomarkers, NGAL

Abstract :

Objective
Running is associated with a healthy lifestyle and improves quality of life. The “Weir Venloop” is a yearly running event and several collapsed runners were admitted to our Emergency Department. Studies with (ultra)marathon participants have shown that long-distance running can be associated with exertional rhabdomyolysis and acute kidney injury (AKI). The level of neutrophil gelatinase-associated lipocalin (NGAL) in urine has shown potential for use as an early biomarker of AKI. The aim of this study was to investigate AKI among amateur long-distance runners by analyzing urinary biomarkers and if these parameters can be related to performance.

Methods
In this observational prospective study we collected urine samples of participants of the 10km and half marathon competing the “Weir Venloop 2015”, immediately before and after the finish. An urine dipstick analysis of hemoglobin, glucose and ketones concentrations was directly performed. Furthermore, the levels of albumin, creatinine, uric acid, sodium and NGAL were measured on the Architect® *c8000* and *i2000* analyzers. Race times were documented.

Results
A total of 35 urine samples (18 male, 17 female) from the 10-km participants and 45 samples (21 male, 24 female) from the half marathon participants were collected. Significant increase in creatinine, albumin, hematuria (dipstick) were found after the race. Urine levels of albumin, hematuria, creatinine and uric acid showed significant correlation with the race times, i.e. exertion. Urinary NGAL significantly increased in male participants, most pronounced after running a half marathon, and uNGAL showed significant correlation with race times but only in the male participants.

Conclusions
Long-distance running was found to be associated with microalbuminuria and hematuria among both male and female participants. A significant increase in uNGAL and significant decrease of sodium was only found in male runners. With this knowledge, we can take better care of the collapsed runner in our ED.

#7380 : Emergency Department Applicability of SOFA Sepsis – Is There a Middle Ground?

Preferred format : Oral presentation

Authors:

Tom Roberts (1), Danny Yookee (2), Matt Edwards (3), Jeff Keep (2)

1. Kings College Hospital Foundation NHS Trust, Emergency Department, London, UK
2. Kings College Hospital Foundation NHS Trust, n/a, London, UK
3. Kings College Hospital Foundation NHS Trust, Kings College London, London, UK

Keywords: Sepsis, SOFA, triage, diagnosis

Abstract :

Background – 2016 has seen the publication of new definitions for sepsis and further evaluation of the SOFA sepsis scoring system. With little involvement from Emergency Department (ED) physicians, the problem now is applying them to the first few hours of patient care. The ED requires a system that sits between the blunt triage tool of 'quick SOFA' (qSOFA) and the intensive-care based and considerably more detailed SOFA Sepsis score. The key area of difficulty with applying the SOFA score is that it relies on changes from patient's baseline. This baseline information, however, is rarely available in its entirely in the critical period of the patient's initial care in the ED. Assuming a baseline score of 0 for all patients will clearly result in overdiagnosis of sepsis in the ED.

Aims

- to illustrate the difficulties in applying the SOFA score within a representative ED population in comparison to the qSOFA and National Early Warning Score (NEWS)
- to develop and test an adapted SOFA score (EDdeltaSOFA) with specific, pragmatic assumptions for the ED relating to existing physiological baseline and pre-existing disease.

Methods

A retrospective analysis was performed of one month's patients notes who had been coded for 'infection' within an ED database. The NEWS and qSOFA score were calculated from recorded vital signs at triage. These scores were then applied against the SOFA score (calculated from blood tests and physiological parameters within the ED) necessarily assuming a baseline as 0 and then against an adapted score.

This adapted SOFA score, the 'EDdeltaSOFA' utilises all the same categories as the SOFA score but allows for a few pragmatic assumptions based on prior knowledge or reasoned clinical suspicion of the patient's baseline physiology. For example, for renal impairment, where previous creatinine is not known but the patient has a history of chronic renal impairment, it seems reasonable to assume a baseline SOFA score of 1 rather than a baseline score of 0.

Results

Within the sample of 169 patients who met criteria, 34 patients were excluded with missing data. 57 patients were positive for SOFA sepsis within the sample with only 42 meeting criteria with the adapted EDqSOFA score. NEWS and qSOFA performed poorly for predicting SOFA sepsis when the patient's baseline physiology score was assumed to be zero. NEWS sensitivity 54% (C.I.s 41-67) specificity 43% (C.I.s 31-54) and qSOFA 55% (C.I.s 42-68) specificity 66% (C.I.s 54-76). They performed better when the EDqSOFA score was applied. NEWS sensitivity 88% (C.I.s 74-96) specificity 49% (C.I.s 39-59) and qSOFA 71% (C.I.s 55-84%) specificity 69% (C.I.s 58-78%)

Conclusion:

The new definitions of 2016 are an extremely welcome step forward in our understanding of the elusive clinical entity of sepsis. It is now the role of Emergency Physicians to apply the knowledge to our clinical environment. The data presented above suggests that there is a promising method of adapting the SOFA sepsis score. It is the authors' intention to develop this tool further and conduct a series of larger validation trials for its use.

#7381 : Out of hospital cardiac arrest: an observational study

Preferred format : ePoster

Authors:

Dorra Chtourou (1), saida zelfani (2), Samia Arfaoui (1), Amina Jebali (1), mylène Ben hamida (2), abdelaziz zouari (2), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA

Keywords: cardiac arrest out-of-hospital resuscitation

Abstract :

Introduction: SAMU teams were frequently called for out-of-hospital cardiac arrest.

The purpose of this study was to evaluate the management and outcome of pre hospital cardiac arrest by the mobile emergency care unit (MECU).

Methods: This was a retrospective study using the MECU-database for all out of hospital cardiac arrest registred from January to December 2015. We studied the demographic charecteristics of patients, their management and their outcome.

Results: During the period of study, 114 prehospital cardiac arrest were management by the MECU teams. The median age was 63 +ou- 15 years, predominantly male (59.5%). The majority of events occured at home (80%) in the pesence of a family member, who did not initiate resuscitation attempt. The medical history was diabetes in 11.3% of cases and coronary disease in 9% of cases. The most frequent reason for calling MECU teams was neurological distress (38%). The average time for MECU sterting was 4+ ou - 3min and the average time to arrival on the scene was 17 + ou - 4 min. Cardiopulmonary resuscitation (CPR) was done for only 56% of ceses and return of spontaneous circulation was obtained for only 7 patients (6%) who were died 48 h after their admission to intensive care unit.

Conclusion: Unsuccessful resuscitations were longer and beyond guideline recommandations when cardiac arrest occured out of hospital

#7382 : NOT TO APLPLY THE CANADIAN SPINE RULE. ECONOMIC COST

Preferred format : ePoster

Authors:

Luis Manclús Montoya (1), María Cuenca Torres (2), Pedro García Bermejo (1), Sergio Navarro Gutierrez (1), Miguel Angel Giner Esparza (1), José María Tenias Burillo (3)

1. Emergency, Hospital Universitario La Ribera, Alzira, SPAIN
2. Research, Hospital Universitario La Ribera, Alzira, SPAIN
3. Medicina Preventiva, Hospital Padre jofre, Valencia, SPAIN

Keywords: Whiplash, Emergency Services

Abstract :

INTRODUCTION

The Canadian Spine rule is an assessment tool used to rule out cervical spine injury in low-risk patients, obviating the need for radiography.

AIM:

Describe the application of simple radiology patients diagnosed with cervical whiplash in a hospital emergency department and analyze whether such requests in accordance with the proposed the Canadian C-Spine rule algorithm.

MATERIAL Y MÉTODOS:

The study was conducted at the Hospital Universitario de La Ribera (Alzira-Valencia-Spain). All the patients diagnosed with a whiplash that were treated between 1st January and 31st December 2015 were included.

The application of imaging tests (Simple radiology, CT, MRI, electromyography and myelography) in patients sample was studied.

For requests of plain radiographs examined whether these requests were made according to The Canadian C-Spine rule.

RESULTADOS:

373 patients were included. A little bit more of a half were females. The age average was 36.84 ±13.76 years old.

Imaging tests were applied to 86.3 % of patients : 82.3 % radiography and 4% (TAC / RM)

In 67.56 % of cases, radiographs requests did not conform to the recommendations of The Canadian C - Spine rule.

This meant an economic impact of 7.350 €.

CONCLUSIONES:

Clinicals of hospital emergency services requested radiography to almost all patients diagnosed with cervical sprain without following the proposed The Canadian C - Spine rule algorithm which results in a health system like the current unjustified cost human and economic resources.

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#7383 : The dynamics of stroke patients in emergency department

Preferred format : ePoster

Authors:

Virgiliu Cezar Bologa (1), Francesca Iulia Paius (2), Lucian Calutiu (2)

1. Emergency Physician , Emergency Department , UPU-SMURD, Sibiu, ROMANIA
2. Paramedic, Emergency Department , UPU-SMURD, Sibiu, ROMANIA

Keywords: emergency room, cerebrovascular accident, hemorrhagic, ischemic, neurological disorders

Abstract :

The dynamics of stroke patients in emergency department

Virgiliu Cezar Bologa(1); Francesca Iulia Paius(1);Lucian Calutiu(1);

1. Emergency Department, UPU-SMURD, Sibiu, Romania

Speaker: Francesca Iulia Paius

Keywords: emergency room, cerebrovascular accident, hemorrhagic, ischemic, neurological disorders

BACKGROUND

In Romania there are approximately 300 cerebrovascular accident(CVA) registered per 100.000 inhabitants per year, compared to a European average of 200 CVA/ 100.000 inhabitants. At the moment in Romania there are approximately 800.000 patients who have suffered from CVA.

The present study focuses on the dynamics of the number of cases of CVA emerged at the Emergency Department-SMURD SIBIU between 01.01.2013 – 31.12.2015, as well as on their hospitalization within the departments of Sibiu County Clinical Emergency Hospital.

MATERIALS AND METHODS

The study was performed through a retrospective observational method on a number of 190268 cases emerged at the Emergency Department of Sibiu County Clinical Emergency Hospital between 01.01.2013 – 31.12.2015, out of which 2864 were diagnosed with CVA.

RESULTS

Out of a total number of hospitalizations within the Emergency Department-SMURD SIBIU between 01.01.2013 – 31.12.2015, the number of cases of CVA was of 2864, which stands for 1,5 % out of the total number of cases.

Out of the total number of 2864 cases of CVA emerged at the Emergency Department, the evolution throughout the 3 years was as follows: 35.71% in 2013, 34.77% in 2014, 29.50% in 2015.

Out of the total number of cases, 2628 (91.75%) were ischemic and 236 (8.24%) were hemorrhagic.

The hourly distribution of strokes throughout the 3 years was as follows: : 8:00 – 14:00 : 40.60% ; 14:00 – 20:00 : 34.11% ; 20:00 – 2:00 : 18.71% ; 2:00 – 8:00 : 6.56% .

The monthly distribution was as follows: January - 8.72%, February - 8.41%, March - 9.25%, April - 9.67%, May - 9.07%, June - 7.92%, July - 7.57%, August - 8.31%, September - 6.66%, October - 8.17%, November - 7.61%, December - 8.58%.

The distribution of CVA patients' hospitalizations according to the hospital's departments was the following: Neurology - 7.39%; Neurosurgery - 3.98%; transferred to regional hospitals - 1.25%; discharged upon request - 7.26%; deceased in the Emergency Department - 0,1% .

CONCLUSIONS

Throughout the studied period, the percent of patients hospitalized at the Emergency Department with the diagnose CVA, decreased from 35.71%

in 2013 to 34.77% in 2014, and to 29.50% in 2015.

The CVA prevalence according to the monthly intervals was maintained throughout the three years by the spring months - March (9.25%), April (9.67%) unlike the autumn months - September (6.66%).

According to the time intervals, the highest number of CVA cases is within 8:00-14:00, followed by those occurring within the second part of the day, the lower number of CVA cases being registered in the interval 2:00 - 8:00.

Out of the total number of 2864 patients diagnosed with CVA, transferred according to departments, 87.39% were hospitalized at Neurology, 3.98% at Neurosurgery and 1.25% transferred to Regional Neurosurgery for the operation of broken aneurisms, and 7.26% were discharged.

#7384 : The effect of using high sensitivity troponins on emergency department admissions

Preferred format : ePoster

Authors:

Isobel Brookes (1), Jason Long (2)

1. , Plymouth University, Glasgow, UK
2. NHS GG&C, none, Glasgow, UK

Keywords: cardiac, chest pain, troponin

Abstract :

In October 2015 an Emergency Department in the West of Scotland implemented a new chest pain protocol in response to a study (Shah *et al.*) that showed by using high sensitivity troponin (hsTnI) levels, patients who had suffered chest pain could be safely discharged earlier. The new protocol uses hsTnI to assess the likelihood of a cardiac cause of chest pain and allows safe discharge of patients with a negative hsTnI as soon as 2 hours after onset of pain. The previous protocol required patients to be admitted for a 12 hour troponin.

This study compared the safety and efficacy of the new protocol against the former protocol. Data was retrospectively analysed from 600 patients (300 from each protocol) using patient records. Patients were included in the study if they had presented with chest pain and had a hsTnI measurement taken. The main factors considered were admission, discharge and re-admission rates. Additional data was gathered to check compliance with the protocol, including chest x-ray and time to ECG. Recommendations from the study are intended to be used to refine the protocol and increase compliance.

The new protocol resulted in a statistically significant decrease in admissions, from 62.3% to 35.7%, to the acute receiving unit (this equates to approximately 1000 admissions per annum). Patients self-discharging from the ED fell from 11 to 2. Re-attendance within one week with chest pain increased from 6 patients to 10. Mean time to first ECG was 39 minutes. The protocol suggests an ECG should be completed within 15 minutes, only 19% of patients met this target. The protocol was followed in 56% of cases, with non-compliance being mainly due to a lack of completion of a repeat hsTnI (despite clinical indications that it was appropriate) or chest x-ray.

In summary this study showed that there was a statistically significant reduction in admissions with chest pain, although it would possible to improve this even further by completing all repeat troponins in the ED to prevent unnecessary admissions. Time to first ECG could also be improved by performing ECGs immediately on presentation.

#7385 : Pre-hospital hypoglycemia: the safety of not transporting treated patients

Preferred format : ePoster

Authors:

Dorra Chtourou (1), saida zelfani (2), Yosra Manai (1), Amina Jebali (1), wafa Limam (2), SLIM JDIDI (3), mounir Daghfous (2)

1. SAMU-SMUR, centre d'aide médicale urgente, tunis, TUNISIA
2. SAMU-SMUR, centre d'aide médicale urgente, Tunis, TUNISIA
3. SAMU-SMUR, centre d'aide médicale urgente, TUNIS, TUNISIA

Keywords: hypoglycemia pre-hospital not transported

Abstract :

Introduction: Mobile emergency care unit (MECU) teams were frequently encounter patients who are not transported after being treated for an hypoglycemic episode. The outcome of these patients are unknown.

The purpose of this study was to determine the outcomes of patients treated for hypoglycemia and not transported and to identify the safety of this attitude

Methods: This was a prospective, observational study involving all adults (aged more than 15 years) hypoglycemic insulin dependent patients (blood glucose less than 4 mmol/ L by glucometer) attended to by the MECU teams three month interval.

Results: There were 36 calls for adult patients with hypoglycemia. for the 9 patients transported, there were 2 further hypoglemic episodes requiring a repeated call for an ambulance (22.2%). for the 28 patients treated and not transported, 9 further episodes of hypoglycemia (32.7%) were reported. These differences were not staticallly significant (p=0.58). There was also no statically significant difference in the intervals between hypoglycemic episodes for patients transported (2 days +ou- 1.5) compared with patients not transported for their previous hypoglycemic episode (3.2 days + ou - 2.6) (p=0.5).

Conclusion: Repeat episodes of hypoglycemia are common; however, there were on difference in the incidence of repeat episodes of hypoglucemia between transported and not transported insulin dependent patients.

#7386 : Circadian variation of pre-hospital occurence of cardiogenic pulmonary oedema

Preferred format : Oral presentation

Authors:

Jitka Callerova (1), Roman Skulec (1), Jiri Knor (1), Patrik Merhaut (1)

1. EMS, Emergency Medical Service of the Central Bohemian Region, Kladno, CZECH REPUBLIC

Keywords: Cardiogenic pulmonary oedema, Circadian variation, Prehospital

Abstract :

Introduction: Circadian variation of in-hospital acute cardiogenic pulmonary oedema (CPE) with the highest occurrence in the early morning has been reported repeatedly. However, no study evaluating circadian variation of CPE in the field has been published. Therefore, we decided to evaluate the circadian variation of CPE in the Central Bohemian Region of the Czech Republic in the patients treated by regional emergency medical service (EMS) and analyse its association with baseline blood pressure in the field.

Methods: We extracted all dispatches to CPE cases from EMS database for the period from 1.11.2008 to 30.6.2014 and analysed for circadian variation. We identified the patients presenting with CPE coupled with arterial hypertension (systolic blood pressure >140mmHg) and hypotension (systolic blood pressure <90mmHg) and compared the subgroups (both subgroups include 2744 subjects).

Results: In 4747 episodes of CPE, maximal occurrence was detected in the ninth hour in the morning, representing 7.7% of all CPE episodes ($p<0.05$). While CPE with hypertension (2463 subjects) reached maximal occurrence also in the ninth hour (7.4% of all cases, $p<0.05$), CPE with hypotension (281 patients) was most frequent in the fourteenth hour (8.6% of all cases, $p<0.05$).

Conclusion: The highest occurrence of CPE was observed in the ninth hour in the morning in our study. Moreover, differences in circadian variation between CPE with hypertension and hypotension were identified. Knowledge of these patterns may have an impact on the logistic of prehospital emergency care and on preventive measures in the patients who have previously undergone CPE.

#7387 : Management of patients admitted to the emergency department due to acute atrial fibrillation episode in North Estonia Medical Centre

Preferred format : ePoster

Authors:

Kaisa Joarand (1), Helena Nestor (2), Toomas Marandi (3)

1. emergency medicine resident, North Estonia Medical Centre, Tallinn, ESTONIA
2. cardiology resident, North Estonia Medical Centre, Tallinn, ESTONIA
3. Cardiologist, North Estonia Medical Centre; University of Tartu, Tallinn, ESTONIA

Abstract :

Introduction

Atrial fibrillation (AF) is a frequent arrhythmia affecting up to 1% of population and is a major contributor of stroke and thrombembolism. AF management involves assessments, rhythm conversion if decided and thromboprophylaxis. Several risk and symptoms scores are used - CHA2DS2VASc (C- congestive heart failure, H-hypertension, A- age ≥75 (doubled), Diabetes, Stroke (doubled), Vascular disease, Age 65- 74, Sex (female)), HAS-BLED (Hypertension, Abormal liver/kidney function, Stroke, Bleeding history or predisposition, Labile INR, Elderly >65, Drugs concomitantly/alcohol abuse), EHRA- European Heart Rhythm Association score.

The aim of this study was to describe the management of acute AF episode in emergency department (ED).

Methods

The study was retrospective. List of patients admitted to ED during the period Oct 01 to Nov 30 2014 due to AF (ICD-10, code I48) was obtained from hospital database. Patients with onset of AF ≤48 h and discharged home from ED were included. Patients, hospitalized or considered not to be subjects for rhythm conversion (electrical, EC or medical, MC), also patients with onset of AF >48 hours, were excluded.

Data about sex, age, outpatient treatment (use of anticoagulants, antiagregants, antiarrhythmics), time of onset of AF,reporting of scores (CHA2DS2VASc, HAS-BLED, EHRA), mode of rhythm conversion in the ED (EC or MC), the use of anticoagulants and antiarrhythmics in ED was collected from patient cards.

Patients were contacted by telephone 6 months after admission and data about anticoagulation, thrombotic episodes and bleeding were collected.

Results

794 patients admitted to the ED, 676 were excluded according to prespecified criteria,118 were included into the final analyses.

There were 50 men and 68 women. 68% of patients were seen in ED during the first 12 hours of onset of AF. In 97 patients (82%) AF was recurrent. 53 patients (45%) used anticoagulants, including 31 patients (58%) warfarin. Metoprolol was used by 37 (31%), propafenon by 24 (20%) and amiodarone by 4 patients (3%). 13 patients (11%) used metoprolol and propafenon concomitantly.

CHA2DS2VASc score was reported in ED for 7 patients(6%), other scores were not reported.

113 patients (96%) were treated with antiarrhythmics in ED (82 (72%) metoprolol, 80 (71%) propafenon, 32 (28%) amiodaron).

From 65 patients, not using anticoagulants before admission, 38 were treated by enoxaparin. 27 patients didn’t get any anticoagulation.

Electrical cardioversion was performed in 34 patients (29%), 30 of them were anticoagulated. Sinus rhythm was restored in all of them. Medical cardioversion was done in 79 patients. Sinus rhythm restored spontaneously in 5 patients. Further anticoagulation was advised to 65 patients (55%).

All patients were attempted to contact by telephone 6 months after admission, 59 were reached – 42 were currently using some anticoagulant/antiagregant, 18 reported bleeding (11 haematomas, 2 gastrointestinal haemorrhage). Thrombotic event was reported once- ischaemic stroke in a patient taking warfarin and 5 patients died.

Conclusion

Our analysis revealed wide variability in management of patients with AF in our ED. Thus, local treatment guidelines should be updated, use of scores recommended (CHA2DS2VASc, HAS-BLED, EHRA) and education courses planned as a part of implementation programs.

#7388 : Combined treatment of artificial dermis and vacuum-assisted closure for huge developing necrotizing fasciitis with severe sepsis

Preferred format : ePoster

Authors:

Kaneko Mayuko (1), Chijiwa Tsuyoshi (2), Matsuoka Tatsuki (3), Yoshioka Hayato (3), Hasegawa Eiju (3), Kato Hiroshi (3)

1. doctor, Department of emergency and critical care medicine, National Hospital Organization Disaster Medical Center, Tachikawa, Japan
Department of Gastroenterology, Dokkyo Medical University Koshigaya Hospital, kosigaya, JAPAN
2. doctor, Department of Emergency and Critical Care Medicine, Saitama Medical Center, Jichi Medical University, Saitama, JAPAN
3. doctor, Department of emergency and critical care medicine, National Hospital Organization Disaster Medical Center , Tachikawa, JAPAN

Keywords: VAC, NPWT, artificial dermis, sepsis, necrotizing fasciitis

Abstract :

Surgical debridement for necrotizing fasciitis leaves patients with extensive defects. Various treatments and surgical techniques have been developed for functional and aesthetic restorations in affected cases. Artificial skin substitutes have widely been in use for repairing complex tissue defects. These substitutes serve as scaffoldings for the fibroblasts and endothelial cell ingrowth and provide good dermal regeneration templates. However, engraftment of artificial skin substitutes remains slow and incomplete. To overcome these weaknesses, vacuum-assisted closure (VAC) systems have been used over the artificial dermis, and this combined treatment seems efficient and less invasive. We used this combined method in a few cases of severe necrotizing fasciitis concurrent with various intensive treatments for systemic septic shock. Case 1 was a 67-year-old woman with necrotizing fasciitis in her left inguinal region. She had septic shock caused by streptococcal infection and untreated diabetes. Multi-antibiotic therapy and direct haemoperfusion with polymyxin B-immobilized fibre column (PMX-DHP) were administered in the intensive care unit. The combination of artificial dermis and VAC performed after minimal invasive debridements. Her general condition gradually recovered. Finally, the autologous skin engrafted completely without joint contractures. Case 2 was a 49-year-old man with necrotizing fasciitis on his right leg, which had resulted in complex tissue defects involving multiple tendons and the exposure of tibia. He was also sepsis with poorly controlled diabetes, and his wound culture had revealed both fungi and bacteria. He was treated with antibiotics and antimycotic agents in the intensive care unit. After serial debridements, he underwent the combination of artificial dermis and VAC. His wound healed and his general condition improved. After the autologous skin engrafted, he was discharged in an ambulant state. The combined use of artificial dermis and VAC is less invasive than conventional tie-over dressing and makes it possible to treat bedside. VAC sucks up the inflammatory exudation. We are likely to immobilize the artificial dermis and enables patients to receive early rehabilitation. Because of VAC suctioning bacteria themselves, this combination is more effective than artificial dermis alone from the perspective of infection control. The quality of the treatment not only increases the engraftment rate but also decreases the complications and the risks of infection due to the use of artificial dermis, which is vulnerable to infection. Our results suggest that VAC combined with artificial dermis is an effective method for repairing refractory soft tissue necrosis and useful even in a severe condition.

#7389 : More than a simple laceration: extremity vascular injury

Preferred format : ePoster

Authors:

Ian Hong (1), Wei Lin Tallie Chua (2)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
2. Emergency Medicine, Singhealth, Singapore, SINGAPORE

Keywords: pseudoaneurysm, penetrating injury, vascular injury

Abstract :

Introduction

Lacerations and minor penetrating injuries commonly present to the Emergency Department (ED). It is still crucial to thoroughly assess for any associated neurovascular injury and/or injury to deeper structures in the management of such injuries. We present a case of a small laceration which had serious underlying vascular injury.

Case

A 41 year-old gentleman presented to the ED after having slipped and sustaining a stab injury by a metal file which he happened to be holding on his thigh. There were two small linear wounds (1.5cm and 2cm) over the right upper inner thigh, actively bleeding but controlled with compression. A toilet and suture was performed for the two wounds and the patient was discharged.

He re-presented to the ED 3 days later complaining of increasing pain over the wound with surrounding haematoma. Although he had been massaging the area at home, there was no obvious repeat trauma and no symptoms of anaemia. There was ecchymosis over the anterior aspect of the thigh up to the knee. Distal pulses were present. Hb was 10mg/dL. He was discharged to follow-up at primary care.

On his 3rd visit 3 days later for worsening bruising and pain, he was found to have extensive bruising involving his entire right lower limb and calf, tracking up to the perineum and right iliac fossa. Sutures were still in-situ over the wounds with no active bleeding. Distal pulses were present and there were no other signs of compartment syndrome. Hb dropped from 10 to 8.5mg/dL in 3 days. He was admitted and found to have a 7x3cm and 1.5x1.5cm pseudoaneurysm of the right profunda femoris which was embolised. The patient was then discharged well.

Discussion

This case highlights the importance of excluding neurovascular involvement deep tissue injury in any penetrating injury, no matter how innocuous the external wound may look. Signs of vascular compromise can be divided into hard and soft signs. Patients with hard signs such as absent pulses, bruit/thrills, active or pulsatile haemorrhage, pulsatile or expanding haematoma, signs of limb ischaemia or compartment syndrome warrant urgent surgical or interventional radiological intervention.

In the absence of hard signs, soft signs such as diminished pulses, mononeuropathy, non-expanding hematoma should be actively looked for. An arterial pressure index (API) should be measured if soft signs are present or if the injury is proximal to a main vessel, there was evidence of hypotension or moderate bleeding at scene, or if knee or elbow dislocations were sustained. A CT angiogram should be considered in an API of <0.9 with soft signs.[i] Patients with normal API still need close follow up on discharge as 1-4% of these patients with penetrating wounds eventually require operation for progression of an undetected injury.[ii] [iii]

#7390 : Acute epiglottitis in adults: Who needs airway intervention?

Preferred format : ePoster

Authors:

Ryuhei Igeta (1), Makoto Sera (2), Taizo Nakanishi (2), Hideya Nagai (2), Hideyuki Matano (2), Shinsuke Tanizaki (2), Shigenobu Maeda (2), Hiroshi Ishida (2)

1. Emergency Depertment, Obama Hospital, Obama-shi, JAPAN
2. Emergency Depertment, Fukui Prefectual Hospital, Fukui, JAPAN

Keywords: acute epiglottitis

Abstract :

Objective

Acute epiglottitis is a potentially life-threatening condition as an airway emergency, therefore early diagnosis and airway management are essential.

Although laryngoscopy is the gold standard for the diagnosis of acute epiglottitis, this invasive procedure can be dangerous and sometimes hard to perform for emergency department (ED) physicians. In this context, we investigated how the clinical manifestations and X-ray findings can contribute to the diagnosis and proper airway management in patients with acute epiglottitis.

Methods

We conducted a retrospective chart review of patients with acute epiglottitis aged 18 years or above at the presentation who visited our ED between 2005 and 2014.

We evaluated the number of days between the onset and the ED visit, signs and symptoms (sore throat, dysphagia, salivation, dyspnea, muffled voice, and stridor), and examination findings (the width of the epiglottis (EW) on lateral neck X-ray and the degree of swelling of the epiglottis on laryngoscopy).

Results

Out of the 47 patients identified in this study, 10 required airway intervention such as tracheal intubation, tracheotomy, or cricothyroidotomy. More than half of the patients visited the ED within one day of onset. Dyspnea was seen with higher frequency in the patients with airway intervention (90% in the airway intervention group vs 24% in the non-airway intervention group, $p<0.01$).All of those diagnosed with severe swelling of the epiglottis on laryngoscopy required airway intervention. Lateral neck X-ray was taken in 29 patients, 4 of whom required airway intervention. EW was 7mm or greater in 28 of them. The median value of the airway intervention group (4 patients) and the non-airway intervention group (24 patients) were 25.5mm (interquartile range (IQR), 22.3-30.25) and 11.2mm(IQR, 9.3-18) respectively, significantly greater in the airway intervention group ($p<0.01$).EW was 20mm or greater in all four patients with airway intervention who underwent lateral neck X-ray.

Conclusions

Patients without dyspnea on arrival are more likely to be treated without airway intervention. Lateral neck X-ray can be helpful both in the diagnosis of acute epiglottitis and in the prediction of those who require airway intervention.

#7391 : Anemia expression of upper gastrointestinal hemorrhage

Preferred format : ePoster

Authors:

Ramona Ganea (1), Virgiliu Cezar Bologa (2), Denisa Elena Vintila (1), Francesca Iulia Paius (1)

1. Paramedic, Emergency Department , UPU-SMURD, Sibiu, ROMANIA
2. Emergency Physician , Emergency Department , UPU-SMURD, Sibiu, ROMANIA

Keywords: anemia, gastrointestinal bleeding, ulcer, esophageal varices

Abstract :

Anemia expression of upper gastrointestinal hemorrhage

Virgiliu Cezar Bologa (1) ; Denisa Elena Vintila(1) ; Ramona Ganea(1); Francesca Iulia Paius(1);

1. Emergency Department, UPU-SMURD Sibiu, Sibiu, Romania

Keywords: anemia, gastrointestinal bleeding, ulcer, esophageal varices

Speaker : Denisa Elena Vintila

BACKGROUND

The upper gastrointestinal bleeding is 5 times more frequent compared to the lower one. UGIB has a prevalence of approximately 170 cases per 100.000 inhabitants per year!!!

The present study aims to evaluate the incidence and etiology of the upper gastrointestinal bleeding at the patients who arrived at the Emergency Department of Sibiu County Clinical Emergency Hospital as well as their hospitalization according to the hospital's departments.

MATERIALS AND METHODS

The study was performed through a retrospective observational method on a number of 190268 cases emerged in the Emergency Department of Sibiu County Clinical Emergency Hospital between 01.01.2013 – 31.12.2015, out of which 848 were diagnosed with UGIB.

RESULTS

Out of the total number of cases registered at the Emergency Department of SMURD Sibiu between 01.01.2013 – 31.12.2015, 848 were UGIB, which represents 0.4 %.

The distribution of the 848 cases of UGIB emerged at the Emergency Department of SMURD Sibiu for the studied period was as follows: 316 (37.26%) in 2013, 276 (32.54%) in 2014, 256 (30.18%) in 2015.

Out of the total number of UGIB cases, 141 (16.62%) were cases where patients have associated severe anemia, and 707 (83.37%) were cases where patients have shown mild and moderate anemia.

According to the etiology of UGIB, the following values were registered: 28 (3.30%) cases of esophageal varices, 67 (7.9%) cases of gastric and esophageal neoplasms, 753 (88.79%) cases of gastric and duodenal ulcer.

The distribution of hospitalizations of patients with UGIB according to the hospital's departments was the following: Gastroenterology - 80.42%; Surgery - 2.12%; Medical - 7.42%; Oncology - 0.4%; refused hospitalization - 9.43%.

CONCLUSIONS

Between 2013 – 2015 the percent of patients diagnosed with UGIB, hospitalized at the Emergency Department, decreased: 2013 -37.26%, 2014 –32.54%, 2015 –30.18%.

Out of the total number of UGIB cases, 141 (16.62%) were cases where patients have associated severe anemia, and 707 (83.37%) were cases where patients have shown mild and moderate anemia.

The majority of UGIB cases were caused by ulcer: 753 (88.79%) registered cases, the rest being represented by gastric and esophageal neoplasms (7.9%) and bleeding esophageal varices (3.30%).

Out of a total number of 848 patients diagnosed with UGIB, the hospitalization according to the hospital's departments was as follows: Gastroenterology - 80.42%; Surgery - 2.12%; Medical - 7.42%; Oncology - 0.4%; Discharged - 9.43%.

#7392 : The rate of road traffic accidents emerged in the emergency department

Preferred format : ePoster

Authors:

Ioan Lucian Marian (1), Virgiliu Cezar Bologa (2), Andreea Liliana Bocai (1), Lucian Calutiu (1), Francesca Iulia Paius (1)

1. Paramedic, Emergency Department , UPU-SMURD, Sibiu, ROMANIA
2. Emergency Physician , Emergency Department , UPU-SMURD, Sibiu, ROMANIA

Keywords: traffic accidents, poly-trauma, head injuries, emergency room

Abstract :

The rate of road traffic accidents emerged in the emergency department

Virgiliu Cezar Bologa(1); Andreea-Liliana Bocai(1); Ioan Lucian Marian(1); Lucian Calutiu(1); Francesca Iulia Paius(1);

1. Emergency Department, UPU-SMURD Sibiu, Sibiu, Romania

Keywords: road traffic accidents, poly-trauma, head injuries, emergency room

Speaker : Andreea-Liliana Bocai

BACKGROUND

Trauma ranks as the 4th most common cause of death after cardiovascular diseases, cancer and respiratory diseases.

The present study focuses on the distribution of traumatic cases caused by road traffic accidents emerged at the Emergency Department of Sibiu County Clinical Emergency Hospital as well as their gravity in the above mentioned period.

MATERIALS AND METHODS

The study was performed through a retrospective observational method on a number of 190268 cases emerged in the Emergency Department of Sibiu County Clinical Emergency Hospital between 01.01.2013 – 31.12.2015, out of which 1645 were road traffic accidents.

RESULTS

Out of a total of 190268 arrivals at the Emergency Department of SMURD Sibiu, the number of traumas caused by road traffic accidents was 1645, which represents 0, 86%, distributed as follows: 522 patients (31.73%) in 2013, 568 patients (34.52%) in 2014 and 555 patients (33.73%) in 2015.

A number of 1068 out of these patients were not required hospitalization, which represent 64.92% and 568 patients were hospitalized, which represent 34.52%.

The distribution of hospitalizations for the severely traumatized patients by road traffic accidents was the following: Orthopedics - 236 (41.55%), Surgery - 137 (24.12%), Neurosurgery - 128 (22.54%) and the rest for other departments.

Throughout the studied period a total of 114 patients were deceased because of road traffic accidents, distributed as follows: 34 patients (29.82%) in 2013, 48 patients (42.1%) in 2014, and 32 patients (28.07%) in 2015.

The distribution per months of the patients traumatized because of road traffic accidents was increased throughout the period of July, August and December, representing 33.58%.

According to the localization of the traumatism, the majority were: 771 cranial traumas, 716 member traumas, 518 thoracic traumas, 421 injuries, 312 spinal cord traumas, 120 pelvic traumas and 114 abdominal traumas.

CONCLUSIONS

The number of victims caused by road traffic accidents was relatively constant, maintaining the same curve both in the case of severe accidents and in the case of deaths caused by road traffic accidents as well.

The majority of hospitalizations determined by road traffic accidents were in Orthopedics, followed by Surgery and Neurosurgery.

The cranial trauma was most frequently associated with the rest of conditions.

The highest frequency of road traffic accidents was throughout the months of July, August and December.

The severe accidents and deaths have a constant frequency according to the number of cases.

#7393 : Problematic patients with acute alcoholic intoxication in Emergency Room

Preferred format : ePoster

Authors:

Wataru Yajima (1)

1. Emergency department, Jikei medical university, Tokyo, JAPAN

Keywords: acute alcoholic intoxication

Abstract :

In Japan, patients with acute alcoholic poisoning often occupy beds in Emergency Room(ER) and impede medical care for other patients.
Jikei medical university hospital is located near the downtown in Tokyo and we receive almost 300-500 patients with acute alcoholic poisoning a year.
Statistical analysis showed patient age and staying time in ER had a positive correlation.Also, male patients tended to call ambulances more often than female patients,but there was no significant difference in staying time in ER between male and female patients.
Patients visiting to ER by ambulances tended to stay in ER longer than walk-in patients. The mean time was 165.1 min and 124.9 min,respectively.
Mean staying time in all patients was 159.5 min and maximum staying time was 810 min.
We also analyzed data from alcoholic concentration and Γ-GTP in serum ,the presence of head injury and the number of cases which failed to respond to a demand of emergency transportation because of all-beds occupied.
Patients with acute alcoholic intoxication in ER are problematic not only in that they occupy ER beds long time but also they occupy beds for severe patients and sometimes we have to decline emergency transportation.

#7394 : Kicking off a retropharyngeal abscess

Preferred format : Oral presentation

Authors:

Laura Heffernan (1), Abdullah Bin Rauf (1), James Binchy (1)

1. Galway University Hospital, HSE, Galway, IRELAND

Keywords: retropharyngeal abscess, atypical presentation, trauma

Abstract :

Introduction

Retropharyngeal abscesses (RPA) are deep neck space infections that can pose an immediate life-threatening emergency, such as airway obstruction. The potential space can become infected by bacteria spreading from a contiguous area or direct inoculation from penetrating trauma. Infection is often polymicrobial and the source is usually oropharyngeal flora (most commonly group A beta-hemolytic streptococci). The incidence of RPA is declining due to the widespread use of antibiotics for upper respiratory tract infections (URTI).

Methods

We describe an atypical presentation of RPA in a three year old girl who attended with a history of post-traumatic neck pain.

Case History

MB presented to the Emergency Department with neck pain and reduced range of motion following a kick to the neck by a sibling. Her mother witnessed the accident and felt that it was a mild trauma, with disproportionate pain afterwards. Of note, MB had an ongoing URTI for which she had been treated with antibiotics one week previously. On examination, MB was irritable and held her head in slight flexion, resisting any neck movements. Her pain was severe, requiring opiate analgesia. She was constitutionally well; eating and drinking, haemodynamically stable and apyrexic. Her tonsils were not inflamed and she had no signs of inflammation of the posterior pharyngeal wall. Blood tests revealed a normal white cell count with a raised CRP (50) and ESR (99). Given the history of trauma, a cervical spine x-ray was performed which showed psuedosubluxation of C2/C3 with a concern regarding facet joint injury, which was further characterized by CT. As physicians were focused on the boney structures, pre-vertebral soft tissue swelling (which was visible on both x-ray and CT) was overlooked. Ultimately, MRI revealed a RPA without any traumatic bone injury. The RPA was incised and drained. Cultures grew Haemophilus influenzae for which she was treated with antibiotics. She recovered well without any negative sequellae.

Discussion

In this case the presenting history of mild trauma did not explain the clinical picture of our patient, however there were no clinical signs of an infective cause of neck pain.

Influenced by the history of trauma, physicians both arranged and interpreted imaging with a view to identifying boney injury. Although psuedosubluxation at C2/C3 is a recognized finding in children, the history of trauma was concerning. Therefore a non-contrast CT was performed to visualize the vertebrae and facet joints, albeit sacrificing soft tissue detail to reduce radiation dose. MRI ultimately defined the RPA however in retrospect, swelling of the prevertebral soft tissues was visible on both the x-ray and CT.

MB did not have classic symptoms and signs of RPA. She did have a URTI which may have triggered her RPA but this is not a certainty. It is also possible that the recent course of antibiotics masked her symptoms.

Conclusion

This case highlights an unusual presentation of a common disease and reminds us that trauma can often be a red herring in a patient’s presentation.

#7395 : Colonoscopy-associated pneumoperitoneum, pneumothorax and pneumomediastinum

Preferred format : ePoster

Authors:

Er Kian-Ching (1)

1. Emergency department, Dalin Tzu Chi Hospital, Chiayi, TAIWAN

Keywords: colonoscopy, pneumoperitoneum, pneumothorax, pneumomediastinum

Abstract :

Colonoscopy-associated pneumoperitoneum, pneumothorax and pneumomediastinum

KIAN-CHING ER, YI-KUNG, LEE

EMERGENCY DEPARTMENT, DALIN TZU CHI HOSPITAL, TAIWAN(R.O.C)

Introduction: Colonoscopy is used both diagnostically and therapeutically and permits examination and treatment of the colon, rectum, and a portion of the terminal ileum. As a rare but serious complication, colonic perforation appears to occur in 0.2% to 0.5% of diagnostic colonoscopies with up to a threefold increase with therapeutic colonoscopies. Intraluminal air may pass through the abdomen and/or thorax. To date, there have been only rare reported cases of combined pneumoperitoneuma, pneumothorax and pneumomediastinum resulting from colonoscopy.

Case report: Our patient, an eighty three year-old man with past hx of transverse colon cancer over hepatic flexture s/p right hemicolectomy, underwent colonoscopy with procedural sedation for regular workup. During the procedure, subcutaneous emphysema developed. Patient was immediately sent to ED. Due to respiratory distress, endotracheal intubation was done. Image studies showed pneumothorax, pneumomediastinum and pneumoperitoneneum. Chest tube insertion was done. As patient’s family refused aggressive surgical intervention, patient was then sent to ICU for further treatment. Patient was transferred to original ward from ICU and discharged smoothly under the conservative and antibiotic treatment.

Discussion: Colonoscopy-associated perforations typically occur by barotrauma, mechanical trauma and electrocautery injury during polypectomy. Depending on the site of injury, it is also possible for air to enter the retroperitoneum. This occurs when a visceral wall defect results in pneumotosis coli. The air will track back the bowel wall and omentum and subsequently reach the retroperitoneum. When this happens, direct communication to the mediastinum existed. Due to the rupture of mediastinal parietal pleural, concurrent penumothorax will developed. Despite a relative rare reports of iatrogenic pneumothorax and pneumomediastinum after colonoscopy, this potential complication happens whenever a colonic perforation occurs. Due to the potentially devastating consequences, clinician should more alert of these iatrogenic complications.

#7396 : The impact of adrenaline on haemodynamics during experimental cardiac arrest

Preferred format : Oral presentation

Authors:

Roman Skulec (1), Anatolij Truhlar (2), David Astapenko (3), Vladimir Cerny (4)

1. EMS, Emergency Medical Service of the Central Bohemian Region, Kladno, CZECH REPUBLIC
2. EMS, Emergency Medical Service of Hradec Kralove Region, Hradec Kralove, CZECH REPUBLIC
3. Department of Anesthesiology and Intensive Care, Charles University in Prague, Faculty of Medicine in Hradec Kralove, University Hospital Hradec Kralove, Hradec Kralove, CZECH REPUBLIC
4. 1Department of Anesthesiology, Perioperative Medicine and Intensive Care, J.E. Purkinje University, Masaryk Hospital Usti nad Labem, Usti nad Labem, CZECH REPUBLIC

Keywords: experimental cardiac arrest, epinephrine, coronary perfusion pressure

Abstract :

Introduction: Out-of-hospital cardiac arrest is a critical condition. Despite of providing sophisticated pre-hospital therapeutic strategy, return of spontaneous circulation (ROSC) is reached at only 30-40%. It has been demonstrated that coronary perfusion pressure (CoPP) higher than 15 mm Hg is associated with increased chance of ROSC. For that purpose, intravenous administration of 1 mg of adrenaline every 3-5 minutes during advanced life support has been recommended. However, there has not been published any clinical study demonstrating a clear outcome benefit associated with this approach and the role of adrenaline during advanced life support is questioned. Therefore, we performed an experimental study to investigate intra-arrest haemodynamic effect of adrenaline in a porcine model of ventricular fibrillation.

Methods: After preparation, cardiac arrest with ventricular fibrillation was induced in 14 female domestic pigs. After 2 minutes of untreated cardiac arrest, mechanical cardiac compressions were delivered for 3 minutes and cardiac compressions with mechanical ventilation for further 10 minutes. Then, a defibrillation shock was delivered to reach ROSC and experimental animals were monitored for 20 minutes. Prior to cardiac arrest induction, the animals were randomly assigned to receive either 15 µg/kg of adrenaline intravenously fifth and tenth minute of cardiac arrest (group A, 7 animals) or to undergo life support without administration of adrenaline (group B, 7 animals). Besides of usual vital signs, invasive arterial blood pressure, central venous pressure, intracranial pressure (ICP) and end tidal CO_2 were monitored. CoPP and cerebral perfusion pressure (CPP) were calculated.

Results: While ROSC was reached in all 7 group A animals, in group B only in 5 experimental animals (p=0.127). CoPP and CPP values were comparable at the baseline and during the first 5 minutes of cardiac arrest. Each adrenaline administration induced an increase of CoPP in group A when compared with group B (6^{th} minute: 30.6±6.4 vs. 14.3±3.2 mm Hg; 11^{th} minute: 29.4±8.5 vs. 12.3±2.4 mm Hg, p<0.001) followed by a subsequent decrease to group B values in the end of adrenaline dosing interval. Moreover, we observed a similar pattern of significant CPP increase in group A, whereas ICP values exhibited no difference from the group B animals. Adrenaline administration was associated with significantly higher $EtCO_2$ values throughout the protocol (p<0.005).

Conclusions: Regular adrenaline administration led to a significant increase of CoPP, CPP and EtCO2 in our model of experimental cardiac arrest. This resulted in a higher chance of achieving ROSC. Adrenaline did not induced unfavourable increase of ICP values. The results support routine clinical use of adrenaline with a strong emphasis on compliance with distinct intervals of its administration, rather 3-4 minutes than 5.

#7397 : Unexpected contralateral event

Preferred format : ePoster

Authors:

Isabel Fernández-Marín (1), Víctor Sánchez Alemany (1), Ana Belén Carlavilla Martinez (1), Ana Sánchez Morla (1), María Lorena Castro Arias (1), Luis Yubero Salgado (1), María Cuadrado Fernández (1)

1. Emergency Department, Hospital Universitario 12 de Octubre, MADRID, SPAIN

Keywords: Cardiac Catheterism, Contralateral Pneumothorax, Pacemaker, Contralateral Hemothorax, Pacemaker implantation, Hemopneumothorax

Abstract :

Unexpected contralateral event

87 years old male with known cardiovascular risk factors, history of cardiac arrest treated with stent implantation and right coronary permanent pacemaker for symptomatic atrial dysfunction.

The patient came to the Emergency Room with right pleuritic chest pain and associated dyspnea for four days, he states that the symptoms began after the pacemaker implantation.

On admission the physical exam was normal, hemodynamically stable, afebrile and basal oxygen saturation of 99 % without cardiopulmonary auscultation findings nor in the rest of the examination.

Blood tests without alterations, NT-proBNP 411, raised D dimer, electrocardiogram with sinus rhythm at 50 bpm without alterations and chest radiograph suggestive of right pleural effusion.

Chest X ray after the pacemaker implantation was reviewed (Left subclavian access) describing a right pneumothorax.

Assessment was completed with a Chest CT describing a right hemopneumothorax.

Thoracic Surgeons were consulted during hospitalization, who decided to place an anterior drainage which drained blood. The patient was admitted to the Thoracic Surgery Service.

- Clinical diagnosis:

Iatrogenic right pneumothorax after pacemaker implantation.

The patient was admitted with good evolution. He was valued by the Arrhythmia Unit during the income. They considered the release of one of the active fixation system during the procedure as the most probable cause of the hemopneumothorax. There was not a perforation in auricular cable's current location.

- Conclusions:

The frequency of complications related to implant pacemaker is variable and is betweens 6% ato 9%, and there are different factors related to them.

The most common are related to an inexperienced operator and with the concurrence of heart failure prior to implant.

Pneumothorax is a rare complication, especially contralateral to the puncture point used to channel the path.

#7398 : The biggest found

Preferred format : ePoster

Authors:

Isabel Fernández-Marín (1), Víctor Sánchez Alemany (1), María Cuadrado Fernández (1), Carlos Rubio Chacon (1), Luis Pérez Ordoño (1), Susana Borruel Nacenta (2), Ana Belén Carlavilla Martinez (1)

1. Emergency Department, Hospital Universitario 12 de Octubre, MADRID, SPAIN
2. Radiodiagnosis Department, Hospital Universitario 12 de Octubre, MADRID, SPAIN

Keywords: Lithiasis, Stone, Huge Stone, Abdominal Pain, Hematuria, Giant intravesical lithiasis, Hipogastrium, Hydronephrosis, Renal Failure, Hyperkalemia

Abstract :

The biggest found

52-year-old woman with history of treated depressive syndrome.

Came to the Emergency Room because of dysuria, urinary frequency and urgency without fever, with slight lower abdominal pain associated in the last hours.

As a past medical history the patient reported a previous cystitis episode treated with Norfloxacin.

On physical examination the patient was calm and alert, blood pressure 105/80 mmHg with a heart rate of 117 bpm, temperature 34.8Cº (96.64 Fº) and eupneic with basal O2 Saturation in 99%.

Initial laboratory evaluation revealed Creatinine 5.61 mg / dl, potassium 7.6 meq / liter, PCR 13.27 mg / dl, 17500 leukocytes with 14300 PMNn, prothrombin activity 72%. Venous blood gases: pH 6.89 and HCO2 8. Normal values for the rest of the hemogram and biochemistry.

Urinalysis revealed urine sediment with more than 300 leukocytes per field and over 300 red cells per field.

We diagnosed the patient an urological sepsis with acute renal failure, metabolic acidosis and secondary severe hyperkalemia with no electrocardiographic changes.

We proceeded to bladder catheterization with adequate diuresis and purulent urine output.

Treatment was initiated with fluid therapy, Dextrose and insulin, bicarbonate and intravenous Ceftriaxone, with improved renal function analytical control as well as ionic disorders and acid-base balance.

Abdominal X ray was requested where we objectified a 9 centimeters diameter lithiasic image in hypogastrium. We ordered an abdominal CT, in which expansion of both renal excretory systems was seen. We also saw some adjacent fat change suggestive of inflammatory changes with giant intravesical lithiasis.

- Clinical diagnosis:

Severe sepsis with mixed urological renal failure in relation to giant bladder stones.

Urology was consulted and decided urgent surgery to perform a litopalaxia and a double bilateral J catheter placement. The patient evolved favorably during the income and was discharged after 8 days of hospitalization. Urology revisions were scheduled.

- Conclusions:

The giant bladder stone is a very rare disease requiring diagnostic imaging. It is manifested by repetition sepsis, urinary frequency and stranguria.

Ultrasound and plain radiographs are sufficient for diagnosis. Continuous calculation extraction is the treatment of choice.

#7399 : Non-traumatic coma in the Emergency Department

Preferred format : Oral presentation

Authors:

Massimo ZANNONI (1), Gianni TURCATO (2), Alberto RIGATELLI (3), Valentina SIVERO (2), Francesco BUONOCORE (3)

1. Emergency and Accident Department, Azienda Ospedaliera Universitaria Integrata, Verona (VR), Italy, VERONA, ITALY
2. Postrgraduate Emergency School, University of Verona, VERONA, ITALY
3. Emergency and Accident Department, Ospedaliera Universitaria Integrata, Verona, VERONA, ITALY

Keywords: unconsciousness, coma, emergency department,

Abstract :

A limited number of studies investigate patients admitted to the Emergency Department (ED) for non-traumatic coma (NTC). Aim of our study was to investigate aetiology and acute outcome of patients referring to the ED due to a NTC. All the adult patients admitted to the ED in Verona (Italy) from May 2011 to March 2016 with a Glasgow Coma Score below 10 were included in the analysis. Post-traumatic coma or subjects with a major trauma were excluded from the study. A brain computerized tomography scan was performed in all the patients and the cause of impaired consciousness was explored by instrumental and laboratory data available in the ED before patient to be discharge to the hospital ward or at home, if applicable. Acute outcome is reported too. During the study period 1,742 patients were admitted for NTC: 1,046 males, 696 females (mean age: 59,7 years; range: 18-101 years). Stroke caused NTC in 805 (46.2%) patients, heart failure in 304 (17,4%), metabolic disorders in 203 (11.7%), epilepsy in 188 (10.8%), respiratory insufficiency in 110 (6.3%), intoxication in 64 (3.7%), infection in 51 (2.9%) and malignancy in 17 (1%). Gender analysis showed males to have a higher prevalence of heart failure (20.2% vs 14.3%) NTC. On the other hand stroke (50% vs 43%) and malignancy (1.4% vs 0.7%) were higher in females. When dividing the study population by age, aged (over 65 years old) had higher prevalence of NTC due to respiratory insufficiency (7.9% vs 3.9%) and infection (4% vs 1.4%). Epilepsy (12.5% vs 9.9%), malignancy (1.6 vs 0.6%) and intoxications (6.8 vs 1.5%) were more frequent in patients below the age of 66 years. Diagnostics and patient stabilization in the ED accounted of 2 hours and 42 minutes (SD: 3 hrs 28 min) occupancy of the shock room. We had 29 fatalities in the Emergency Room, 21 patients were discharged home. The remaining patients were admitted mostly to intensive care units (1,262) or medical specialties (330) rather than ,medical wards (150). Diagnosis of non traumatic coma in the Emergency Department is a real challenging situation, requiring human and diagnostic resources for a significant amount of time. Intensive care units are often the final destination of most of these patients and diagnosis has a paramount importance in order to avoid hospital resources to be overwhelmed. On the other hand we have to consider NTC a serious condition requiring swift medical or surgical decision making upon arrival at the emergency department to give the best chances to the patient in terms of survival and long time clinical sequelae.

#7400 : An audit of procedural sedation in adults in the emergency department.

Preferred format : ePoster

Authors:

Eve Foley (1), Mark Harrison (2)

1. Acute Care Common Stem Anaesthetics, Northumbria Specialist Emergency Care Hospital, Newcastle Upon Tyne, UK
2. Emergency Medicine, Northumbria Specialist Emergency Care Hospital, Newcastle Upon Tyne, UK

Keywords: sedation

Abstract :

Introduction

Sedation is commonly administered in the Emergency Department (ED) to promote relaxation or sleep during painful or distressing procedures. Given correctly sedation can improve a patient's experience of an unpleasant procedure. However sedative drugs can be unpredictable and if used incorrectly can cause unexpected complications and even death. The Royal College of Emergency Medicine (RCEM) designed the following audit to reflect the need to address safety before, during and after the administration of sedation for a procedure in the ED.

Aims

1. To benchmark current performance in emergency departments against RCEM/RCOA (Royal College of Anaesthetists) and AoMRC (Academy of Medical Royal Colleges) clinical guidelines
2. To allow comparison nationally
3. To identify areas in need of improvement
4. To provide a baseline for future comparison
5. To develop a local document which outlines the fundamental concepts for delivering safe sedation which can also be used to document procedural sedation in patient notes.

Standards

1. There should be documented evidence of the patient's informed consent unless lack of mental capacity has been recorded.
2. Patients undergoing procedural sedation in the ED should have documented evidence of pre-procedural assessment
3. Procedural sedation should be undertaken in a resuscitation room or one with dedicated resuscitation facilities
4. Sedation requires the presence of all of the below:
    1. A doctor as seditionist
    2. A second doctor or emergency nurse practitioner (ENP) as procedurist
    3. A nurse
5. Monitoring during procedural sedation must be documented to have included all of the below
    1. Non-invasive blood pressure
    2. Pulse oximetry
    3. Capnography
    4. ECG
6. Oxygen should be given from the start of sedative administration until the patient is ready for discharge from the recovery area
7. Following procedural sedation, patients should only be discharged after documented formal assessment of suitability.

Methods

This was a retrospective case note audit from January 2015 to January 2016. The inclusion criteria, as defined by the RCEM, consisted of adult patients aged over 16 years, undergoing procedural sedation. Patients receiving Entonox (50% nitrous oxide/oxygen) only, opiates only or Entonox and opiates in combination were excluded. Our sample size was 50 patients.

Results

Pre-procedure assessment of ASA grade was documented in 10% of cases, potential airway difficulty was assessed in 2% of cases and fasting status in 8% of cases. Most patients were sedated with a benzodiazepine but in 20% of cases the agent used was not recorded in the notes. Only 32% of patients had blood pressure monitored, 30% ECG monitoring, 20% capnography and 34% pulse oximetry. Only 28% of patients had oxygen during the procedure. Post sedation assessment was virtually completely unrecorded.

Conclusion

The results of this audit indicate that currently our department is not meeting the standards set by RCEM before, during or after the sedation. Whether this is because the standards were physically met at the time of sedation but just not documented in the notes we cannot be sure. We plan to design and implement a document to be used for procedural sedation cases to improve patient safety and our documentation of clinical practice.

#7401 : Case report: Massive pulmonary embolism in pregnancy – Intra-arrest thrombolysis and resuscitative hysterotomy

Preferred format : Oral presentation

Authors:

Ngua Chen Wen (1), John Taylor (2), Matthew Carwardine (3)

1. Emergency Unit, University Hospital of Wales, Cardiff, South Glamorgan, UK
2. Emergency Unit, Royal Gwent Hospital, Newport, UK
3. Anaesthetic Department, Morriston Hospital, Cardiff, UK

Keywords: Massive pulmonary embolism, cardiac arrest in pregnancy, intra-arrest thrombolysis, resuscitative hysterotomy

Abstract :

Background

Massive pulmonary embolism is a leading cause of maternal death and may require intra-arrest thrombolysis as well as resuscitative hysterotomy.

Case Report

The case presented is that of a 35-year-old primigravida at 28 weeks gestation. The patient was brought to the Emergency Department in cardiac arrest with cardiopulmonary resuscitation (CPR) ongoing with a paramedic ambulance crew. Initial rhythm was PEA; return of spontaneous circulation (ROSC) was obtained following one cycle of the Advanced Life Support (ALS) protocol and adrenaline bolus. Spontaneous circulation was not sustained; episodic CPR with adrenaline boluses was required. Resuscitative hysterotomy was performed intra-arrest. The baby was given to the neonatal arrest team; it had no output and did not survive despite resuscitation attempts. Echocardiography was performed during maternal resuscitation using the Focused Echocardiography Evaluation in Life Support (FEEL) protocol revealing a grossly dilated right heart. The patient was thrombolysed intra-arrest with 100mg Alteplase. ROSC was obtained post thrombolysis and output was maintained thereafter. Inotropic support was initiated and surgical haemostasis was achieved in the resuscitation room. Repeat echocardiography showed good biventricular function. The patient was transferred to the Intensive Care Unit where despite improved cardiovascular status subsequent computed tomography (CT) brain revealed catastrophic irreversible hypoxic injury. Treatment was withdrawn with the support of family members. Post mortem examination confirmed massive pulmonary embolism as the cause of death.

Conclusion

Intra-arrest thrombolysis can significantly restore and improve cardiovascular status in cardiac arrest caused by massive pulmonary embolism. Thrombolysis is not contraindicated in maternal resuscitation where resuscitative hysterotomy may also be required.

#7402 : Evaluation of blood cultures profitability performed in 2014 in a emergency department

Preferred format : Oral presentation

Authors:

Sofiane YEFSAH (1), Christelle HERMAND (1), Alessandra PUIG (2), Jessica ROUCHE (2), Félicité GEFFRIER (2), Ines LEUNG (2), Barbara SAKAROVITCH (2), Dominique PATERON (2)

1. SAU St Antoine, CHU St Antoine, Paris, FRANCE
2. SAU St Antoine, APHP, Paris, FRANCE

Keywords: sepsis, blood cultures, infectiology, emergency department

Abstract :

Introduction : Sepsis represents 11.2% of emergency room visits. Blood cultures sampling is one mean for microbiological documentation of sepsis. We questionned the profitability of this exam in an emergency department, the state of local practices and we research predictive positive blood cultures factors.

Material and method : Descriptive retrospective single-center study. Data were collected from the hospital bacteriology laboratory without exclusion criteria from January 1st 2014 to December 31th 2014.The search for positive predictive criteria was carried out from January 1st 2014 to 1 February 1st 2014.

Résults : Among 57,430 patients who had consulted in the emergency department concerned over the study period, 2401 samples were performed of which 226 were positive for 9.4% profitability. These samples corresponded to 1939 patients included representing 170 patients who had at least one positive blood culture. The profitability per patient was 8.8%.The average number of samples per patient was 1.24. The predictive positive blood cultures criteria found were: central catheter sampling (OR 3.73 95% CI [2.29; 5.92], p <0.001), the presence of central catheters (OR 4.17 95% CI [2 43; 6.98], p <0.0001), the sampling of more than one blood cultures per patient (versus 1 blood culture: OR 2.77 95% CI [1.88; 4.04] p <0.001 for 2 blood cultures , oR 7.36 95% CI [3.98; 13.29] p <0.001 for 3 blood cultures and more), age ≥65 years (OR 1.89 95% CI [1.41; 2.54] p <0.0001), the notion of immunosuppression (OR 2.86 95% CI [1.00; 8.18] p = 0.03), the notion of fever (OR 3.45 95% CI [1, 13; 12,61] p = 0.02), fever at admission (OR 3.8 95% CI [1.31, 11.55] p = 0.007), hospitalization (OR 8 45 95% CI [1.28; 358.74] p = 0.02), practice of urinary screening (OR 2.91 95% CI [1.02; 9.02] p = 0.03)

Discussion : Our study was underpowered for the search criteria predictive of positive blood cultures, a study on a larger sample would be appropriate to adapt our practices.

Conclusion : The profitability of blood cultures in the study site was comparable to literature data (from 5 to 15%). Highlighting positive predictive criteria is a way to improve our practices but requires further studies, prospective in particular.

#7403 : Five-year trends in computed tomography of pulmonary angiogram (CTPA) for suspected pulmonary embolism: a retrospective review

Preferred format : ePoster

Authors:

Ngua Chen Wen (1), Timothy Rainer (2)

1. Emergency Unit, University Hospital of Wales, Cardiff, South Glamorgan, UK
2. Emergency Medicine Academic Unit, Cardiff University, Cardiff, UK

Keywords: computed tomography of pulmonary angiogram (CTPA), pulmonary embolism,

Abstract :

Background

CTPA is considered the gold standard for diagnosing pulmonary embolism (PE), and evidence of right heart strain suggests sub-massive PE.

Method

A retrospective review of 5 years CTPA scans was performed at a tertiary teaching hospital, University Hospital of Wales (UHW) from August 2010 to July 2015. The objective of this study is firstly to assess changing trends in the incidence of emergency department (ED) diagnosed acute PE and submassive PE, secondly to evaluate the pick up rate against Royal College of Radiologist (UK) recommendations.

Result

Of the total 1507 CTPA scans requested in the ED, 270 (17.9%) were positive for PE, and at least 80/270 (29.6%) could have been categorized as submassive PE. Just over half (54%) of the positive CTPA scans reporting did not mention any radiographic evidence of right heart strain. There was a four-fold rise requested CTPA scans from 2010 to 2015. The positive yield over the years however decreases from 20.1% to 16.4%.

Conclusion.

There is a trend in increased requests in CTPA, and a higher absolute rate in pick up in PE which is within the acceptable range proposed by the Royal College of Radiologist UK.

#7404 : It´s not always a child´s play

Preferred format : ePoster

Authors:

Patricia Boned Blas (1), Teresa Fernando Gros (2), Rocio Escriche Ros (2), Alicia Baguena Garcia (2), Alba Gallego Royo (2)

1. Emergency, Hospital Royo Villanova. Zaragoza, zuera, SPAIN
2. Emergency, Hospital Royo Villanova. Zaragoza, zaragoza, SPAIN

Keywords: anemia, celiac disease, edema

Abstract :

Female patient 44 years old without important antecedents. She came to the emergency room for facial and lower extremities edemas accompanied by dyspnea and asthenia important with amenorrhea three months and not altered bowel habits.

On examination: Important pale skin and mucous membranes, rest nondescript except edemas. Additional tests: blood count Hb 7.1, Hct 21, VCM 147, 139000 platelets . Abdominal ultrasound hepatomegaly with increased echogenicity its suggestive of steatosis. Study prior to transfusion anemia is requested and entered in Internal Medicine.

During admission other tests are performed . Normal gastroscopy, blood. folic ac> 20 ng / ml, negative antiendomysial AC, AC antitranglutaminasa 10 (positive)

Intestinal transit thickening compatible with jejunal loops with celiac box, small bowel biopsy: chronic duodenitis with marked villus atrophy.

It is diagnosed by folic acid deficiency and celiac disease and treated with folate supplements and gluten-free diet. During follow-up in outpatients presents elevation of transaminase, GGT 788 and hepatomegaly, paresthesia persistent in lower extremities accompanied by loss of strength, enter again to conclude study being realized EMG compatible with sensory polyneuropathy of axonal predominance in moderate degree, and liver biopsy with steatohepatitis and pericellular fibrosis

During admission hypertransaminasemia normalizes, we can not be attributed to nutritional deficiencies polyneuropathy or increased ferritin and MCV, but due to existing alterations as well as the presence of teleangectasias and hypertrophy of parotid makes us think of a harmful drinking , so that rehabilitation begins during admission

Conclusion:

Celiac disease is an autoimmune disorder that can occur in genetically predisposed people where the ingestion of gluten leads to damage in the small intestine. It is estimated to affect 1 in 100 people worldwide. When people with celiac disease eat gluten (a protein found in wheat, rye and barley), their body mounts an immune response that attacks the small intestine. These attacks lead to damage on the villi, small fingerlike projections that line the small intestine, that promote nutrient absorption. When the villi get damaged, nutrients cannot be absorbed properly into the body.
The most common form is classical with esteatorreica diarrhea, malnutrition, abdominal distention and growth arrest. Left untreated, celiac disease can lead to additional serious health problems. These include the development of other autoimmune disorders like Type I diabetes and multiple sclerosis (MS), dermatitis herpetiformis (an itchy skin rash), anemia, osteoporosis, infertility and miscarriage, neurological conditions like epilepsy and migraines, short stature, and intestinal cancers as in our case. All these variants can induce diagnosis delay. Intestinal biopsy remains the gold standard

#7405 : Thromboembolic Disease in Pregnancy – Acute Management

Preferred format : Oral presentation

Authors:

Hina Iftikhar (1), Mahnoor Lallmahamood (2), Anna Iqbal (2), Christopher McQuitty (2), Jacqueline Sia (2), Neil Campbell (2)

1. Acute Medicine , Broomfield Hospital, Chelsmford, UK
2. Acute Medicine , Broomfield Hospital, Chelmsford, UK

Keywords: Pregnancy, Thromboembolic Disease, Acute Management, Objective testing, Diagnosis, Thromboprophylaxis, Anti-coagulation

Abstract :

Background:

Venous thromboembolism (VTE) including deep venous thrombosis (DVT) and pulmonary embolism (PE) remains one of the main direct causes of maternal death according to the Centre for Maternal and Child Enquiries. The risk of antenatal VTE is four to five folds higher in pregnant versus non-pregnant women. Acute VTE should be suspected in pregnant women with signs and symptoms of DVT and PE.

The subjective clinical assessment is unreliable in pregnancy and only a minority of women with suspected VTE have the diagnosis confirmed with objective testing. Failure to obtain objective diagnosis and subsequent treatment has been attributed to mortality in these patients according to the sequential reports on Confidential Enquiries into Maternal Deaths. Early recognition of VTE and widespread use of low-molecular-weight-heparin (LMWH) thromboprophylaxis until the diagnosis is reached by objective testing can prevent mortality.

Method:

A retrospective study of 46 pregnant patients referred to acute ambulatory care unit with suspected VTE (suspected PE n=24, suspected DVT n=22) was conducted over a 1 year period.

Patient demographics (age, gestation), signs and symptoms consistent with VTE, predisposing risk factors (Wells score), thromboprophylaxis with LMWH, objective testing with investigations including bloods (d-dimer<250), Chest X-rays, ECGs, Duplex Ultrasound, Ventilation perfusion (V/Q) or CT pulmonary Angiogram (CTPA) scans were analysed.

Results:

The mean age of our pregnant patients was 31 years (18-43). The mean presentation with suspected VTE was at 27 weeks.

21(46%) out of 46 patients were given LMWH thromboprophylaxis prior to objective testing. 25(64%) patients did not receive thromboprophylaxis due to prompt access to radiological imaging, low suspicion index of VTE(negative d-dimer, low Wells score) or maternal refusal until imaging was conducted. 1(2.5%) out of these 25 patients had a positive DVT scan and was commenced on LMWH immediately.

D-dimer was raised in 21(46%) patients, negative in 7(15%) patients but proven positive in 1 patient for a DVT and not conducted in 18(39%) patients given a high index of suspicion for a VTE.

9(37%) patients suspected of having a PE had a CXR and 1(4.2%) CXR was suggestive of consolidation. ECGs were performed in all patients (100%).

Of the 46 pregnant patients with suspected VTE, 5(11%) patients had a confirmed VTE on objective testing. 25(54%) patients underwent a Duplex Ultrasound, 6(13%) underwent a CTPA, V/Q scan was not conducted in any patient. 3(14%) out of 22 patients with suspected DVT had a positive duplex ultrasound. 2(8%) out of 24 patients with suspected PE had a confirmed VTE 1(4%) positive CTPA and 1(4%) positive duplex ultrasound.

Conclusion:

Pregnancy is associated with a hypercoagulable state, increasing the risk of VTE. The subjective clinical assessment of VTE is unreliable in pregnancy and if clinically suspected, treatment with LMWH should be commenced immediately until a definitive diagnosis is reached by objective testing. D-dimer is affected due to physiological changes in pregnancy and should not be relied upon. Radiological objective testing with patient counselling should be considered in all suspected cases to confirm or exclude VTE, leading to appropriate management in these high risk patients.

#7407 : Awareness of Emergency physicians to the Adverse Drug Reactions reporting: the effect of an Italian pharmacovigilance project.

Preferred format : Oral presentation

Authors:

Barbara Gabrielli (1), Roberta Marino (2), Federica Caldera (3), Mariangela Esiliato (3), Aldo Tua (2), Francesco Saverio Moschella (2), Roberto Corgnati (3), Roberta Petrino (2)

1. Emergency Department, Sant'Andrea Hospital Vercelli, Vercelli, ITALY
2. Emergency Department-Sant'Andrea Hospital, Vercelli, Vercelli, ITALY
3. Pharmacy Department-Sant'Andrea Hospital, Vercelli, Vercelli, ITALY

Keywords: Adverse Drug Reactions, Pharmacovigilance, Drug reaction reporting system

Abstract :

Background

Voluntary reporting is a fundamental tool to increase knowledge about drug security and postmarketing surveillance. Several epidemiological studies show that a good percentage of Emergency Department (ED) visits are due to adverse drug reactions (ADRs). Nonetheless, under-reporting of these events is still frequent. Therefore, intervention is needed to educate ED physicians on a continuous pharmacovigilance activity.

Methods

A pharmacovigilance project has been initiated on September 2012 in Sant'Andrea Hospital of Vercelli, Italy, involving both pharmacists and emergency doctors. In this study the reporting trend of ADRs in the ED has been evaluated from 2011 to 2015, and the effect of the project on clinical practice was considered. The project didn't provide a training phase for the physicians before its onset.

Results

Vercelli Hospital is a secondary hospital in Piedmont region. The activity of ED can be considered as uniform from 2011 to 2015 regarding overall visits (average: 38378 patient per year), middle age (52,75 years), triage color average rate, in terms of clinical priority (red codes: 1,41%; yellow codes: 13%; green codes: 75,3%; white codes: 10,20%) and clinical problems distribution (traumatic pathologies average rate: 29,4%; non-traumatic pathologies average rate: 70,6%). The ADRs reporting in this five years interval was: 1 in 2011 (before the pharmacovigilance project), 14 in 2012, 132 in 2013, 172 in 2014, 263 in 2015.

Conclusions

At Vercelli hospital ED, considering an uniform population evaluated, the starting of a pharmacovigilance project, without a direct training for the physicians, has increased the awareness of ADRs reporting among them, with a progressive increase of the reports and a more careful attitude to consider drug interactions as a possible cause of signs and symptoms evaluated in ED. The collaboration between physicians and pharmacists has made the process much simpler.

#7409 : Epidemiology of patients admitted with chest pain and the care they received at Emergency Trauma Centre, Teaching Hospital Karapitiya, Galle, Sri Lanka.

Preferred format : Oral presentation

Authors:

Arosha Abeywickrama (1), Roshel Wijenayaka (2), Malsha Nethmini (2), Hemajith Tharindra (3), Shelton Perera (4), Vijitha De Silva (5)

1. Consultant Physician, Emergency Trauma Centre, Teaching Hospital, Karapitiya, Galle, Sri Lanka, Galle, SRI LANKA
2. Demonstrator, Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, SRI LANKA
3. Social works instructor, Faculty of Medicine, University of Ruhuna, Galle, SRI LANKA
4. Director, Teaching Hospital, Karapitiya, Galle, SRI LANKA
5. Senior Lecturer, Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, SRI LANKA

Keywords: epidemiology of chest pain, care received at emergency trauma centre

Abstract :

Introduction: Teaching Hospital Karapitiya (THK) is located within the city limits of Galle, the capital of southern Sri Lanka. THK is the second largest hospital in the country, with over 1800 inpatient beds and serves as the referral hospital for southern Sri Lanka.

The Emergency Trauma Center (ETC) was established in THK in year 2011.Over 15,000 patients are evaluated annually. This preliminary study was conducted to evaluate the outcome of patients presenting with non-traumatic chest pain to ETC.

Methods: Cross sectional study was carried out among the all patients admitted to the ETC with the complaint of non-traumatic chest pain. All the eligible patients admitted to ETC during the three months starting from January 2016 were recruited to the study. Data was collected by two trained doctors using an interviewer administered questionnaire after obtaining the informed consent. Final part of the questionnaire on admission parameters were completed using the patients notes. Data analysis was carried out using SPSS.

Results: Two hundred eligible patients were recruited to the study. Out of them over two thirds (68%) were males. Mean age of the patients was 57.5 years with a SD of 13.6 and a range of 24 to 86 years. Large majority (91%) of patients were from the Galle district and other 9% were from Matara and Hambanthota districts. Over 75% of people are living in rural areas of above 3 districts. 80% of the patients directly got admitted by themselves to the ETC due to their symptoms. Another 15% were transferred by the peripheral hospitals to the ETC and other 5% were referred by the outpatient department of THK and by general practitioners. Out of the patients 43.5% had past history of ischemic heart disease, 27.5% had hypertension and 17.0% had diabetes mellitus. At the ETC 17.0% of patients were diagnosed to have STEMI, 14.5% with NSTEMI and 28.0% with Unstable Angina. 40.5% of patents were diagnosed as having chest pain of non-cardiac origin. Only 6% of the patients got their cardiac enzymes checked during the stay in ETC and out of them only 25% got a positive result. Only 3% had primary PCI with 100% success rate and 12.5% had thrombolysis (Streptokinase) at the ETC. ACS protocol for NSTEMI was followed in the treatment of 96.5% patients of NSTEMI and ACS protocol for Unstable Angina was followed in the treatment of 94.6% patients with Unstable Angina. Out of the 200 patients, nobody died during the ETC stay and 77.5% were transferred to wards and 22.5% were transferred to the cardiac intensive care units for further management.

Conclusions: Majority of patients who presented with chest pain had ischemic heart disease and most of them had one or more vascular risk factors. Primary PCI is not freely available yet in our hospital and Streptokinase is the choice of thrombolytic due to the low cost.

#7410 : “One for all, all for one” -case series for ‘Triple Lumen Dialysis Line” in Resuscitation.

Preferred format : ePoster

Authors:

Alhady Yusof (1), Zenab Abdel Rahman (2)

1. Emergency Medicine-Intensive care Medicine, Hamad Medical Corporation, Doha, QATAR
2. Trauma/Critical Care Fellow, Hamad Medical Corporation, Doha, QATAR

Keywords: Triple Lumen dialysis Catheter-Central Venous Catheter

Abstract :

Abstract

Introduction

Does an ‘ideal’ central line for emergency and resuscitation use exist? What are its essential characteristics? - A line that allows a high infusion rate of resuscitation fluids during severe bleeding and shock; the availability of multiple ports that can be used for vaso-active agents as well as simultaneous infusion of several incompatible medications; the flexibility of using the same line to initiate emergency haemo-dialysis if necessary; the availability of an ‘extra port’ to initiate vasopressor therapy in hypotensive cases during dialysis. Currently in our Emergency Department, (ED) we stock at least 4 different types of central lines based on all the traditional use mentioned above – Pulmonary artery catheter sheath introducer (for rapid fluid resuscitation), triple lumen central line (for vaso-active and multiple medication infusion), double lumen ‘vascath’ dialysis line, and triple lumen dialysis line with ‘extra port’. We hypothesize the use of the latter as a central line that can be used in all 4 case scenarios. The triple lumen dialysis line (TLDL) we are using has a 11G, 12G and a 16G access ports. The manufacturer claimed flow rates of 320mls/min, 250mls/min, and 55mls/min respectively. We have been using TLDLs in our busy tertiary teaching hospital ED for the last 2 years.

Methods:

We are reporting 4 cases to describe the successful use of the TLDL in different clinical scenarios: 1. A 30 year old male who presented with a massive haematemesis, reduced conscious level, blood pressure (BP) of 50/30mmHg and pulse rate (PR) of 150bpm. TLDL was inserted to accommodate rapid fluid resuscitation and multiple simultaneous blood product infusion; 2. A 45 year old female who presented with 3 day history of fever, increased urinary frequency and a BP of 70/40mmHg despite 2 liters of crystalloid resuscitation. TLDL was used for noradrenalin and vasopressin infusion; 3. A 24 year-old male presented with 2 weeks history of diarrhea and increased lethargy. He was normotensive, but dehydrated with very high creatinine reading and a potassium level of 8mmol/L. He remained anuric despite 3 liters of fluid and conservative therapy. TLDL was inserted to allow for urgent dialysis in the ED; 4. A 75 year old man with a background history of heart failure presented with septic shock of unknown origin. His BP remained relatively low despite judicious fluid resuscitation. He was oliguric so TLDL was inserted in his right internal jugular vein to fine tune the management of his cardiovascular status. A small dose of noradrenalin was started to keep a mean arterial pressure of 70mmHg. Despite this, his renal function continues to deteriorate and he was commenced on haemo-dialysis 2 days later in the Intensive Care Unit.

Results:

We discuss the pros and cons of the TLDL being the only available central line for initial use in the ED.

Conclusion:

It is quite clear from our experience that TLDL can function as the initial central line of choice for all critical care scenarios we faced in our ED.

#7411 : Pneumomediastinum secondary to cocaine insufflation: an uncommon cause of central chest pain

Preferred format : ePoster

Authors:

Geraint Phillips (1), Laura Birks (1), Abdo Sattout (1)

1. Department of Emergency Medicine, Aintree University Hopsital, Liverpool, UK

Keywords: Pneumomediastinum, Mediastinal Emphysema

Abstract :

Introduction

Mediastinal emphysema, or pneumomediastinum, is the abnormal presence of air within the mediastinum and can result in life-threatening complications. A proportion of pneumomediastinum cases have been attributed to cocaine smoking and insufflation.

Case

A 20-year-old man, normally fit and well, presented to the Emergency Department (ED) with an eight-hour history of central pleuritic chest tightness radiating to the back and associated with lower neck pain. He was a non-smoker but admitted to occasional cocaine use.

He stated to have consumed an unquantified amount of alcohol and cocaine (via insufflation) over the previous three days. He was haemodynamically stable and examination of the neck revealed right-sided palpable subcutaneous emphysema. Electrocardiogram (ECG) displayed normal sinus rhythm whilst a plain chest radiograph (CXR) showed a linear shadow outlining the left heart border with significant anterior subcutaneous emphysema. Urgent computed tomography (CT) of the chest confirmed mediastinal emphysema whilst contrast swallow studies ruled out a concomitant oesophageal perforation.

The patient was managed conservatively and discharged with an outpatient follow up.

Discussion

Pneumomediastinum and associated subcutaneous emphysema result from the proximal tracking of free air from ruptured alveoli along peri-bronchiolar sheaths towards the mediastinum and deep fascial tissues of the neck. Repeated forced deep inspiration and Valsalva manoeuvres associated with cocaine use cause local barotrauma as a consequence of the alternating pressure gradients across the alveolar wall which result in alveolar rupture and subsequent air dissection. This in turn leads to air-tracking and the development of mediastinal and subcutaneous emphysema. This phenomenon is well-documented in cocaine smoking, with recent cases also identifying cocaine insufflation as another aetiology.

A secondary causative mechanism has also been hypothesised; it suggests direct toxic damage to alveolar cells further precipitates alveoli rupture and hence the development of pneumomediastinum. However, this is more likely a consequence of prolonged exposure to cocaine rather than acute use.

Pneumomediastinum and associated subcutaneous emphysema are rare but significant complications of illicit drugs use, including nasal insufflation of cocaine, and can often be present with mild, nonspecific symptoms such as chest pain, dyspnoea, dysphagia, dysphonia and cough.

As demonstrated by our case, the condition is usually self-limiting and can be managed conservatively. However, it is essential to monitor potential respiratory complications and to undertake further investigations (CT scans and other contrast studies) to exclude other causes such as mediastinitis, tracheal and oesophageal rupture, pneumopericardium, pneumorrhachis and airway compression.

Conclusion

Patients frequently present to the ED complaining of chest pain following cocaine use. Although the majority will not experience any adverse effect, it is important to be vigilant for signs of pneumomediastinum and prudent to organise a plain CXR to confirm such occurrence.

#7412 : Presence and prognostic value of elevated high-sensitivity cardiac troponin in patients with acute ischemic stroke - a retrospective analysis.

Preferred format : ePoster

Authors:

Keskpaik Triinu (1), Kuido Nõmm (2), Sirli Saar (3), Ingel Tärk (3)

1. emergency medicine resident, Tartu University Hospital, Tartu, ESTONIA
2. MD, head of the emergency department, Tartu University Hospital, Tartu, ESTONIA
3. medical student, Tartu University Hospital, Tartu, ESTONIA

Keywords: Acute ischemic stroke, prognostic value of high-sensitivity cardiac troponin.

Abstract :

Introduction

Cerebrovascular and cardiovascular diseases are major causes of death and disability worldwide. Because of the close association between stroke and cardiac disease, current American Heart Association/American Stroke Association (AHA/ASA) guidelines for the early management of patients with acute ischemic stroke recommend assessment of cardiac biomarkers (preferably cardiac troponin [cTn]) in all patients presenting with acute ischemic stroke. In Tartu University Hospital at the time of this study cardiac troponin was not routinely assessed in these patients.

The aim of our study was to evaluate the presence of elevated high-sensitivity cTn on admission and its impact to neurological improvement and short term survival in patients with acute ischemic stroke.

Methods

This is a retrospective study of all patients admitted to the Tartu University Hospital emergency medicine department with signs and symptoms of acute ischemic stroke in a one year period (January 2014 to December 2014). In our hospital criteria for stroke „alarm“ is any stoke warning sign or symptom regardless of the severity of neurological deficits within 4,5 hours. In this analysis we included only these patients who received thrombolytic therapy. Patients were divided into two groups according to their cTnT value, less than 14ng/L versus ≥14ng/L. We use highly sensitive assay in our hospital. National Institutes of Health Stroke Scale (NIHSS) dynamics from admission to 7th day score was used to evaluate the neurological improvement. As for short term survival, patients who left the hospital alive formed one group and the ones who died within the current stroke case formed the second group.

Results

Altogether we had 263 stroke „alarm“ patients, 165 of them were diagnosed with acute stroke and 143 patients received thrombolytic therapy. From those, cTn-hs was measured in 55% (n=79) of cases on admission to the emergency department. cTnT-hs was elevated (≥14ng/L) in 54% of these patients (n=43). Statistical linear model showed that patients, whose cTn-hs was below 14ng/L had better neurological improvement compared with patients whose cTnT-hs was above 14ng/L (NIHSS dynamics 5.75 in cTnT-hs less than 14ng/L group versus NIHSS dynamics 0.93 in cTnT-hs ≥14ng/L group, p= 0.0082).

We found no correlation between elevated troponin and short term survival (p=0.38).

Conclusions

According to our study elevated cTnT-hs corresponds with worse neurological improvement in patients who are diagnosed with acute stroke and treated with thrombolytic drug. No relationship was revealed with elevated cTnT-hs and short time survival, but since our cohort was very small this is inconclusive.

Elevated cTnT has a potential prognostic value in acute stroke patients and should be routinely measured in patients hospitalized to the emergency department as acute stroke patients.

Key words
Acute ischemic stroke, prognostic value of high-sensitivity cardiac troponin.

#7413 : A CASE REPORT: KOUNIS SYNDROME, HEART ATTACK CAUSE

Preferred format : ePoster

Authors:

Sergio Aznar (1), Vanessa Heras (1), Ezra Honan Roiz (1), Gema Esteban (1), Cesar Briega (1), María Isabel Carrasco (1), María José Jimenez (2)

1. Emergencies Department, Hospital Principe de Asturias, Alcalá de Henares, SPAIN
2. Emergencies Department, Hospital General de Guadalajara, Guadalajara, SPAIN

Keywords: Kounis syndrome, heart attack, nonSTEMI

Abstract :

47-year-old male with sudden onset severe abdominal pain after the ingestion of food. Profuse sweating, strong weakness, distal coldness and feeling of dysthermia. No nausea or vomiting. He denies chest pain.

Does not have medicine allergy or cardiovascular risk factors except smoking.

Physical examination:

Vital signs: BP: 60/40 mmHg, 99 bpm, Temperature: 36.7ºC

Conscious and oriented. Eupneic. Paleness with sweaty skin. Erythema in thorax with wheal skyn lesions.

Cardiopulmonary auscultation without pathological data.

The abdomen is soft, depressible, pain to hypogastrium palpation without peritoneal irritation signs. No hernias.

Complementary tests:

- ECG: Sinus tachycardia of 103 bpm without data of interest.
- Chest x-ray: whitout significant radiological findings.
- Blood test: slight leukocytosis (16100) with predominance of neutrophils (81.8%), the rest of the hemogram is normal. Biochemistry: hyperglycemia (221) and slightly increase of Troponin I up to 0.23 (normal: <0.06).

Differential diagnosis:

In a clinical diagnosis compatible with shock we value different causes: hypovolemic, cardiogenic, obstructive or distributive.

The anaphylactic shock (distributive) is produced by the mast cells release, of sudden appearance, is characterized by low blood pressure, skin rash, urticaria, bronchospasm and digestive symptoms such as pain, vomiting and diarrhea.

Evolution and Discussion:

Initially treated with serum-therapy and administering of 0.5 mg of adrenalin improving clinically with BP 130/80 mmHg and rash disappearance.

Second Troponin of 0.46 (↑) again, reason for which suspected Non-ST-Elevation Miocardial Infraction (NonSTEMI) in the context of anaphylactic shock initiating treatment with dual antiplatelet therapy, and was admitted to hospital to complete the study: Normal Echocardiogram and coronary angioplasty without injuries in the coronary arteries. Obtained values of positive Tryptase and IgE specific for Anisakis. The final diagnosis was Kounis syndrome type I.

The Kounis syndrome is the simultaneous appearance of acute coronary events and anaphylactic allergy reactions. Through histamine and leukotrienes on smooth muscle can cause the onset of vasospastic angina.

Two subtypes I and II are distinguished: without coronary disease and with atheromatous coronary artery disease, respectively. A Type III postulates for patients with stents thrombosis produced by mast cells and eosinophils.

The diagnosis is clinical by the presence of signs suggesting an allergic reaction and a coronary event simultaneously. There are no pathognomonic tests and in case of suspicion of it, we must carry out: EKG to assess ST alterations in relation to vasospasm, blood test with Troponin and tryptase levels. Echocardiogram and cardiac catheterization allow to complete the study.

It should be noted that many of the drugs used separately in anaphylaxis or in ACS can present contraindications when both episodes appears simultaneously. The adrenalin that can aggravate ischemia of ACS and induce vasospasm. The drugs used in ACS can aggravate anaphylaxis: acetylsalicylic acid cause drug allergic reactions, nitrates are contraindicated in hypotension and tachycardia, and morphine can give rise to mast cell degranulation.

Kounis syndrome is infrequent and probably under-diagnosed. Unawareness can cause undesirable effects for the prognosis and evolution of patients that suffer it in case of present interactions between different drugs used in their treatment.

#7414 : Emergency fasciotomy as treatment for upper limb compartimental syndrome of the new born. Case report

Preferred format : ePoster

Authors:

Baguena Alicia (1), Escriche Rocio (2), Pardo Teresa (2), Hamam Sami (3), Fernando Teresa (2), Bonez Patricia (4)

1. Emegncy, Hospital Royo Villanova, Zaragoza, SPAIN
2. Emergency, Hospital Royo Villanova, Zaragoza, SPAIN
3. Traumatology, Hospital Miguel Servet, Zaragoza, SPAIN
4. Emergncy, Hospital Royo Villanova, Zaagoza, SPAIN

Keywords: compartment syndrome, New born, fasciotomy

Abstract :

Introduction: The compartment syndrome in the newborn is a rare disease. It is often initially misdiagnosed due to the low incidence of this disease and because lesions suggest other conditions of the newborn. The initial presentation varies from a local skin lesion to gangrene of the forearm. Early diagnosis and intervention are critical to achieve the best results and to avoid the consequences of prolonged ischemia, such as the development of sensorimotor disorders or Volkmann contracture.

Objectives: Describe the treatment and management done in a newborn compartment syndrome, by exposing a case.

Methods: We present a case of a 48-hour newborn fruit of the fifth pregnancy of young woman with two healthy children. We explain clinical symptoms and diagnostic tests that led to the diagnosis of compartment syndrome. Upper limb emergency fasciotomy was performed including dorsal and volar forearm, carpal tunnel, elbow flexure and distal volar arm. The operation was detailed by photographs taken from the surgical area. We describe the subsequent evolution and outcome.

Results: Periodic fasciotomies cures and artificial skin closure were performed. The patient today (one month after the intervention) has improved forearm mobility without becoming full, no pain, and injuries have evolved toward healing.

Conclusions: Congenital ischemic necrosis of the forearm has previously been reported to occur with compound presentation (when an extremity, hand, arm, or foot of the baby
prolapses together with the vertex in a woman in labor). In our case, this was spontaneously removed by breaking the amniotic sac and there was a vaginal delivery. The newborn should be carefully examined for clinical signs of circulatory compromise, the earliest of which are the skin lesions. Early
diagnosis and intervention must be performed.

#7415 : Adverse events in elderly patients admitted to a medical short stay unit

Preferred format : Oral presentation

Authors:

Camilla Strøm (1), Lars S. Rasmussen (2), Thomas A. Schmidt (1)

1. Dept. of Emergency Medicine, Holbaek Sygehus, University of Copenhagen, Copenhagen, DENMARK
2. Dept. of Anaesthesiology, Centre of Head and Orthopedics, Rigshospitalet, University of Copenhagen, Copenhagen, DENMARK

Keywords: elderly, short stay units, fast track care, adverse events

Abstract :

Introduction

Elderly patients are at particular risk of experiencing adverse events of hospitalisation, and they are more vulnerable to adverse events compared to younger patients. The aim of this study was to compare the occurrence of adverse events during hospitalisation or within 30 days after discharge to either a short stay unit or a department of internal medicine in elderly internal medicine patients.

Methods

This retrospective study evaluated adverse events during hospitalisation of elderly internal medicine patients either in an emergency department based short stay unit called 'Quick Diagnostic Unit' (QDU) or an internal medicine department (IMD) at Holbaek Hospital, Denmark, from January 1st 2014.. Eligible patients were 75 years or older and admitted for any internal medicine disease and they should have a non-emergent (green) triage level at admission. IMD patients were matched with QDU patients by 1) year of birth and 2) date of admission. Medical records were reviewed in a two-stage process by physicians to detect adverse events. Earlier studies have shown that up to 37 % of elderly patients experience an adverse event during a hospitalisation; to detect a 33 % risk reduction based on alpha=0.05 and beta=0.08, a sample size of 450 patients was required. The primary outcome was the occurrence of any adverse event on a list of 19 predefined events during hospitalisation or up to 30 days after discharge. Secondary outcome measures included types of adverse events and mortality. A p-value <0.05 was considered significant.

Results

We screened a total of 833 patients' hospital charts for inclusion and 450 patients met the inclusion criteria, 225 patients in each group. The median age of patients were 82 years (IQR 78-86 years) for both groups. There were no significant differences in baseline variables. For both groups, the median Charlson Comorbidity Index score was 6 with IQR 5-7. Adverse events were significantly less common in the QDU-group than in the IMD-group, i.e., 68 (30 %) patients in the QDU-group and 92 (41 %) patients in the IMD group had one or more adverse events of hospitalisation, (p =0.02). The relative risk of an adverse event was 0.80 (95 % CI 0.65-0-99) in the QDU-group and 1.23 (95% CI 1.02-1.15) in the IMD group, respectively. The most common adverse events were 1) transfer during hospitalisation, 2) unplanned readmission, 3) nosocomial infection in both groups. We found no significant difference in 90-day mortality QDU-group compared to the IMD-group, 65 (29 %) versus 84 (37%) (HR 0.729 (95% 0.414-1.284)).

Conclusions

Adverse events was significantly less common in elderly patients treated in a medical short stay unit compared to an internal medicine ward. Hospitalisation in a short stay unit seems not only feasible, but in selected cases maybe even preferable, for elderly medical patients.

#7416 : Descriptive analysis of the complaint letters sent to two emergency departments

Preferred format : Oral presentation

Authors:

Jennifer Truchot (1), Anthony Chauvin (1), Bertrand Galichon (2), Gina Krunic (3), Fabien Martinez (4), Jean Paul Fontaine (5), Patrick Plaisance (6)

1. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, Paris, FRANCE
2. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Paris, FRANCE
3. Direction des Usagers, du Système d'Information et de la Qualité, Hôpitaux Universitaires Saint-Louis - Lariboisière - Fernand Widal , Paris, FRANCE
4. Direction des Usagers, du Système d'Information et de la Qualité, Hôpitaux Universitaires Saint-Louis - Lariboisière - Fernand Widal , Paris, FRANCE
5. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Saint Louis, AP-HP, Paris, Université Paris VII René Diderot, Paris, FRANCE
6. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, PARIS, FRANCE

Keywords: Complaints, communication, medical error

Abstract :

Introduction: Over the last few years there has been an increase in litigation against doctors. In the USA, one out of six physician is facing malpractice claims. Emergency departments (ED) are particularly vulnerable to this risk. This phenomenon causes modifications in the ways of practicing medicine, among those, over-prescription of complementary exams. Too few studies exist on the analysis of the content of complaints letters. Even though, it is now admitted that the number of complaints is a good indicator of the quality of care. Structural evolution of two EDs motivated the qualitative analysis of complaints.

Methods: We conducted a retrospective multicenter within a hospital group of two EDs from June 2014 to June 2015. The letters were anonymised allowing a blind analysis of their content. Results are expressed in means and interquartile, median and standard derivations, and percentages.

Results: A total of 43 letters were analysed. The patient's median age 19 was 56,4 +/- 21,2 years old with a majority of women (62,7%). The patients wrote the letters themselves in most cases (60,5%). The main reasons for writing were communication default (32,7%), a suspicion of medical error (30,2 %), malicious act (stealing or loosing of personal objects) (23,3 %). The waiting time was only mentioned in one complaint letter. The patients concerned by these complaints were managed in the medical ward (44,3%), the traumatology ward (41,7%), gynaecology (5,6%) and psychiatry (2,8%). The analysis of the repartition over time did not show a correlation between the number of complaints and the residents shifting period or the more crowded periods in the EDs. Sub group analysis according to age or care ward did not show a difference in the number of complaints.

Discussion: Our results are concordant with the current literature. Communication remains the main reason for writing a complaint letter. One of the limits of this work is the necessity to write, during this period, 11 patients transmitted their complaints during a visit and not by writing. The small number of complaints did not allow pertinent sub groups analysis. The blinded analysis did not allow to confirm the suspicion of medical errors.

Conclusion: The principal reasons for writing a complaint letter were human factors for which an intervention such as specific staff education sessions could be suggested. Communication in the ED remains a key element to improve.

#7417 : Combining E-Learning, Mastery Learning, Peer Teaching, and Remote Monitoring in a Hybrid Program

Preferred format : Oral presentation

Authors:

David Rodgers (1), Nedas Jasinskas (2), Dinas Vaitkaitis (3), Paulius Dobozinskas (3), Laima Juozapaviciene (2), Birute Kumpaitiene (2), Elizabeth Sinz (4), Kevin McVeigh (4)

1. , Clinical Simulation Center, Penn State Milton S. Hershey Medical Center, Hershey, PA, Hershey, USA
2. , Hospital of Lithuanian University of Health Sciences, Kaunas, LITHUANIA
3. , Lithuanian University of Health Sciences, Kaunas, LITHUANIA
4. , Anesthesiology and Perioperative Medicine, Penn State Milton S. Hershey Medical Center, Hershey, Hershey, USA

Keywords: Hybrid learning, e-learning, simullation

Abstract :

Background

Skills teaching in healthcare can be challenging in the best of conditions. Add in a lack of instructors or faculty and remote locations, and the difficulty is multiplied. The Crisis Research Centre at the Lithuanian University of Health Sciences was tasked with teaching or updating a wide variety of practicing clinicians in Kazakhstan with skills essential to newborn, pediatric, and adult resuscitation. The lack of access to experienced faculty and geographically isolated locations made this task more difficult. The Centre developed a hybrid approach to teach these skills that included four key components: Review of online, video driven descriptions and instructions of skills. Breaking each complex task into essential elements in an educational program that built mastery by having learners progress through fundamental tasks to complete simulations of the tasks in increasingly difficult increments. Devising a teaching methodology that relied on peer-to-peer teaching using procedural checklists that forced learners down correct pathways during learning exercises. Remote video monitoring of final performance tests of learners in Kazakhstan by the Centre’s staff in Lithuania.

Educational goal

Limitations in faculty availability at the local level forced a creative approach to the problem. The system has been developed and tested with over 2,500 resuscitation team members in Kazakhstan since 2013. Operationally, the system is working well. However, no formal test of its efficacy compared to standard faculty-led teaching has been done. A randomized controlled study comparing the hybrid model against standard instruction is planned with expected initiation in summer 2016.

Proposed Approach

The proposed study will randomize medical students on anesthesia rotation at the Penn State Hershey Medical Center to either receive the hybrid training or standard instruction in basic and advanced airway procedures. Three primary data points are: Initial post-instruction skills test, faculty assessment of skills in actual OR patient cases, and exit skills test at conclusion of rotation. Additional data points will include learner and faculty time spent on instruction, learner evaluation of instructional methodologies, and learner perceptions of competence.

Discussion

While the Centre’s work has targeted low resource areas, findings of this study would have implications in all areas as faculty time could be better allocated to more productive functions. The use of a mastery learning model is not in itself unique in medicine, but combining it with e-learning and peer teaching is unique. If the study hypothesis that the hybrid bundle will produce performance results equal to or greater than instructor led skills training is supported, this model of instruction will be a valuable tool for not only resource limited areas but also for healthcare education in general.

#7418 : Transition of the blood insulin concentration in insulin poisoning treatment

Preferred format : ePoster

Authors:

HAYATO YOSHIOKA (1), KAZUSHIGE INOUE (1), MAYUKO KANEKO (2), TSUYOSHI CHIJIWA (3), NOBUAKI KIRIU (1), HIROSHI KATO (1)

1. Emergency Department, National Hospital Organization Disaster Medical Center, TOKYO, JAPAN
2. Emergency Department, Department of Emergency and Critical Care Medicine, Saitama Medical Center, Jichi Medical University, Tokyo, JAPAN
3. Emergency Department, Department of Emergency and Critical Care Medicine, Saitama Medical Center, Jichi Medical University, Saitama, JAPAN

Keywords: Toxicology, Insulin poisoning, Blood insulin concentration

Abstract :

Background: While the frequency of insulin use is increasing in association with an increase in the number of diabetic patients, reports on the insulin poisoning have been increasing.

Objective: The following three points are important in treating insulin poisoning: (1) early therapeutic intervention; (2) repeated blood glucose measurements and appropriate administration of glucose; and (3) measurement of blood potassium concentration. In theory, although the metabolism of insulin is about 24 hours at longest, the treatment often takes several days. We have examined the blood insulin concentration of the treatment in insulin-poisoning cases (6 cases).

Results: Regardless of the initial blood insulin concentration, we have recognized the possibility that the blood insulin concentration decreases regularly under appropriate treatment. Under all types of insulin (from a Rapid-Acting Insulin to a Long-Acting Insulin), similar trends were observed. We presented an example, a patient who inoculated oneself with 5,400 units of insulin (intermediate-acting) in order to commit suicide. After entering the ICU, the patient received a glucose infusion and potassium supplementation, and without developing any complications, the patient was thereafter discharged from hospital on Day 8. Maximum glucose dosage during the course of treatment was 25g / h.

Discussion: First, the effect duration of the blood insulin concentration depends on insulin metabolism, the injection amount, and the absorption speed. For the reason, it is necessary to frequently measure the blood insulin concentration. In theory, intermediate-acting insulin should disappear within 24 hours but lasted for 7 days in the present case. We have recognized that the blood insulin concentration decreased linearly under the logarithm. By measuring several times the blood insulin concentration of treatment in the beginning 24-48 hours, the possibility of predicting the time to reach the normal level of the blood insulin concentration was suggested. Next, maximum glucose dosages during this research were 22g/h-35g/h. Insulin intakes, blood insulin concentration and maximum glucose dosage did not correlate. This result was thought to be due to glucose uptake limitations of the insulin receptor.

Conclusion: Predicting the normalization of the blood insulin concentrations is useful in building a therapeutic strategy.

#7419 : Ultrasound-Guided Reduction of Distal Radius Fractures

Preferred format : Oral presentation

Authors:

anita sabzghabaei (1), majid shojaee (1), SAEED hasanpoour (2), taghian sahar (3)

1. emergency medicine, shahid beheshti university of medical sience, TEHRAN, IRAN, ISLAMIC REPUBLIC
2. RADIOLOGY, HORMOZGHAN UNIVERSITY OF MEDICAL SIENCE, BANDARABAS, IRAN, ISLAMIC REPUBLIC
3. general physician, private office, BANDARABAS, IRAN, ISLAMIC REPUBLIC

Keywords: Ultrasound; reduction, distal radius fracture

Abstract :

Introduction: Distal radius fractures are a common traumatic injury, particularly in the elderly population. In the present study we examined the effectiveness of ultrasound guidance in the reduction of distal radius fractures in adult patients presenting to emergency department (ED). **Methods:** In this prospective case control study, eligible patients were adults older than 18 years who presented to the ED with distal radius fractures. 130 consecutive patient consisted of two group of Sixty-Five patients were prospectively enrolled for around 1 years. The first group underwent ultrasound-guided reduction and the second (control group) underwent blind reduction. All procedures were performed by two trained emergency residents under supervision of senior emergency physicians. **Results:** Baseline characteristics between two groups were similar. The rate of repeat reduction was reduced in the ultrasound group (9.2% vs 24.6%; P = .019). The post reduction radiographic indices were similar between the two groups, although the ultrasound group had improved volar tilt (mean, 7.6° vs 3.7°; P = .000). The operative rate was reduced in the ultrasound groups (10.8% vs 27.7%; P = .014). **Conclusion:** Ultrasound guidance is effective and recommended for routine use in the reduction of distal radius fractures

#7420 : 1000 consecutive ultrasound examinations in the emergency department: Indications, performer and documentation quality.

Preferred format : Oral presentation

Authors:

Felix Lorang (1)

1. Emergency Department, University Hospital Jena, Jena, GERMANY

Keywords: Ultrasound, documentation, Indication, data, standardization, overview

Abstract :

Background:

Ultrasound is an important tool in the emergency department (ED), which is already highly integrated in the routine work in the ED. Similar to other emergency departments, the implementation of new ultrasound techniques for different clinical questions is increasing constantly. Continuous medical education for advanced ultrasound techniques seem to be very high among emergency physicians. Data about the exact number of different examinations are lacking as well as indications, quality of documentation and level of experience of the performer.

Methods:

We collected the data of 1000 Patients retrospectively, who received one or more Ultrasound-Exams during their stay in our ED. We analyzed the documents with regard to the number of certain exam techniques, the quality of documentation and performance.

Results:

In 1000 Patients who received ultrasound in the ED we could identify 1169 different exams. Especially, critical ill Patients receive up to 5 different exams like echocardiography, abdominal sonography, Doppler sonography, etc..

Abdominal Ultrasound contributed to 59,4%, lung ultrasound, venous duplexsonography as well as the focused Echocardiography to 8,5-11,4%. EFAST and ultrasound of fractures (including the ribs) with 3,6 and 4.8%, respectively, are also common procedures. The remaining exams consist of Ultrasound of Soft tissue, Arteries, Cerebral vessels, eyes and a singular area of Interest like assessing urinary stasis.

Conclusion: Ultrasound Exams in the ED consist of a wide field of target areas. We showed that nearly every field of interest reachable by ultrasound is covered in our department, and sometimes even the bodyparts considered impenetrable by ultrasound like the lungs or bones. Improving quantity of ultrasounds in the ED via standardized and simplified documentation seems prudent and because of the wide range of possible implication, ultrasound should be more promoted and standardized in emergency medicine education, since our data show a very inhomogenous use of this tool.

#7421 : Improving quantity of ultrasounds in the ed via standardized and simplified documentation

Preferred format : Oral presentation

Authors:

Felix Lorang (1), Tudor Pörner (2)

1. Emergency Department, University Hospital Jena, Jena, GERMANY
2. Department of Cardiology, University Hospital Jena, Jena, GERMANY

Keywords: Standardization, Documentation, Ultrasound, Quantity, Quality

Abstract :

Background:

In recent years emergency ultrasound has been a rapid developing subspecialty in Emergency medicine. A lot of new standardized Exams like FAST, FEEL or RUSH for detecting free fluids or the genesis of shock have emerged. Besides the well known exams like Echocardiography or abdominal Ultrasound, procedures like Lung ultrasound or Ultrasound of bones and muscles are increasingly performed. The way of documentation often seems as variable as the diversitiy of the exams. We hypothesize that a standardized Ultrasound procedure individualised for each entitiy combined with an easy to use documentation system will substantially increase the number of documented procedures.

Methods:

Following a baseline survey with identifying correctly documented Exams during 6 Months in the first half of 2015, we implemented our documentation system and evaluated the results after a short run in-phase. We compared the numbers of documented ultrasound in the 2 time periods.

Results:

In the first half year 56 correctly documented Ultrasound exams could be identified. After implementing our simplified documentation system, 500 relevant exams were performed within the first three months ($p < 0,001$).

Conclusion:

Implementing an easy and approachable way to document the exams will significantly increase the correctly documented ultrasound exams. Furthermore, the quality of performed ultrasound is probably increased as well, as other studies suggest.

#7422 : Application of qSOFA score compared with Modified early warning signs for predicting 24-hours-in-hospital cardiac arrest : A retrospective review

Preferred format : ePoster

Authors:

Wisarut Bunchit (1), Veerapong Vattanavanit (2)

1. Emergency Medicine, Faculty of Medicine, Prince of Sonklanagarind University, Songkhla, THAILAND
2. Critical Care Medicine, Faculty of Medicine, Prince of Sonklanagarind University, Songkhla, THAILAND

Keywords: qSOFA, Modified early warning signs, MEWS, cardiac arrest

Abstract :

Purpose

Quick SOFA (qSOFA) is a newly purposed simple screening tool to predict in hospital mortality from sepsis and it should also be used to predict mortality from other causes too. But the role of this score for predicting overall in hospital cardiac arrest in 24 hours is not known. Modified early warning signs (MEWS) was a widely used score for predicting in hospital mortality from any causes now but recent studies showed that low MEWS score still cannot ruled out in hospital mortality. So the aim of our study was to determine the role of qSOFA and comparison to MEWS score in predicting 24-hours-in hospital cardiac arrest.

Methods

This is a single-centre retrospective study. The study included adult in-hospital-cardiac-arrest (IHCA) patients who were monitored and resuscitated by a medical emergency team in the emergency department, on the general ward or ICU. They were enrolled in this study between January to December 2015. qSOFA and High risk MEWS score (MEWS: ≥5) were calculated for the highest score tracing back to 24 hours before cardiac arrest. Timing before IHCA, ROSC rate and survival-to-discharge rate were collected.

Results

Preliminary results were reported from 50 patients. Out of 50 patients, 40.6% had a return of spontaneous circulation. And 18.8% of the patients had survival until discharge. After tracing back until 24 hours before they had IHCA event, there were 53.1% and 59% IHCA Patients who have qSOFA ≥2 and High risk MEWS respectively. The mean time that qSOFA ≥2 was presented was 3.2 hours before cardiac arrest. While for high risk MEWS was 2.9 hours. There was no statistical difference reported in any elements.

Conclusions

As our preliminary results showed, there were no differences in using qSOFA for predicting 24 hours-IHCA compared with high risk MEWS. We supposed that this result will also be presented in the final result of this study and qSOFA should be able to use as an early predictor for IHCA of any causes.

#7423 : Chest pain in young man after car accident.

Preferred format : Oral presentation

Authors:

Valentina Acosta Ramón (1), Emilio Pariente Rodrigo (2), Maria Pilar Carlos Gonzalez (3), Nuria Ovalle Gonzalez (1), Walter Roberto Ferrero Ohse (1), Noelia Santos Mendez (1), Maite Estibaliz López de Goicochea-Saiz. (1), Joel Andino Lopez (1)

1. Servicio Urgencias, Hospital Universitario Marques de Valdecilla, Santander, SPAIN
2. Centro de Salud Jose Barros, Sistema Cantabro de Salud. , Santander, SPAIN
3. Servicio Urgencias, Hospital Universitario Marques de Valdecilla, santander, SPAIN

Keywords: Chest pain, car accident.

Abstract :

Mediastinal hematoma with compressive effect on cardiac cavities is a rare and serious complication of blunt chest trauma. For a man of 21 years, with no history of interest who suffers an accident by frontal crash at 50 km / h, occupying the passenger seat with the seat belt it is presented. He went to the emergency room for their own reporting a central chest pain of moderate intensity.
At that time, constants and physical examination were normal, with the only data of pressure pain on the lower third of the sternum. A study of plain radiography were performed, appreciating posterior dislocation of the xiphoid process, an electrocardiogram showed sinus rhythm with an incomplete right bundle branch block, and an analytical, resulting normal blood count and levels of troponin not high. Three hours after his arrival to the emergency room, the patient presented a progressive malaise, with pallor, and hypotension. A chest scan was performed finding a voluminous anterior mediastinal hematoma with compression effect on right heart chambers due to active bleeding from the left internal mammary vein. The patient underwent emergency VATS with bleeding vessel closure and placement of pleural drainage, presenting a favorable evolution. Mediastinal hematomas are caused by injury of mediastinal vessels, sometimes secondary sternal or vertebral fracture. In severe cases can lead to cardiac tamponade extrapericardial origin, a potentially fatal complication. In the early stages, symptoms and physical examination may not be relevant, in the absence of symptoms of both acute bleeding and cardiac tamponade classics (bradycardia, jugular venous distension, paradoxical pulse).
The case highlights the importance of maintaining a high degree of suspicion of mediastinal hematoma, despite an initial period of hemodynamic stability, in a patient with blunt chest trauma. Regarding our case, it should also remember the relationship between the use of seat belts and sternal fracture. Early diagnosis facilitates rapid handling of this potentially serious situation.

#7424 : Up to 2/3 of qualified ultrasound exams in the ed provides therapy relevant information

Preferred format : Oral presentation

Authors:

Felix Lorang (1)

1. Emergency Department, University Hospital Jena, Jena, GERMANY

Keywords: Ultrasound, significance, information, therapy, discharge

Abstract :

Background:
Emergency ultrasound is an important tool in the ED, which is already highly integrated in the daily work in our Emergency Room. However, not much data is available concerning the number, the quality and the relevance of those ultrasounds in regard to decisions about patients therapy. In our opinion especially the last part is extremely important as it directly affects the treatment. To this day there is to our knowledge no data on the influence on decision making in Emergency Ultrasound available. We suspect that Information obtained by Ultrasound is significantly influencing therapy decisions as well as facilitates discharge from the ED in case of a clean result.

Methods:
During 2 Weeks all Ultrasound exams in the daytime (8:00-20:00) were collected and looked at. We made sure, that each exam was performed by an experienced doctors of our ED, all of them with at least 3 years of ED and proficient Ultrasound experience. Sufficient Experience was defined by the recommendations of the German society on Ultrasound. We could collect 96 exams in our time frame. We looked at the type of Ultrasound, the indication for the Exam, Therapy relevance defined as inducing further Diagnostics (e.g. CT) or Treatment (e.g. Surgery), a possible discharge due to an age appropriate normal Ultrasound exam and inconclusive Results.

Results:
Of the 88 exams we could identify 40 clinically relevant Exams in our results. Another 40 Patients could be safely discharged from our ED, none of whom had a second visit in the next 48h. In only 18 Patients the Ultrasound didn’t help in the decision making or didn’t bring any relevant results.

Conclusion:
High quality Ultrasound Exams are a valuable Tool in our ED. Based on the results we have strong evidence that in more then 2/3 of all cases at least in our ED and way more often than anticipated the results of our Ultrasound Exams are relevant and will clinically significantly influence the following treatment of the Patient.

#7427 : Complications developed after perioperatory anticoagulation withhold , presentation in emergency department

Preferred format : ePoster

Authors:

Nicoleta Cretu (1), Nicoleta Cretu (1), Ben Teasdale (1)

1. Leicester Royal Infirmary Hospital , Leicester, UK, Leicester University Hospitals Trust, Leicester, UK, Leicester, UK

Keywords: Warfarin, Pulmonary Embolism, Hospital acquired pneumonia, Haemofiltration, Ileus

Abstract :

INTRODUCTION

Correctly withhold of anticoagulation treatment perioperatory, even for short periods, can be unprotective against thrombuses formation, with negative consequences for the patient's evolution postoperatory.

EMERGENCY DEPARTMENT PRESENTATION

Male patient of 78 years old presented by ambulance to Emergency Department(ED) with 24 hours history of shortness of breath, fatigue, nausea , vomiting, anuria.

Past medical history- Atrial fibrillation, asthma, Diabetes mellitus, right knee replacement 1 week prior ED presentation.

Medication-Warfarin(stopped 1 week prior knee replacement), beta blocker, Digoxin, inhalers, oral antidiabetics.

On examination: patient was drowsy(GCS14/15), presented crackles pulmonary bilateral, polypnoea, distended abdomen.

Initial vital signs: HR=140bpm irregular, BP=80/45mmHg, SpO2=92% with 15l O2 100%, GCS=14/15.

ED management: 2 intravenous(iv) large bore cannulas, ECG, chest x-ray, urinary catheter(anuria), iv fluids, blood tests, CTPA.

Bood tests – urea=35.6, creatinine=435, eGFR=12, INR=1.5, WCC=12.7, Neutrophiles=10.37.

CTPA-bilateral pulmonary embolism(PE), distended stomach fluid filling, ileus.

Diagnosis:Biateral PE post perioperatory Warfarin withhold. Acute kidney injury. Ileus. Recent right knee replacement

Plan-patient admitted on Intensive Care Unit.

INTENSIVE CARE UNIT(ITU) MANAGEMENT

The patient was admitted on ITU for 1 month.

He received: arterial line, left internal jugular vas cath, full monitoring(HR, BP, SpO2, pCO2, CVP, ECG, urinary output), NG tube (with more than 2 L fluid aspirated)

Required CVVH, intubation, ventilation.

Developed left haemothorax which required left chest drain insertion, vas cath was changed on the right internal jugular vein.

He went to theatre for laparotomy for splenic rupture and intraabdominal bleeding, successfully treated.

He developed hospital acquired pneumonia, which was treated with antibiotics, secondary to which he developed diarrhoea.

Discussion

The anticoagulation treatment for atrial fibrillation was correctly withheld prior the right knee replacement. Despite of that, the patient developed bilateral PE, which received heparin infusion;acute kidney injury which required haemofiltration. Because of anticoagulation therapy he developed left sided haemothorax resolved with chest drain insertion and splenic rupture with secondary intraabdominal bleeding,which required laparotomy and splenic repair.

Due to his prolonged hospital staying, he developed hospital acquired pneumonia, with antibiotherapy and secondary diarrhoea.

The right knee replacement healing process went well, the patient requiring Physiotherapy in order to help the patient’s mobilization after his prolonged hospital admission.

CONCLUSION

Even the perioperatory anticoagulation treatment is correctly withhold following the protocols, sometimes the patients can develop complications related with this process, with secondary prolonged hospital staying and with risk of acquiring hospital pathogens infections, with high emotional impact on the medical staff that is treating this patients as for the patient's family.

Dr Nicoleta Cretu ACCS ST1 Emergency Medicine trainee

Dr Ben Teasdale, Emergency Medicine Consultant

Leicester Royal Infirmary Hospital, Leicester, UK

#7428 : Prospective assessment of transfusion practice among emergency room nurses

Preferred format : ePoster

Authors:

Nesrine Ibn HASSINE (1), CHAWKI JEBALI (2), Nawfel CHBILI (3), Achref HAJ ALI (4), MEJDI OMRI (1), Hajer KRAIEM (5), Mohamed NEJIB KAROUI (6)

1. SAMU 03 , CHU SAHLOUL, Sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
4. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
5. SAMU 03 , CHU SAHLOUL, sousse, TUNISIA
6. SAMU 03 , CHU SAHLOUL, Sousse , TUNISIA

Keywords: Transfusion, emergency, nurses

Abstract :

Introduction: transfusion, even in difficult emergency conditions, nevertheless requires rigorous implementation by following to the letter the rules of "good transfusion practices" to ensure optimal blood transfusion safety. This requires adequate blood safety basic knowledge, a continuous and repeated training so that the transfusion act is set in the rules of art. No studies have evaluated the knowledge and skills of paramedics in our emergency department.

Population and Methods: Our study was prospective, descriptive, mono centric conducted during a period a period 11 weeks. The tool used was a questionnaire containing 21 items in the form of multiple choice questions which were distributed in connection with the three stages of the transfusion (pre-transfusion, per-transfusion and post-transfusion). The collection of information was carried out by two senior technician in emergency medicine, volunteering and respecting anonymity. All paramedics working in our emergency department outside the administrative were included. Outcome measures were adherence to transfusion good practice include taking the correct answers.

Results : thirty nine (93%) nurses have participated to study. Only 31 % have appropriate knowledge and practice with no negative consequences for the patient safety. In our sample, poor knowledge and practice concerned mainly pre-transfusion compatibility check whenreceiving blood units (62%); delay in preservation of blood unit in the ward (65%); and recognition of abnormal reactions after transfusion (46%). These results showed on which topics the teaching program should emphasize so as to improve the quality of blood transfusion in themedical centers according to legal obligations.

Conclusion: These results showed on which topics the teaching program should emphasize so as to improve the quality of blood transfusion in the medical centers according to legal obligations.

#7429 : Unusual and unexpected X-ray finding: a case of Ollier disease

Preferred format : ePoster

Authors:

Tom Barker (1), Abdo Sattout (1)

1. Department of Emergency Medicine, Aintree University Hopsital, Liverpool, UK

Keywords: Ollier disease, Enchondromatosis, Enchondroma

Abstract :

Introduction

A small group of patients can present to the Emergency Department (ED) with limb deformity and unusual radiological findings which are attributed to underlying benign conditions.

Case

A 27-year-old female presented to our ED with a right shoulder injury that she sustained whilst at the gym doing one-handed press ups.

The right shoulder X-ray showed an anterior dislocation with deformed humeral head and scapula with areas of focal calcification. On further questioning, the patient admitted that she was diagnosed with Ollier disease in early childhood.

The dislocation was successfully reduced and an orthopaedics out-patient follow up was arranged.

Discussion

Ollier disease, or Enchondromatosis, is a rare bone disease defined by the presence of multiple enchondromas. Prevalence is around 1 in 100,000 and is twice as common in men than women.

Enchondromas are generally benign asymptomatic tumours of hyaline cartilage and occur secondary to defect in the development of the limb bud, which causes the long bones to grow in diameter in post-foetal life. Pathology is not clearly understood but is believed to be due to heterozygous mutations in the isocitrate dehydrogenase gene and dysregulation in the Indian hedgehog signalling pathway causing anomalies in the pathway controlling the proliferation and differentiation of chondrocytes resulting in the formation of intraosseous cartilaginous foci.

Ollier disease presents as painless bony lesions, mainly confined to the appendicular skeleton, in a bilateral but asymmetric distribution, most commonly affecting the phalanges and metacarpals, and usually in the first decade of life. Lesions usually appear and grow before puberty but soon remodel into normal bone. It may also present with shortened limbs due to an abnormal epiphyseal plate adjacent to the enchondromas affecting the longitudinal growth of the bones.

Pathological fractures can occur due to thinning of the cortical bone over the growing lesions.

Various tumours are associated with Ollier such as chondrosarcoma, osteosarcoma, central nervous system, ovaries, breast and lung. The reported incidence of malignant transformation of enchondromas ranges from 5% to 50%.

The diagnosis is based on clinical and radiological findings. Plain radiographs reveal asymmetrical osteolytic lesions with well-defined, sclerotic margins and ground-glass appearance of the matrix at the metaphysis and epiphysis of long bones. Computed tomography (CT) scans are useful to assess the lesions further as well as evaluating any soft tissue component.

However, given the hypercellularity of enchondromas, histological distinction between benign and malignant tumours may be difficult. Therefore, in suspected malignant transformation, dynamic magnetic resonance imaging (MRI) scans and bone scintigraphy are useful.

The treatment is usually conservative and surgery is reserved for cases of deformity, limb-length discrepancy, pathological fracture or malignant transformation. Overall prognosis is good.

Conclusion

Ollier disease is a rare bone disease and doesn’t usually cause any significant functional impairment. The presence of similar radiological findings in the ED should dictate detailed medical history and records review.

#7430 : Mortality in emergency department: myth or reality?

Preferred format : ePoster

Authors:

Nesrine Ibn HASSINE (1), CHAWKI JEBALI (2), Hajer KRAIEM (3), Nawfel CHBILI (4), MEJDI OMRI (1), Mohamed NEJIB KAROUI (5)

1. SAMU 03 , CHU SAHLOUL, Sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. SAMU 03 , CHU SAHLOUL, sousse, TUNISIA
4. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
5. SAMU 03 , CHU SAHLOUL, Sousse , TUNISIA

Keywords: Mortality, emergency, limit any active therapeutics

Abstract :

Introduction: The study of mortality in emergencies is of high importance for emergency didactic. It is also a useful indicator for assessing the provision of care and support for patients. Our emergency department has not yet been the subject of such a study. Thus, it seemed appropriate to consider a prospective study whose objectives were to determine the characteristics of the patients died in the emergency specify the cause of death and to evaluate patients who died with the waning of the limitation or shutdown therapeutically active.

Materials and methods: This is a prospective observational study mono centric over a period of one year including all deaths in the emergency department during the period of study. Several parameters were collected from the medical records. Then, two seniors have investigated whether the death was reversible with the waning of a medical condition, there was a concept of preventable death in severe trauma and finally, if the limitation or cessation of active treatment was formalized conduct or implicitly. Exclusion criteria inclusions were: patients already arrived dead, age <15 years, patients without medical records and patients whose medical records are unusable due to lack of data.

Results: We included ninety-four deaths in emergencies. Thus, we have objectified male predominance. The majority of death affects a young population with an average age of 61 ± 5 years. Only 24.5% of our patients underwent a medical transport. More than half of patients have cardiovascular history. The cause of death was the most common stroke and in 29.8% of cases the etiology of death was unclear. The incidence of reversible medical death was 12.7%. We noted 17 premature deaths post-traumatic.

Conclusion: early deaths were frequent emergencies and are mainly the elderly, for which an "alternative" home maintenance decision could be taken. Active resuscitation measures have been taken in principle in most cases before deciding on a limitation or termination of active treatment.

#7431 : Rhabdomyolysis and hematuria associated with the use of simvastatin

Preferred format : ePoster

Authors:

Rocio Escriche (1), Alicia Baguena (1), Patricia Boned (1), Teresa De Fernando (1), Teresa Pardo (1), Pilar Miranda (1)

1. Emergency, Royo Villanova Hospital, Zaragoza, SPAIN

Keywords: Rhabdomyolysis; hematuria; simvastatin

Abstract :

Male patient of 42 years old with a history of right nephrectomy 16 years ago after congenital anomaly detected by chance after traffic accident, ischemia of left renal artery in 2011 by what was being followed by hypertensive nephropathy of grade IV during 2 years. After all, the hypertension has been well controlled, there is a mild renal impairment , an dyslipidemia and an anxious syndrome with psychiatric treatment. Basal chronic treatment with Omeprazole 20mg, Torasemide 5mg, 10mg Manidipine, Alprazolam 0.25mg, 1mg Trifluoperazine and a combination of Simvastatin and Ezetimibe 20mg to 10mg. Consultation in the emergency room for sudden hematuria without urinary symptoms associated or fever. The only antecedent of interest is the resumption of moderate physical activity in the previous 24 hours. There have been no changes in their usual treatment. There has been no drug use. Up study conducted Cr 1.26mg / dl, urea 36mg / dl, Na 141mEq / L, K 4.4mEq / L and CK 91527. There is a frank hematuria without infectious signs urinals. Blood count and coagulation unchanged. Abdominal ultrasound performed without alterations.Given low probability episode of rhabdomyolysis secondary to exercise described (of mild or very moderate intensity), the study is extended in emergency room for suspected side effects to statins, confirming alteration of transaminases GOT 517 IU / L, GPT 108UI / L, high myoglobinaemia> 1340 ng / mL and confirmation myoglobinuria in urinary sediment. At first the patient experiences a torpid evolution, with low urine output despite fluid infusion and maintenance of high levels of CK during the first 72 hours. After suspension of lipid-lowering therapy and adequacy of fluid therapy is objectively progressive clinical improvement with gradual normalization of biochemical parameters during hospitalization. Conclusion: In daily clinical practice is very common the use of lipid-lowering drugs for secondary prevention of ischemic heart disease. It is known the relationship of statins with the onset of liver damage being widespread monitoring of transaminases and can spend more unnoticed association with myopathies that could condition a myoglobinaemia and myoglobinuria with even fatal renal failure, which should be considered in patients susceptible to renal involvement.

#7432 : ketoprofen versus diclofenac in treatment of renal colic: double-blind randomized forward-looking comparative Study

Preferred format : ePoster

Authors:

Nesrine Ibn HASSINE (1), CHAWKI JEBALI (2), Achref HAJ ALI (3), LOTFI BOUKADIDA (4), Asma ZORGATI (5), Riadh Boukef (6)

1. Urgences, CHU Sahloul de Sousse , Sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
4. Emergency of Sahloul, Sousse, Sousse, TUNISIA
5. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
6. Urgences , CHU Sahloul de Sousse , Sousse , TUNISIA

Keywords: Ketoprofen, diclofenac, renal colic, emergency

Abstract :

Introduction: The renal colic of the adult is a frequent lombo-abdominal painful syndrome in emergencies. Treatment is based on nonsteroidal anti-inflammatory drug (NSAID) but the choice between different NSAIDs remains a subject of controversy. Our aim was to compare the efficiency and the tolerance of two intramuscularly NSAIDs in renal colic.

Materials and methods: A randomized controlled clinical trial, single-center double-blind realized in emergencies service over an 8 month period. was included: Age > 16 years with a visual analogue scale (VAS) ≥ 5 . Exclusion criteria: Pregnant , renal failure or known hepatic, known or suspected allergy to NSAIDs, known peptic ulcer, hemorrhagic. All patients was randomized in to 2 groups: GK (Ketoprofen): a 5 ml syringe with an ampoule 100 mg / 2 ml + 1 ml of serum. GD (diclofenac): a 5 mL syringe containing a bulb of 75 mg / 3 ml. The route of injection was intramuscularly. If VAS > 3 after 40 mn, 1 g of paracetamol slow intravenous was administered to the patient. Primary outcomes were successful treatment, time to resolution of pain and VAS drop percentage. Secondary outcomes were the occurrence of side effects.

Results: We have included 80 patients. Indeed, the average age was 39 ± 13 years for GK versus 43 ± 14 years for GD. The mean VAS on admission was also similar in both arms. We objectified a therapeutic success rate of 92% in both groups. This success was similar in both arms with a slight tendency for the ketoprofen group. The use of rescue medication was 32.5% in the GK versus 47.5% in the GD (P=0.17). We have observed in 46% (n = 37) of the study population side effects. These effects were only minor and no major intolerance expression was registered.

Conclusion: The effect of anti-inflammatory drugs on the efficacy and tolerance in the treatment of renal colic was the same for diclofenac and ketoprofen. Other factors such cost, side effect profile, and personal preference may be taken into consideration in the choice of treatment.

#7433 : Emergency Ultrasound Survey. Results from a national Survey in Germany.

Preferred format : Oral presentation

Authors:

Johannes Böer (1), Tobias Lindner (2), Alexander Heinzmann (3), Tobias Kunzmann (1), Lars Lomberg (4), Wolfgang Blank (3), Martin Möckel (2)

1. Zentrale Notaufnahme, Kreiskliniken Reutlingen, Reutlingen, GERMANY
2. Campus Virchow Klinikum, Notfallmedizin, Universitätsmedizin Berlin Charité , Berlin, GERMANY
3. Medizinische Klinik I, Kreiskliniken Reutlingen, Reutlingen, GERMANY
4. Interdisziplinäre Notaufnahme, Klinikum Stuttgart, Stuttgart, GERMANY

Keywords: emergency, ultrasound, education

Abstract :

Purpose:
To evaluate the current state of ultrasound US) use in German emergency departments (ED).
Methods:
ED-Experts, DGINA and DEGUM Members were asked to complete the questionaire online by Surveymonkey®. Responses were collected and anonymized.
Results:
135 valid answers from different hospitals were received. 85% of the hospitals have 2 or more ultrasound machines in the ED. 1/3 of the examinations are done by residents without supervision from an expert sonographer. Among the most frequent US-examinations are „abdomen“, „FAST“, “lower-extremity duplex”, “echo/FEEL” and “chest-US”. The participants claim that basic examinations should be mastered by every doctor. Special ultrasound examinations including gut sonography and contrast enhanced ultrasound are applied in some EDs, but the respective use differs widely.
Conclusion:
To ensure US quality in the ED, levels of competence and training programs need to be established. Contrast enhanced US is so rarely used in EDs even though 50% have the technical possibility. Further research is required with respect to most needed examination types and focus on education.

#7434 : SYPHILITIC AORTITIS: WHEN CHEST PAIN BECOMES THE WORST NIGHTMARE OF THE EMERGENCY PHYSICIAN

Preferred format : Oral presentation

Authors:

Martina Battistioli (1), Eleonora Rella (1), Oscar Totis (2), Alessandro De Leo (2), Mauro Masat (3), Elvio Polesel (4), Zoran Olivari (2), Pier Giorgio Scotton (5), Maurizio Sacher (1)

1. Emergency Medicine , Treviso Ca' Foncello Hospital , Treviso, ITALY
2. Cardiology , Treviso Ca' Foncello Hospital , Treviso, ITALY
3. Cardiothoracic Surgery, Treviso Ca' Foncello Hospital , Treviso, ITALY
4. Anesthesia and Intensive Care , Treviso Ca' Foncello Hospital , Treviso, ITALY
5. Infectious Disease, Treviso Ca' Foncello Hospital , Treviso, ITALY

Keywords: syphilitic aortitis, chest pain, critical care, aortic dissection, infectious rare disease

Abstract :

Introduction

Tertiary Syphilis is usually slowly progressive and any organ may be involved, in particular heart. Cardiovascular syphilis involves the ascending aorta and the arch and can cause aortic aneurysm, aortic regurgitation and coronary ostial stenosis due to aortitis, thus miming all emergent causes of chest pain.

Case Report

A 31 years old woman presented in the ED with history of episodic stress-related chest pain associated with dyspnea and tachycardia for the past 2 months. Her past history was mute and she had no cardiovascular factory risks at all.

Physical examination, vital parameters, Chest X-Ray and blood texts, including markers of cardiac ischemia and D-dimer, were normal. The ECG in course of pain showed a transient diffuse ST depression (2 mm) more evident in the inferior and lateral leads. The bedside echocardiogram showed no abnormalities. Patient was given a dose of Aspirin (250 mg chewed tablet) and recovered in the Emergency Medicine Department for further investigations.

The days after, she presented two other episodes of chest pain, associated with tachycardia and dyspnea. Seriated ECGs -during pain- showed not only the same ST deviation presented in the ED but also ST segment elevation in the anterior and septal leads, and transient T-wave inversion in the inferior and lateral ones after the pain decreased. The last episode of chest pain was associated with respiratory distress due to pulmonary edema, being necessary a C-PAP mask to correct hypoxemia. CT Thorax Angiography, showed just a subsegmentary pulmonary embolism whereas urgent Coronary Catheterization showed the presence of an “ab estrinseco” stenosis of the coronaries’ ostia , thus leading to immediate surgery in the hypothesis of aortic dissection.

During the surgery, which consisted on: substitution of aortic valve and arch and CABG (LIMA on AD) because of the damage of sinus-tubular junction and coronaries’ ostia, it was made the hypothesis of either inflammatory or infectious disease causing aortitis instead of hematoma, which was not present at all. Later, serology for syphilis resulted positive, and histology confirmed the suspect.

The patient was than admitted to the Infectious Disease Department and then fully recovered.

Discussion

Chest Pain is sometimes a challenge for the ED Physician, because of the difficulties in the differential diagnosis. ACLS stresses the importance of identifying some of these “ACS miming” that are severe and life threatening, above all: aortic dissection, pulmonary embolism, acute tamponade, tension pneumothorax.

This patient had presented several episodes of chest pain with ECGs suggestive for ischemia, thus leading to think, at first instance, to Printzmetal’s Angina. Further investigations identified pulmonary embolism and also led the suspect of aortic dissection. How is that possible that three of the main, most frightening chest pain causes are present in the same patient at the same time? The answer is syphilitic aortitis, because of the “ab estrinceco” compression of the coronaries’ ostia which in fact mimes an ACS. In the antibiotic era, when syphilis is becoming uncommon, tertiary syphilis is rare and no one thinks about it as cause of chest pain.

#7435 : Traumatic anterior dislocation of the hip joint; case report

Preferred format : ePoster

Authors:

Azadeh Mahmoudi Gharaee (1), behrang rezvani (1), Morteza Talebi Doluee (1)

1. , none, Mashhad, IRAN, ISLAMIC REPUBLIC

Keywords: Traumatic, anterior hip dislocation

Abstract :

Introduction

Traumatic dislocations and fracture-dislocations of the hip are severe injuries caused mostly by high-speed motor-vehicular accidents, fall from a significant height or sport injuries. Young adult males are most commonly affected. Traumatic anterior dislocation of the hip joint is uncommon. Here we present a traumatic anterior hip dislocation due to motor vehicle accident.

The Case

A 19 years old male motorcyclist who had a car accident was brought to ED by EMS. Initial stabilization was done. On primary survey no serious injury was discovered. The patient had held his right hip and thigh in flexion and abduction. Neurovascular examination was normal. On hip x ray anterior dislocation of right hip was obvious. The patient admitted by orthopedic service and close reduction was done in less than 4 hours. Bone traction was applied and the patient discharged with no complication. On follow up visits traction was removed and he was allowed to walk. No complication such as avascular necrosis of femoral head was detected.

Conclusion

Hip dislocation was considered to be uncommon in previous years but the increase in incidence has been attributed to traffic accidents. Traumatic dislocation of the hip is considered an orthopaedic emergency. Delay in reduction more than 6 h has been associated with a high risk of avascular necrosis of the femoral head and osteoarthritic joint degeneration. The final outcome of isolated traumatic hip dislocation which is reduced within 6 hours is believed to be excellent. In this case reduction was done in less than 4 hours and no complication was detected on follow up visits.

#7436 : Comparison of the effects of hypericum perforatum (St John's Wort) treatment and alpina officinarum (galangal) treatment on the wound healing in experimental contact burns

Preferred format : Oral presentation

Authors:

HALİL UĞUR SAVAŞ (1), SELAHATTİN KIYAN (2), YİĞİT UYANIKGİL (3)

1. EMERGENCY MEDICINE , Mr, GAZİANTEP, TURKEY
2. EMERGENCY MEDICINE , Mr, İZMİR, TURKEY
3. HISTOLOGY AND EMBRYOLOGY, Mr, İZMİR, TURKEY

Keywords: Burn, Hypericum Perforatum, Alpina officinarum

Abstract :

e Purpose:Topical agents are commonly used for burn treatment.There is not any agent or a method in the treatment that adopted as an effective and common method.St. John’s wort and galangal has been used for the treatment of numerous disorders for many years. It was aimed to determine whether H.Perforatum and A.officinarum which have been regarded to be effective on burn and wound healing are effective on experimental contact type burns in terms of wound healing,or not and compare their effects with each other.METHOD:35 healthy albino Wistar rats were subjected. Rats were separated into 5 groups. Burns were formed by contacting the 1x1 cm copper end, which was kept at 100°C constant temperature, of the device designed with the aim of forming burn model to the shaved areas for 10 seconds without applying extra pressure..Any procedure or treatment was not applied to Group 1. In Group 2, burns were only irrigated with 100cc SF for 2 minutes and covered with drug-free dressing after burn application and any other treatment was not applied. In Group 3, the gel prepared from galangal plant was applied for one time after burn application. In Group 4, the gel prepared from St John's wort was applied for one time after burn application.In Group 5, plain gel was applied for one time after burn application.FINDINGS:Hour 0 (before burn) and hour 24 (after burn) weights were measured and assessed.Edema amount was seen to be reduce in all groups with time.In this study, the procedures of vein, hair root and degenerated hair root count were performed on all preparates obtained from each animal of each group.Degenerated hair root number increased step by step in burn control group. When galangal and St John's wort were compared in terms of the effect on the degenerated hair root number, any statistically different value could not be obtained. St John's wort had a statistically meaningful difference ($p<0.05$) in terms of degenerated hair root number. 10 randomized histological sections was taken from each biopsy materials obtained from all animals of each group and tissues of each animal, and in each preparate, epidermis thicknesses of 20 randomized different areas were taken, arithmetic mean results were written and they were assessed statistically. RESULT:it was observed that the topical *H.perforatum* treatment that was applied for one time in acute contact type experimental burns reduced edema and damages of hair root and glandula sebacea, and was effective both for the protection of hair root number, vein number and epidermis thickness, and lowering the degenerated hair root number.It was understood that *A.officinarum* treatment had also effects reducing the edema, glandula sebacea damage and was effective for the protection of epidermis thickness and lowering the degenerated hair root number. However when the treatment applications were compared, the effects of *H.Perforatum* treatment was more prominent than topical *A.officinarum* treatment for wound healing regarding the contact type burns. It can be said that *H.Perforatum* topical treatment is going to givmore positive results for acute period burns when compared to *A.officinarum* treatment.

#7438 : Myocardial infarction and dextrocardia

Preferred format : ePoster

Authors:

Karina Valdez Flores (1), Maria del Carmen Rodriguez Ocejo (2)

1. Emergency Department, Hospital Son Espases, Palma de Mallorca, SPAIN
2. Emergency department, Hospital Son Espases, Palma de Mallorca, SPAIN

Keywords: dextrocardia, ecg, myocardial infarction

Abstract :

Myocardial infarction and dextrocardia

Valdez F., Karina; Rodriguez O., Carmen

Emergency Department, Hospital Son Espases, Spain

Background:

This case report describe the difficulties of emergency physicians to obtain an ecg in a patient with a known dextrocardia.

Case Report:

A 57 years old male was found in an internet café by the ambulance crew after he presented a syncope. No known allergies. He has history of Hypertension, Type-2 Diabetes and is a cigarette smoker. He also had a Killip II myocardial infarct 5 years ago, treated with primary angioplasty and 4 stents in the right coronary artery were placed. His last echocardiography found an ejection fraction of 29%. He was currently taking: Salycilic acid 100mg qd,Atorvastatin 40mg qd,Furosemide 40mg qd, Pantoprazole 40mg qd,Metformine 850mg bid,Insulin Glargin 18UI bid,Bisoprolol 5mg 1qd,Ezetimib 10mg qd,Ivabradin 7,5mg bid,Candesartan 4mg qd and Eplerenon 50mg qd. His vital signs were normal and physical examination showed signs of decompensated heart failure.

He was admitted to the hospital for further investigation and monitoring. The physician and nurses in ED had low experience recording an ecg in a patient with dextrocardia.

1st ecg standard: Negative P wave and QRS complex in I, Poor progression of R wave in precordial limbs. QRS negative V4-V6. 1 mm elevation ST in II and flattening ST in III, aVF and V4-V6. Negative T in II, III and aVF

2nd ecg: bipolar wires switched from left to right. P positive in I. Poor R wave progression in precordial leads. There is no longer ST elevation in DII. Negative T waves in II, III and aVF.

3rd ecg: bipolar and precordial wires switched. P positive in I. Good progression of R in precordial leads. No changes in ST. T negative in II, III, aVF and V4-V6.

During the monitoring, he presented a polymorphic ventricular tachycardia followed by ventricular fibrillation. Advanced CPR was performed with further recovery of vital signs after 15 minutes. After CPR, the ecg showed an elevation of ST segment in inferior leads. Primary angioplasty was performed and confirmed the total occlusion of the left anterior descendant coronary artery, Septal and right coronary artery.

Conclusions: The dextrocardia is the right sided position of the heart. It’s a unusual condition. Negative P wave and QRS complex in I must let us be alert. The malposition of the electrodes of the right and left arm can also produce a negative P wave in I. The right way to do an ecg in presence of dextrocardia is switching the left and right arm lead electrodes and right-sided precordial leads.(1)

The Ecg lecture is an important skill to diagnose coronary artery disease and we must try to recognize the normal variations and avoid lead misplacement using guidelines or electrocardiograph alarms.

1. Kligfield P, et al. Recommendations for the standardization and interpretation of the electrocardiogram: part I: The electrocardiogram and its technology: a scientific statement from the American Heart Association Electrocardiography and Arrhythmias Committee.Circulation. 2007 Mar 13;115(10):1306–24.

#7439 : kearns-Sayre's a-v complete block: An uncommon cause of collapse.

Preferred format : ePoster

Authors:

Francisco Javier Lucas Galán (1), Nuria Sánchez Garrido-Lestache (2), Fernando Constantino Briones Monteagudo (1), María Olmos Alemán (3), Francisco Javier Lucas Imbernón (1)

1. Emergency Department - General Hospital of Albacete , SESCAM, Albacete, SPAIN
2. GP, Osakidetza, Vitoria, SPAIN
3. Endocrinology Department- General Hospital of Albacete, SESCAM, Albacete, SPAIN

Keywords: mitochondrial diseases, Kearns-Sayre syndrome, heart diseases, heart blocks, syncope.

Abstract :

Kearns-Sayre syndrome is a rare disease, discovered in the 1950s by Thomas Kearns and George Sayre, caused by mutations in the mitochondrial DNA. It is important to know that this syndrome is developed due to an isolated mutation, not a hereditary alteration. Patients may have reduced visual ability, hearing loss, dysphagia, ophthalmoplegia, neurological and cardiac disorders, and ptosis along with proximal symmetrical muscle weakness. There is no cure and the treatment is purely symptomatic with regular assessment for its main manifestations, especially of those symptons with vital risk for the patient. Disturbances in cardiac conduction are common, although most patients have A-V blocks of first and second degree but, infrequently, they can develop a complete A-V block. That's the main reason why most patients with Kearn-Sayre's diagnosis need a pacemaker along their lives.

In December 2015 we recived a 29 year old patient, diagnosed with Kearns-Sayre syndrome, brought to the Emergency Service of General Hospital of Albacete by recurrent syncope with spontaneous recovery. She had been previously attended two times for the same reason, and the test performed yielded normal results (blood test and EKG). She told us that Neurology and Cardiology experts were studying her due to frequent dizziness in the past6 months. PMH (pass medical history) she was diagnosed of type 1 diabetes and myopathy (right ptosis and paresis ophthalmoparesis members (proximal 3/5, 4/5 distal). On examination, the patient was asymptomatic , observations (BP, HR BR) were normal, and cardiac auscultation: rhythmic without murmurs. No other symptoms were done in exploration.. The electrocardiogram showed a complete AV block, and a temporary pacemaker was placed and the patient was transferred to the Intensive Care Unit of Coronary where a cardiology expert implanted a permanent pacemaker DDDR MEDTRONIC resulting in complete recovery of the patient.

Mitochondrial disorders, like Kearns-Sayre syndrome, are a heterogenic group of disease with a variety of manifestations. Heart damage is common, especially cardiac conduction (like A-V complete block). Since this is a vital emergency in these patients, we have to detect it as soon as possible. It is important to note that there is no cure for these diseases, so the treatment is pure symptomatic and preventive.

#7440 : It would be useful STONE questionnaire in hospital emergency rooms for suspected nephrolithiasis?

Preferred format : ePoster

Authors:

Daniela Rosillo Castro (1), Carmen Hernández Martínez (1), Maria Dolores Pascual Muñoz (1), Rocío López Valcarcel (1), María de la Paz Egea Campoy (1), Maria del Mar de la Torre Olivares (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: Prognosis, nephrolothiasis, emergency room

Abstract :

Introduction

The questionnaire STONE predicts the probability of presence of ureteral calculi uncomplicated and can be used for the diagnosis of renal colic in Primary Care Emergency

Objetive

Compare the probability of renal colic according to the questionnaire STONE with the presence of abnormalities in imaging tests (ultrasound and computed tomography (CT)) in a hospital emergency department

Material and Methods

Observational, longitudinal , retrospective review of medical records , patients were selected patient with renal colic diagnosis in 2015 that underwent ultrasound or CT in the period up to 1 week of diagnosis. The probability of nephrolithiasis according STONE questionnaire was calculated. Collected variables: gender , age , location, duration of clinical (less than 6 hours, between 6-24h and more than 24 hours), if I have nausea or vomiting, presence of hematuria , impaired creatinine, if he had lithiasis and / or hydronephrosis

Results

Of the 532 patients with a discharge diagnosis of renal colic emergency patients underwent imaging test 159 patients (29.87%). The mean age was 47.8, 56% men. 56% were left location. 44.7% went to the emergency in the first 6 hours of evolution, 28,3 6-24 hours and 27% with more than 1 day evolution .. There were hematuria in 89.3%. 25.2% had nausea, vomiting 12.6% and 58.5% did not mean any of them. In 20.8% of patients was impaired creatinine STONE According to the questionnaire the likelihood of renal colic was low at 8.2%, moderate in 45.3% and high in 46.5%. Ultrasonography was performed CT 67.3% and 32.7%. 69.8% in the presence of calculi was confirmed, and there ureterohydronephrosis 28.3% grade 1, grade 2: 32.1% and grade 3: 1.3% Any alteration in 89.3 % of tests target image . They had litiasis 83.8 % and one of the two 97 % of patients with high probability , 68% stones and some 90 % of the average and 0% lithiasis and 38 % ureterohydronephrosis I grade of low . In 100% of patients with medium probability and impaired creatinine calculi visualized

Conclusion

Any alteration in our series aim at a high probability in the questionnaire STONE predicts in 8 of 10 patients the presence of calculi and almost 100 % the presence of some alteration . In 100% of patients with low probability is not objective stones. In all patients with average probability with impaired renal function calculi visualized , what makes us think about the possibility that it could create a questionnaire STONE extended for hospital use including this value.

#7441 : Primary P.C.I in Winter's E.C.G pattern: A new sign of L.A.D occlusion/subocclusion.

Preferred format : ePoster

Authors:

Francisco Javier Lucas Galán (1), Fernando Constantino Briones Monteagudo (1), María Asunción Galán Traba (1), Nuria Sánchez Garrido-Lestache (2), María Olmos Alemán (3)

1. Emergency Department - General Hospital of Albacete , SESCAM, Albacete, SPAIN
2. GP, Osakidetza, Vitoria, SPAIN
3. Endocrinology Department- General Hospital of Albacete, SESCAM, Albacete, SPAIN

Keywords: myocardial ischemia, coronary disease, electrocardiography, cardiovascular diseases, myocardial revascularization.

Abstract :

Winter pattern is a rare, novel and little-known electrocardiographic pattern, without elevation of ST segment, of vital importance as a standard of primary revascularization in patients without contraindication and typical chest pain. First described in 2008 by Dr. Winters and published in New England, it describes an occlusion / subocclusion of the proximal left anterior descending coronary artery (LAD), being a primary criteria for revascularization as soon as possible. Only 2% of proximal LAD occlusions have this pattern, so most of them are not diagnosed in time.

In Winter's pattern, instead of the signature ST-segment elevation, the ST segment shows a 1- to 3-mm upsloping ST-segment depression at the J point in leads V_1 to V_6 that continued into tall, positive symmetrical T waves.

The last experience with this syndrome in Albacete's Emergency Service was with a 71 years old patient, ex-smoker for more than 20 years, currently on statin for dyslipidemia and operated of right herniorrhaphy. Patient referrers, from 1 hour ago, left chest pain that radiates to the back and is accompanied by vegetative symptoms. On examination, the patient was diaphoretic with low blood pressure (BP 90/60). The electrocardiogram (ECG) shows ST segment depression in precordial with peaked T and slight rise of ST <1 mm in aVR without ST elevation in V7-V9. NSTEMI (Non–ST-Segment Elevation Myocardial Infarction) initially suspected, we treated with analgesia and did troponin's serialization with slight elevation of it (Tn 18, CK 189). After a while, the chest pain and the ECG changes persist. After a second serialization with persistent troponins rise without ECG changes, it was discussed with cardiology expert who recognized the Winter's pattern and found in the catheterization a substantially complete proximal occlusion of LAD, proceeding to primary revascularization and implanting a stent in it.

In ischemic heart diseases the myocardial damage is subjected to the time of revascularization. It is important to learn and recognize the ECG's patterns that are equivalent to ST-segment elevation, showing a false NSTEMI image.

#7442 : Aplasia of the posterior arches of the atlas: a rare cause of acute neck pain in emergency departement

Preferred format : ePoster

Authors:

dorsaf bellasfar (1), mouna titey (1), jihene aouem (1), saloua houimli (1), abdelmajid ben romdhane (1)

1. , FSI hsopital, tunis, TUNISIA

Keywords: posterior arche, aplasia, atlas

Abstract :

Introduction: Cervical pains are a common reason for visit in emergency department. About 20% of the population had at least one episode of neck pain in her life [1-2]. The cause can be traumatic, postural, inflammatory, infectious, tumor or secondary to bone deformities. Agenesis of the posterior arch of the Atlas is a rare cause.

Observation: We have reported the case of a young woman, aged 25, basketball player who has consulted in the emergency for isolated neck pain, lasting for two days. On physical examination, the patient was non-febrile , mobility was preserved and painful and there was no sensory-motor deficit. The rest of the examination was without abnormalities. Radiography of cervical spine showed agenesis of the posterior arch of C1. The patient benefited from a symptomatic treatment based on anti-inflammatory and analgesic drugs and she was sent to the orthopedic consultation to complete the exploration by an MRI of the cervical spine.

Conclusion: malformations of the cervical spine are a rare cause of neck pain. Their clinical expression may remain asymptomatic for a long time and their discovery is often fortuitous.

#7443 : Who cares about patient flow? Understanding the issues surrounding patient flow in the Emergency Department and Hospital

Preferred format : Oral presentation

Authors:

Sarah Edwards (1), Leesa Parkinson (1)

1. Emergency Department, Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Bangor, UK

Keywords: Patient flow, Quality Improvement, Management

Abstract :

Background

Patient flow and how to improve it is very topical in most hospitals. The Royal College of Emergency Medicine in the United Kingdom, see this as an important issue which as a whole country needs improving. Without patient flow (PF) through out a hospital, patients ultimately get stuck in the Emergency Department (ED). Like many trusts in the United Kingdom, acute bed pressures are seeing referred patients remaining in the ED. Consequently, there is potentially delayed treatment by the accepting speciality, due to limited capacity leading to increased bed days and morbidity. We conducted an anonymous online survey to all the consultants of one National Health Service (NHS) trust to see is we as an ED could help PF issues. This trust serves a population of approximately 600,000 people. Given increasing pressures on Emergency Departments (ED) we need to try understand and improve the issues surrounding patient flow in the hospital.

Aims

Our aim was to understand the views of consultants in one NHS trust about PF issues. We anted to understand their perception of PF and PF initiatives in the hospitals. By understanding these aims we could see if any of these issue we ED based, and see if we could change them.

Methods

Using Survey Monkey™ an online survey creator, we sent a 7-question survey to all Consultants in the trust (550). It was a completely anonymous survey asking questions around PF in respective departments and engagement in hospital wide PF initiatives. A qualitative thematic analysis of all the results was conducted by one researcher, trying to draw out themes.

Results

27% (145/550) of the hospital consultants completed the survey across all sites in the hospital. The majority of responses came from the acute specialities including critical care, emergency medicine, anaesthetics and surgery. Unsurprisingly, nearly 100% of participants across all specialities said PF was important to them and their areas of practice. The specialities that didn’t included histopathology and dermatology. No consultants felt that the ED made their PF issues any worse. Key issues were needing more community beds to move patients, frustration of nothing changing quickly and low moral with long patient waits in the ED. One final issue, was a feeling that there is no hospital wide consensus or plan that is helping minimise patient waits in the the ED.

Conclusion

PF is important to all departments not only the ED. The constant pressures and daily waits for referred patients to be moved to the correct speciality is demoralising the workforce. There is a general feeling that more community placements, would help alleviate this burden. As a speciality, we as Emergency Medicine must try and assist our speciality colleagues when referring patients, especially if they remain in our department. Moving forward, we need to draw together all specialities and have a hospital wide approach to tackle these issues, not just an Emergency Medicine one.

#7444 : Developing the mental health aide memoire for adults – A succinct tool for the emergency department psychiatric history

Preferred format : Oral presentation

Authors:

Sarah Edwards (1), Helen Salter (1)

1. Emergency Department, Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Bangor, UK

Keywords: Mental Health, Psychiatric, Suicide, Suicide assessment, Psychiatric history

Abstract :

Background and Aims

Between late 2010- early 2012 there were more than 114000 inpatient admissions each year in England for intentional self-harm, a 7% increase on the previous year. Our hospital is a district general hospital which sees between 500-600 adult patients each year who present with a mental health (MH) issue. In 2015 the Royal College of Emergency Medicine (RCEM) in the United Kingdom released results of a national survey looking at admissions to the Emergency Department (ED) with MH issues. The work by RCEM looked at 9 standards that it believed were important when seeing patients with MH issues. This included a risk assessment through to patients after referral being seen by a MH practioner within one hour. Locally and nationally the results across most of these standards were poor.

Aims

Consequently, we wanted to develop a tool that could be used to capture this key data. It would need to be quick, easy and not onerous to a busy emergency medicine (EM) doctor.

Methods

We audited the department against the RCEMs standards pre development of the tool. We then with our psychiatric liaison colleagues designed a 2 paged, A4 size document encompassing what was required by RCEM. It also includes tailored questions, sensitively written to identify those highest at risk. The form takes between 2-3 minutes to fill in. Subsequently we re audited the use of the tool.

Results

We saw a 40% improvement across the whole spectrum for documentation for the RCEM standards. Also, overall documentation for psychiatric patients has improved dramatically.

An unexpected benefit, was our junior doctors who often have never worked in a psychiatric job found the form very useful. They found the wording of the questions, helpful when seeing MH patients. Our psychiatric liaison team report improved referrals and thus helping them with patient management.

Conclusion

Our 2-page form has helped to revolutionise how we receive a MH history from our patients. Its quick, friendly for the psychiatric novice and hopefully is assisting with patient care. The form is being further updated and improved, with aim to role it out trust wide.

#7445 : MRI in the emergency department: why do emergency medicine doctors order MRIs

Preferred format : Oral presentation

Authors:

Farah Mustafa (1), Andrew Casey (1), Peadar Gilligan (1)

1. Emergency Medicine, Beaumont Hospital, Dublin, IRELAND

Keywords: MRI, Imaging, emergency department,clinical decisions

Abstract :

Title: MRI in the emergency department: why do emergency medicine doctors order MRIs

Authors

A Casey, F Mustafa, P Gilligan

Introduction

We present an observational study that assesses the accuracy of clinical diagnosis made by EM physicians when correlated with MRI scan results.

Given concerns with radiation-induced malignancies from the excessive use of CT scans, intuitively an alternative method of evaluation that does not entail ionizing radiation is invaluable. MRI does not use ionizing radiation, and has not been shown to be harmful to humans but this test is not without its downsides, including cost, availability, some contraindications, and the time needed to perform the scan.

Methods

A retrospective study of MRI scans requested by EM physicians using a digital radiology system NIMIS (National Integrated Medical Imaging System) was performed. We looked at the clinical diagnoses suspected by the EM physicians when requesting the scans and compared them with the radiological reports. This is a pilot study and we aim to analyse the data for a period of 1 year with a total of 396 scans.

Results

A total of 37 MRI scans were requested by EM physicians in the study period of 3 months. 21 of those scans were of lumbosacral spine and 10 were of brain with or without contrast. There were 2 cervicothoracic, 1 hip, 1 knee, 1 ankle and 1 breast scan performed.

17 MRI scans of lumbosacral spine were performed for a suspected cauda equina syndrome out of which 6 were positive for cauda equina syndrome and another 7 showed advanced degenerative changes with nerve root impingement, thecal sac indentation and significant disc bulges.

Of the 10 brain scans, 4 were positive for the clinical suspicion of exacerbation of Multiple Sclerosis, increased size of meningioma, metastatic brain lesions and for progression of cavernous hemangioma.

The hip scan was performed for a suspected illiopsoas abscess which confirmed the clinical suspicion of the physician and the breast scan confirmed a suspected implant rupture. The cervicothoracic, knee and ankle scan results did not confirm the suspected clinical diagnosis.

In total, of the 37 MRI scans requested by EM physician, 18 (48.65%) were found positive for the suspected clinical diagnosis.

The study results indicate that EM physicians are increasingly using MRI in the evaluation of patients and their clinical concerns are often confirmed radiologically.

Conclusion

With the increasing availability of MRI Emergency Medicine specialists need to consider its potential applications in the evaluation of patients attending Emergency Departments. This study shows that though we use it infrequently we have a high pick up rate with regards to presumed diagnosis.

#7446 : Atrial fibrillation in the Wolff-Parkinson-White syndrome: a challenging arrhythmia

Preferred format : ePoster

Authors:

Dorsaf Bellasfar (1), Karim Ounalli (2), Saloua Houimli (1), Mouna Titey (1), Ghania fetiha Aouadi (3), Amel Amamou (1), Jihen Aouem (1), Fatma Ben salem (3), Ben Romdhane Abdelmajid (1)

1. emergency department, Hopital des FSI La Marsa, Tunis, TUNISIA
2. anesthesia, Hopital des FSI La Marsa, Tunis, TUNISIA
3. emergency department, Hopital des FSI La Marsa, tunis, TUNISIA

Keywords: Wolff-Parkinson-White, atrial fibrillation, syncope, cardioversion

Abstract :

Background: Wolff-Parkinson-White syndrome often represents a diagnostic and therapeutic dilemma for emergency physicians especially if it’s associated with atrial fibrillation. It is life-threatening because of the fast ventricular response and the possibility of degeneration to ventricular fibrillation.

Case report: We report the case of a 25 years-old man, with a medical history of hypertension, presented to the emergency room for loss of consciousness with palpitation and dizziness. Clinical examination found a clammy patient with a Coma Glasgow Scale of 15, a blood pressure about 100/60 mmHg and a pulse about 200 bpm. Admission electrocardiogram showed irregular wide QRS complex tachycardia. Intravenous amiodarone was administrated at a dose of 300 mg. With the persistence of the same arrhythmia an electrical cardioversion was performed with success. A sinus rhythm and a delta wave were shown in the post cardioversion electrogram. Then, the patient was transferred in the department of cardiology for radiofrequency ablation of the accessory pathway.

Conclusion: Clinical clues to the diagnosis of atrial fibrillation occurring in the setting of the Wolff-Parkinson-White syndrome include essentially medical history and electrocardiogram signs. An irregular wide QRS complex in a young patient with palpitations, dizziness or syncope has to lead to this diagnosis. treatment depends on the initial hemodynamic status.

#7447 : Patterns of child and adolescent mental health admissions to the emergency department

Preferred format : ePoster

Authors:

Sarah Edwards (1), Elly Lesser (2), Leesa Parkinson (1)

1. Emergency Department, Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Bangor, UK
2. General Practice, Northern Devon Healthcare Trust, Barnstaple, UK

Keywords: Mental Health, Psychiatry, Child Psychiatry,

Abstract :

Objectives and Background

Appromixmately 1 in every 12 to 15 children and young people deliberately self-harm. Our aim was to identify all the paediatric mental health (MH) patients that presented to the Emergency Department (ED) and follow their journey to paediatric ward. By understanding the service needs we will be able to identify areas for improvement. The hospital has a Child and Adult Mental Health Service (CAMHS) service works Monday to Friday in daytime hours only (9am – 5pm).

Methods

This retrospective analysis looked at patients younger than 18 years who attended the ED in a District General Hospital with a primary MH issue between January and December 2014. Data collected included reason for admission, length of stay in the department, length of stay in ward and other epidemiological data. Final discharge destination and nursing provision needed was also looked at.

Results

103 paediatric patients presented to the ED with a primary MH problem, all of whom were admitted to await further psychiatric assessment. Most patients were female (9:1 ratio), with a mixed overdose as the common presentation. 4% of the total paediatric admissions over this period were MH related. 70% of patients presenting out of hours. Median length of admission was 31 hours and 40 minutes. Admission on a Friday night resulted in the longer stays, with a median stay of 52 hours. Nearly 20% of these patients required 1:1 nursing care on the ward, 87% were subsequently discharged home after psychiatric review. Since 2011 there has been a 30% increase in the numbers of admitted to the paediatric ward in our hospital.

Discussion

This rise in paediatric MH patients presenting to the ED is likely to be mirrored across all EDs in the United Kingdom. This has a significant impact both on the ED and the paediatric ward. A major concern is all these patients are being admitted to the ward, which is not the appropriate setting to be reviewed. If CAMHS was available in the ED, these patients could be discharged from here. Subsequently to this study, there has been a review of service provision and CAMHS is planning to introduce a 6-day week. Additionally, the ED now attempts to identify all children with MH problems at triage, and aims to get them seen as soon as possible by the paediatric team. Further work is needed to understand why there has been an increase in the number of children and young people with MH problems.

#7448 : Glasgow Blatchord Score (GBS): Raising The Bar

Preferred format : ePoster

Authors:

Etimbuk Umana (1), Olayiwola Amoran (2), Carol Goulding (1)

1. , University Hospital Galway, Galway, IRELAND
2. , Naas General Hospial, Dublin, IRELAND

Keywords: Patients, GBS, OGD, Bleeding, Risk, Intervention

Abstract :

Introduction: Upper GI bleed (UGB) is a common presentation to the emergency department (ED). It accounts for three percent of all hospital admission. The GBS has been found to be superior to both the Rockall and AIM65 score for risk stratification of UGB. A GBS score of ≤0 has been shown to have a sensitivity of >99% for stratifying low risk bleeds, however recent studies show a GBS of ≤1 is equally sensitive and therefore could be considered as an appropriate cut-off for stratifying patients as low risk.

Aims: The aim of this study was to a) determine the frequency of use of the GBS score in the ED and b) to assess the relationship between GBS and esophagogastroduodenoscopy (OGDs) findings and need for intervention.

Method: Retrospectively, data was obtained from both ED and endoscopy unit from the 1st January to 31st of July 2015 of all patients presenting to University Hospital Galway with UGB. Patient's demographics, GBS, OGD findings and intervention were recorded.

Results: A total of 109 patients were identified but data was available for 86 patients who fulfilled our criteria. In this study 47(55%) were males and 39(45%) were females, mean age 59 and 65 respectively. Only 12(14%) had their GBS documented on admission. Sixty four patients had normal (non-active bleeding) OGD's, six had active bleeding on OGD, while sixteen patients had no data available. Of the seventy patients who underwent OGD's, nine patients required intervention.

Seventeen patients(20%) had a GBS ≤1 who underwent OGD's, none had active bleeding or required intervention. A GBS≤1 had a sensitivity and specificity of 100% and 30% respectively. It also had a NPV of close to 100% in predicting active bleeding and need for intervention.

Conclusions: Using a GBS of ≤1 was shown to be sensitive for identifying low risk UGB which could therefore be offered OGD as out-patients, there by reducing admission for UGB by 20%. Education of first responders and appropriate referral system for outpatient management of patients presenting with a GBS of ≤1 should be facilitated.

#7449 : The explosive return of dnp (2,4-dinitrophenol)

Preferred format : Oral presentation

Authors:

David Shackleton (1), Alicia Refson (1)

1. Northwick Park Hospital, NHS, London, UK

Keywords: toxicology

Abstract :

2,4-dinitrophenol, an industrial organic compound, has been increasing in recreational use, thanks in part to widespread availability over the internet. Used originally in industry as an explosive precursor, it was used originally as a medication in 1933 for its profound weight loss effects. Severe toxicity led to its withdrawal as a medication, but it has found new popularity amongst body builders as an agent to increase basal metabolic rate (BMR) and enhance fat loss. We present the case of an intentional overdose of DNP and the lessons learnt from this dangerous drug.

A 32-year-old male with a history of depression took an intentional overdose of DNP before calling an ambulance. On arrival to the resuscitation room he looked extremely unwell, with profound sweating, yellow sweat and confusion. Staff commented on the unusual smell from his sweat. On initial assessment, his airway was patent, SaO_2 95% in room air, heart rate 140 bpm, BP 168/86 mmHg and GCS 14 (E4V4M6), temperature was 39.5ºC. Electrocardiogram showed narrow complex tachycardia. Oxygen was given by a high-flow non-rebreather mask and IV access gained. 1L Hartmann's fluid was given stat. A venous blood gas (VBG) showed a pH of 7.36 and Lactate 8.3 mmol/L. Within five minutes of arrival his heart rate rose rapidly to over 200 bpm and within a few seconds his entire body became rigid, breathing slowed before loss of cardiac output and commencement of Cardiopulmonary resuscitation (CPR). Intubation was difficult due to extreme generalised rigidity. Administration of rocuronium and midazolam failed to improve this rigidity. A repeat VBG during CPR showed a potassium of 8 mmol/L. He was given 10mls of 10% calcium gluconate, an insulin/dextrose infusion and further IV fluid. During CPR he was given an intralipid bolus and a bolus of 8.4% sodium bicarbonate. He died after one hour of CPR with asystole throughout. His final lactate was 18 mmol/L, with an unrecordable potassium and a pH of 6.8. During CPR, advice was sought from the National Poisons information service (NPIS) who advise on severe poisoning cases in the UK.

Learning points:

DNP acts to uncouple oxidative phosphorylation and as such greatly increases the BMR leading to extreme rises in body temperature. Extreme rigidity due to release of calcium has been reported to occur immediately prior to death as well as quickly after. Yellow colouration of sweat has been reported as pathognomic of DNP overdose.

These patient should be cooled rapidly. Intubation with paralysis and sedation should be considered immediately. Dantrolene has been suggested as an early treatment for the severe hyperthermia.

Skin exposure to DNP is possible and staff should wear protective clothing whilst examining the patient.

Street names for DNP currently include Dinosan, Solfo Black, Nitrophen, Aldifen, Chemox, Mical, Caswell 392, Nitro klenup.

Easy internet availability will make overdose far more common. Emergency physicians should be aware of this compound and be mindful of how rapidly these patients can deteriorate. Very early aggressive resuscitation with cooling may allow recovery.

#7450 : C2 fracture with absence of neurological signs

Preferred format : ePoster

Authors:

Tom Barker (1), Abdo Sattout (1)

1. Department of Emergency Medicine, Aintree University Hopsital, Liverpool, UK

Keywords: C2 fracture, Odontoid fracture, Cervical spine fracture

Abstract :

Introduction

Falls are a common presentation to the Emergency Department (ED). In some cases, the symptoms and clinical examination may not correlate with the severity of the injuries sustained.

Case

An 81 year-old male was brought to our ED after tripping on a loose carpet and falling forward down 12 stairs. There was no loss of consciousness and he was able to mobilise with no limitations after the fall. He was immobilised by the ambulance crew based on the mechanism of injury.

Examination revealed tenderness to the left aspect of the neck, no midline cervical spine tenderness, a GCS of 15 and no neurological deficit.

In accordance with NICE guidelines, an urgent computed tomography (CT) scan of head and neck revealed a displaced fracture through the base of odontoid process with significant anterior and left lateral subluxation and dislocation of the body of C2 in relation to C1. There was surrounding haematoma with a degree of spinal canal compromise at C1-C2 level.

Due to the severity of the fracture and preserved neurology, the patient was transferred urgently to the regional neurosurgical unit for posterior C1-C2 fixation. He made good post-operative recovery and was discharged 5 days later with an Aspen collar to be worn for 8-12 weeks.

Discussion

Cervical spine injuries account for 3.7% of all trauma patients with an estimated incidence around 11.8 per 100,000 per year. Falls (60%) are the commonest mechanism of injury followed by motor related accidents. Involvement of the C1-C2 complex accounts for 19-25% of all cervical spine fractures with odontoid process accounting 55% of these.

Odontoid fractures are classified as Type I (upper tip of the odontoid process only), Type II (through the base of the odontoid process) or Type III (body of C2).

Patients usually complain of neck pain and inability to actively move the neck with a sensation of instability. Examination findings can be as severe as quadriplegia with respiratory involvement but more commonly (up to 79% of cervical spine fractures) no neurological deficit is identified.

Diagnosis relies on clinical examination and radiological imaging (plain X-rays or CT scans). However, NICE suggest that, as a minimum, CT scans should cover any areas of concern or uncertainty from X-rays or clinical examination. MRI may add important information about ligament and disc injuries.

Treatment for Type I fractures is immobilization with a hard-collar for 6-8 weeks whilst Type II and III fractures can be managed either conservatively or surgically (external immobilization with a halo vest, internal fixation/ odontoid screw fixation or posterior C1-C2 arthrodesis).

Conclusion

Significant cervical spine injury can be present with minimal signs and symptoms. Patients demographics (especially the elderly) and mechanism of injury should always be considered when deciding on choice of investigations.

#7452 : An unusual case of central venous thrombosis after central venous catheterisation in a young patient with undiagnosed Behcet’s disease

Preferred format : Oral presentation

Authors:

Vittorio Decaro (1), Azam Majeed (1)

1. , University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK

Keywords: Central venous thrombosis, Central venous catheter, Tonsillitis, Behcet's disease

Abstract :

Introduction: Behcet’s disease (BD) is a systemic small vessel vasculitis. Aneurysm formation and venous thrombosis are rare but life-threatening complications. We present the unusual case of central venous thrombosis in a young man under investigation for BD.

Case report: A 20-year-old-gentleman of Afro-Caribbean descent presents to the Emergency Department with severe right-sided neck pain unresponsive to intra-venous (IV) morphine plus sore throat and difficulty swallowing for 10 days.

He was under investigation for BD following infra-renal aortic aneurysm repair 5 weeks ago. Recovery on ITU had been uncomplicated aside from an incidental small non-occlusive thrombus in the right internal jugular vein (IJV) secondary to central venous catheterisation. He was discharged with a PICC line in-situ for IV antibiotics. On examination, the anterior border of right sternocleidomastoid was significantly tender and there was follicular tonsillitis with normal neck movements.

Vascular and ENT opinions were sought and the patient was treated for acute bacterial tonsillitis with meropenem and vancomycin since blood tests were consistent with infection (white cell count 14.7 and CRP 273). After a few days, he developed marked head and neck swelling which triggered ITU admission for impending airway compromise. This responded well to a course of dexamethasone however antibiotics had been ineffective. CT imaging was therefore performed and revealed an occlusive thrombus in the right IJV extending cranially to the level of C2. This was significantly worse than before and there was new thrombosis in the right subclavian vein with extension into the origin of the left subclavian vein. Other findings were retropharyngeal oedema, bilateral prominent cervical lymphadenopathy and enlarged right axillary lymph nodes. He received 5 days of anticoagulation before removing the PICC line to minimise the risk of dislodging the thrombus. Treatment was continued with warfarin. A lack of positive microbiological tests made it difficult to identify a source of infection however blood tests were later seen to improve on antibiotics. They were therefore stopped 24 hours after PICC line removal during which time he developed another thrombus at the site of a peripheral venous cannula in the left antecubital fossa. Unfortunately the patient subsequently underwent endovascular repair for a leaking pseudoaneurysm. Treatment for BD was commenced soon after discharge from hospital.

Discussion and conclusion: There are a handful of case reports for central venous thrombosis in BD. They all present with swollen face, neck and upper limbs in the very first instance. This was different in that severe neck pain was the only presenting complaint and also complicated by signs and symptoms of tonsillitis. A referral to the vascular team was made because the level of pain was inconsistent with a diagnosis of tonsillitis. Both atypical head and neck presentations and risk factors should alert the emergency physician to suspect central venous thrombosis. Systemic vasculitis is another important consideration especially with central venous catheterisation.

#7453 : The burden of trauma presenting to the tertiary referral hospital in Freetown, Sierra Leone

Preferred format : Oral presentation

Authors:

Richard Lowsby (1), Ibrahim Bundu (2), Hooi-Ling Harrison (1), Tenema M'Bayo (2)

1. King's Sierra Leone Partnership, King's Centre for Global Health, London, UK
2. Connaught Hospital, Ministry of Health and Sanitation, Freetown, SIERRA LEONE

Keywords: trauma, injury, registry

Abstract :

Introduction

Injury accounts for 8% of the mortality in Sierra Leone and contributes to significant morbidity and disability[1]. Connaught Hospital is the main government referral hospital in Freetown, the capital of Sierra Leone. Its emergency department (ED) receives trauma victims that attend directly from within the city but also takes referrals from across the country. Currently, the country is recovering from a recent Ebola epidemic, there is no formal trauma system in place and a trauma registry is lacking. The burden of cases has not previously been measured. The aim of this study was to assess the volume and acuity of trauma cases presenting to the ED so that services can be designed accordingly.

Methods

We collected data retrospectively over a 3-month period from 1st January to 31st March 2016 from the attendance register in the ED triage area. Basic demographic data including age and sex were obtained as well as time of presentation, mechanism of injury and triage colour category as a marker of severity of illness.

Results

During the study period, 2928 patients were assessed by the triage staff, of which 340 (11.6%) presented following injury. Sixty-six percent were male and the mean age of victims was 28 years old. Road traffic collision (RTC) accounted for 55% of presentations and was the most common cause of injury, followed by falls from height (17%), assault (14%) and burns (5%). Of the assaults, penetrating trauma was more common than blunt injury.

Although the early shift is the busiest in terms of overall attendances, the majority of trauma attendances occur during the late (40%) and night (22%) shifts. In terms of triage category, 14% were red (emergency) cases and 27% were orange (very urgent), yellow comprised 35% and the remainder were green.

Conclusion

Injury accounts for 11.6% of the cases seen in triage at the main government hospital in Freetown. The majority of cases are due to RTC and present later in the day or overnight. Forty-one percent of cases are high acuity, being category red or orange. Subsequent to this study, we aim to establish a trauma service that will be able to respond appropriately to the needs of these patients and establish pathways and training that will facilitate urgent care to improve their outcomes, focusing on basic life-saving interventions such as oxygen delivery and shock management. A formal trauma registry is also seen as an important method of monitoring and improving care.

Reference

1) Sierra Leone: WHO statistical profile. World Health Organisation, 2015. Available from: http://www.afro.who.int/en/sierra-leone/country-health-profile.html

#7454 : How we handle new-onset atrial fibrillation in our emergency department

Preferred format : ePoster

Authors:

Daniela Rosillo Castro (1), Maria Dolores Pascual Muñoz (1), Carmen Hernández Martínez (1), Amalia Castaño Villar (1), Rocío López Valcarcel (1), Vivianne Andrea Jímenez Garzón (1), Paula Rodriguez Lavado (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: Atrial fibrillation, drugs, heart rate

Abstract :

Introduction: Atrial fibrillation is the most common arrhythmia seen in the emergency services.

Objective: Assess if we make a proper handling of recent onset atrial fibrillation in our emergency department

Material and method: observational, longitudinal , retrospective review of medical records. All patients diagnosed with AF selected discharge not known . Variables studied : sex , age , reason for consultation , evolution time , if frequency control is attempted or method used and used drugs cardiovierten . EKG at discharge. If they were reviewed in outpatient in less than 1 month and ECG in consultation

Results: Between 2014-2015 we had 237 patients with a discharge diagnosis of atrial fibrillation, of which 91 patients were not known . mean age 69.81 %. 51.6 % were women. Complaint: Palpitations 46.1 % , 17.6 % Chest pain ,Disnea16.5 %, casual 11.7 %, other 13.2 % Time evolution > 48 hours 53.8 % and < 48 46.2 %. In 54.9 % is made control heart rate fc and cardioversion 45.1 %. At 31.9 % they remained high in FA and 68.1 % were in sinus . Was used : 2.2 % electric, pharmacological 61.5 , 36.3 spontaneous . In cardioversion: spontaneus was 32.6 % , 14 % used amiodarone , flecainide 39.5 %, the rest with drugs for frequency control . In the frequency control was spontaneus 37.5% , 22.9 % was used digoxin , diltiazem 10.4 % , Amiodarone 6..3%, bisoprolol 6.3 % , 4.2 % propanolol , verapamil was used 6.3 % and 2.1 % carvedilol. They were revised 87.9 % in outpatient cardilogia in less than 1 month. In sinus 48.8 % , 47.6 % Atrial Fibrillation 42.9 % , 3.3 % flutter

Conclusions: Overall we make a correct handling of recent onset atrial fibrillation , as a function of time of evolution almost 100 % , cardioversion or frequency control is performed as indicated. It is noteworthy that in 1 in 3 patients this objective is achieved spontaneously . For cardioversion is the most used drug flecainide and frequency control digoxin and diltiazem

#7455 : Secondary aortoenteric fistula: A case report

Preferred format : ePoster

Authors:

Francesco Borrelli (1), Danilo Benedetto (2), Marina Buda (1), Giada Zecchi (3)

1. Emergency Medicine Residency Programme, University of Modena and Reggio Emilia, Modena, ITALY
2. Emergency Medicine Residency Programme, Università di Modena e Reggio Emilia, Modena, ITALY
3. Emergency Department, Nuovo Ospedale Civile Sant'Agostino Estense, Modena, ITALY

Keywords: Aortoenteric fistula, Bleeding, Aortic Aneurysm

Abstract :

CASE REPORT: G.B. is a 81yo gentleman with a past hystory of hypertension and abdominal aortic aneurysm rupture with emergent placement of endovascular synthetic graft two years before. He is otherwise healty excluding known colic diverticulosis.He was brought to our ED by EMS for pre syncope. He also reported epigastric pain and a single emission of black stool some hours before presentation. He was evaluated for abdominal pain and bloody stools 12 days before and was diagnosed with suspected diverticulitis.
On initial evaluation the patient was tachycardic with a HR of 120bpm, his BP was normal but he had a mottled skin and appeared confused, intensely shivering despite thermal blanket. Examination revealed moderate pain to the central region of abdomen with moderate local tenderness. Rectal examination showed melena in the rectal ampulla. An ABG showed acute metaboli lactic acidosis with efficient respiratory compensation and moderate anemia (Ph 7,42, pCO2 19mmHg, Lac 11,9mmol/l, Hb 8g/dl).Omeprazole 80mg EV was administered stat and fluid resuscitation with NS was started. A FAST scan was immediately performed: no free fluid was visible in peritoneum but a liquid layer encompassed the excluded aneurysm. In the meanwhile a CBC performed just 10 minutes after the initial ABG revealed an Hb of 6g/dl, so the patient started tranfusion of 2 units of PRBC. In few minutes the situation deteriorated and several hypotensive episodes occured but despite this the patient was taken to the CT to perform an aortic scan with contrast medium. The CT showed massive quantity of air inside the aneurysmatic sac, likely due to aortoenteric fystula since the absence of a clear cleavage plain between aneurysm and duodenum. The patient needed emergent laparotomy and endotracheal intubation was performed in the ED using ketamine 1mg/kg and midazolam 5mg. Just few seconds after glottic visualization was obtained and the ET passed trough the cords, a massive hematemesis occured, accompanied by a new hypotensive epysode. The patient underwent surgical exclusion of the aneurysm as a bridge therapy for secondary endovascular repair.
At the time of this abstract, 8 days before the event, the patient is alive and is waiting for second surgery.

DISCUSSION:Aortoenteric Fistula (AEF) is defined as a communication between the aorta and the GI tract and is classified as primary if the communication i between the native aorta and GI tract or secondary if the aorta has been reconstructed (for either aneurysmal or occlusive disease). Secondary AEF are the most common. When left untreated, AEF it is almost universally fatal and is notoriously difficult to diagnose. As such an high index of suspicion is required when approaching a patient with GI bleeding and hystory of aortic disease. The classical triad of GI bleeding, Abdominal pain and pulsatile mass is present in only 11% of cases in recent rewiews. A classical clinical feature is the "herald bleeding", a self limited minor bleed that, if left untreated, will be followed by exsanguinating bleeding within hours to months. Our patient's prior episode of "diverticulitis" could have been an herald bleeding.

#7456 : Social network analysis of international collaborative publications in European Journal of Emergency Medicine

Preferred format : Oral presentation

Authors:

Ching-Hsing Lee (1), Pei-Chen Juan (2)

1. Attending Physician, Chang-Gung Memorial Hospital, Taipei, TAIWAN
2. Emergency Physician, Chang-Gung Memorial Hospital, Taoyuan, TAIWAN

Keywords: Social network analysis, international, publication

Abstract :

Background:
European Journal of Emergency Medicine (EJEM) is one of the leading journals in emergency medicine (EM) with increasing publications from the all over the world. The effects of international collaboration on the impact of publications in EJEM and the hub countries of international collaboration were not studied.

Objectives:
This study aims to evaluate the effect of international collaboration on the impact of publications in EJEM and social network analysis (SNA) of international collaboration.

Methods:
Design: This study was an observational study.
Setting: All of the data were collected from SciVerse Scopus database.
Type of participants: All of the articles published in EJEM before 2015 were enrolled.
Data Collection: A computerized literature search was conducted in March, 2015. We collected data on publications including publication year, author's affiliated country, document type, and cited times for further analyze. The publication's origination was classified according to the first author's nationality. The international collaborative research was defined as the authors were affiliated with two or more countries.
Data Analysis: The demographic data were analyzed by descriptive statistics. Linear regression was used for trend analysis. The cited times difference between single nation and international collaborative publications were analyzed by Wilcoxon rank-sum test. NodeXL were used to calculate SNA metrics of international collaborative publications (Out-degree: leading author numbers; In-degree: co-author numbers; Betweenness centrality: connectivity of hub country; Eigenvector centrality: ranking of linkage to influential hub countries).

Results:
A total of 1701 publications were enrolled and 84 (4.9%) were international collaborative publications. There was no international collaborative publication between 1994 and 2005. The number increased from 6 (5.9% of 102) in 2006 to 25 (9.2% of 153) in 2014. The trends of international collaborative publications and ratio of international collaborative publications to all EJEM publications from 1994 to 2014 were 0.747, and 0.007, respectively (all $p<0.001$). The average cited times of single nation and international collaborative publications were 13.5 and 19.4 ($p<0.001$). The difference remained significant when we limited the publication type to articles (6.389 and 4.120, $p=0.186$, respectively). The United States, Spain, United Kingdom, Belgium, Italy, Germany, France, Canada, Australia, Netherlands were leading ten countries in international collaboration publication. The social network metrics of these countries were in Table.

Conclusions:
EJEM is a globalized journal with publications from more than 20 countries every year and international collaborative publications were increasing in the past ten years. From the perspective of cited times, there was no statistic difference between the impact of international collaborative and single nation publications. The leading countries of high out-degree or in-degree were the hubs of international collaborative researches. Implement strategies that strengthening international collaboration in EM researches may enhance global academic excellence in EM, especially countries outside the hubs.

#7457 : Penetrating aortic ulceration: A predictable aort dissection

Preferred format : ePoster

Authors:

GOKSU BOZDERELI BERIKOL (1), GURKAN BERIKOL (2), ONUR SAYDAM (3), ATTILA BESTEMIR (1), MEHMET SERKAN YURDAKUL (1), ISMAIL EKINOZU (4)

1. EMERGENCY MEDICINE, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
2. NEUROSURGERY DEPARTMENT, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
3. CARDIOVASCULAR SURGERY, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
4. CARDIOLOGY, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY

Keywords: Aortic dissection, computer tomography, d-dimer

Abstract :

Introduction: Aort dissection and aortic syndromes are rare but highly mortal conditions in emergency departments. In aorta lumen, ulcerated atherosclerotic plaques makes the intimal layer disrupt. Mostly tearing chest and interscapular pain occurs with aortic rupture.

Case report: Our case is 66 years old woman applying to emergency department with chest and interscapular pain. Tearing-like chest pain was started early in the morning and severity was not decreased. Vital signs are ta in left arm 160/80 and right arm 150/75, tachicardic, pale and sweating, normoglicemic, saturation 95 with O2. Her ECG is normal sinus rythm. Her laboratory findings are normal. D-dimer is 3600. Computer angiography is reported as acute penetran ulceration started between ascending and arcus aorta and continuous mural hematoma to iliac arteries with obliteration lumen. Patient was forwarded to university hospital. Multi-sliced BT has done but no change in the size of hematoma. After she was followed up for 2 days with antihypertensive and analgesics, she was discharged from hospital. On the fourth day she reapplied to our department with severe pain. After 72 hours her tomography reported as aort dissection of arcus aorta. She was forwarded to university hospital for operation.

Discussion: Penetrated aortic ulceration causes tear like pain in patients. Emergency physicians suspect aortic dissection as well as pulmonary embolism, acute coronary syndrome as differential diagnosis but angiography also normal for dissection. Intramural hematomas and penetrating aortic ulcers are less urgent for operation than aort dissections. D-dimer can be a prognostic value for penetrating aortic ulcers. Symptomatic ones should be treated endovascular besides asymptomatic patients can be followed up. In emergency department, all suspected chest and interscapular tearing pain should be evaluated as progressive and mortal.

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2.Gifford, Shaun M., et al. "The natural history and outcomes for thoracic and abdominal penetrating aortic ulcers." *Journal of vascular surgery* 63.5 (2016): 1182-1188.

Acknowledgments: There is no conflict of interest in this study.

#7458 : Systemic Inflammatory Response Syndrome Predicts in Acute Coronary Syndrome without Congestive Heart Failure

Preferred format : ePoster

Authors:

amri saloua (1), Mohamed ali Cherif (2), Farah Riahi (3), Mohamed Mezgheni (4), Asma Ben ali (3), youssef zied El hechmi (2), Ines Sedghyeni (5), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis, TUNISIA
4. service des urgences, hôpital habib thameur, tunis,
5. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: SIRS, Mortality,emergency

Abstract :

Introduction :

High levels of inflammatory biochemical markers are associated with an increased risk among patients with acute coronary syndrome (ACS). The objective of the current study was to evaluate the prognostic significance of the systemic inflammatory response syndrome (SIRS) among ACS patients with no clinical or radiological evidence of congestive heart failure (CHF).

Methods :

Consecutive patients with ACS and no clinical or radiological evidence of CHF, presented at our emergency department (ED) between January the 1st and December the 31, 2015,were included in the study. We have shared our patients into two groups : group1 (SIRS+) and group2 (SIRS-).

Physical examination, troponins and referring patients were studied.

Results :

The study included 89 patients (60years, male 75%). 67% were smoking, 47% were hypertensive, 29% were diabetic and 24% were coronary. 47 patients (53%) had SIRS on admission to the ED. SIRS was a predictor of hospital morbidity (p=0.004).

Conclusion :

SIRS was a marker of increased risk of hospital morbidity among patients with ACS and no clinical or radiological evidence of CHF. It can facilitate the initial management of patients in ED.

#7459 : Different kind of ileus: Internal hernia

Preferred format : ePoster

Authors:

GOKSU BOZDERELI BERIKOL (1), GURKAN BERIKOL (2), MEHMET SERKAN YURDAKUL (1), ATTILA BESTEMIR (1), FIRAT KIZILKAYA (3)

1. EMERGENCY MEDICINE, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
2. NEUROSURGERY DEPARTMENT, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
3. RADIOLOGY, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY

Keywords: ileus, internal hernia

Abstract :

Introduction: Internal hernia is a rare condition of small bowel obstruction. Ileus of small intestines are important for mesenteric iscemia and perforation.

Case report: Our patient is 87 years old woman with abdominal pain and constipation. She is immobil and she has hypothyroidea, Alhzeimer, hypertension, hyperlipidemia, DM, osteoporosis. Cholesistectomized patient has tenderness in abdomen and defansive. Her laboratory findings are normal. Computer tomography imaging is reported as in the left upper quadrant a focal area of intestines with contrasted wall, inflammatory findings on the surrounding mesenteric fatty tissue and dilatation with suspection of internal hernia. She is hospitalized in surgery department for laparotomy.

Discussion: Internal hernia seen as encapsulation of enlarged small intestinal loops and composed in a herni sac. With obstruction ileum segmental dilatation occurs. Without computer tomography, x-ray may not give a clue of obstruction as air-fluid level. For complications as incarceration, necrosis, internal hernia should be kept in mind for patients suspected as ileus with abdominal pain. While symptoms like constipation, abdominal pain which lead us to ileus, mesenteric iscemia; internal herni should be kept in mind in differential diagnosis

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Acknowledgments: There is no conflict of interest in this study.

#7460 : Short-time variation in available beds predicts admission rate among chest-pain patients independently of high-sensitivity troponin t, seasonal and daily variation.

Preferred format : ePoster

Authors:

Caroline Johansson (1), Anna Pettersson (1), Umut Heilborn (2), Per Svensson (1)

1. , Karolinska Institute, Stockholm, SWEDEN
2. , Karolinska university hospital, Stockholm, SWEDEN

Keywords: bed capacity, chest-pain, troponin T

Abstract :

Introduction: Chest pain is a common symptom at the emergency department (ED) which often leads to admission for further investigation. Assessment algorithms aim to safely reduce the rate of admission but it is unknown if the number of available beds at the time of admission decision affect admission rate or the risk of major adverse cardiac events (MACE) after discharge. Purpose: To investigate whether number of available beds was associated to admission rate or 30-day MACE among chest pain patients in the ED. Methods: This was an observational study at two EDs between 1st of January 2013 to 14th of September 2015. All patients >18 years with chief complaint chest pain and at least one high sensitivity cardiac troponin T (hs-cTnT) measurment were included. Information on number of available beds at the short-time emergency wards and coronary care units was extracted every five minutes and the average during a 30-minute period was calculated for each patient, two thirds into their stay at the ED, when the admission decision usually occurs. Association between number of available beds (one standars deviation increase) and admission rate, acute myocardial infarction (AMI) among admitted and 30-day MACE among discharged were studied with logistic regression together with sex, age, hs-cTnT>14 ng/L, ED site, season (winter as reference), visit-year (2013 as reference) and 24-hour variation (day, evening and night with day as reference). Results: Out of 24,730 patient visits, 6,873 were admitted out of which 1,134 were diagnosed with AMI. Among discharged, 70 patients had a 30-day MACE. The number of available beds varied in relation to the 24-hour period ($p<0.001$), season ($p<0.001$) and decreased yearly ($p<0.001$) during the study. Admission was independently associated to the number of beds (OR 1.11 $CI_{95\%}$ 1.07-1.15), male sex (OR 1.52 $CI_{95\%}$ 1.42-1.62), initial hs-cTnT>14 ng/L (OR 6.41 $CI_{95\%}$ 5.93-6.94), age (OR 1.76 $CI_{95\%}$ 1.69-1.83), year (OR 0.87 $CI_{95\%}$ 0.81-0.94 for 2014 and 2015 respectively) and seeking the ED during spring or night (OR 1.15 $CI_{95\%}$ 1.05-1.25 and OR 1.29 $CI_{95\%}$ 1.17-1.43 respectively). AMI among admitted was more common among those with male sex (OR 1.48 $CI_{95\%}$ 1.27-1.72), initial hs-cTnT>14 ng/L (OR 6.42 $CI_{95\%}$ 5.38-7.65), seeking the ED during the evening (OR 0.82 $CI_{95\%}$ 0.70-0.96) and 2015 as year of ED admission (OR 1.27 $CI_{95\%}$ 1.06-1.51). Furthermore, initial hs-cTnT>14 ng/L (OR 7.01 $CI_{95\%}$ 3.76-13.06), age (OR 2.45 $CI_{95\%}$ 1.71-3.50) and male sex (OR 1.92 $CI_{95\%}$ 1.15-3.21) were all associated to 30-day MACE. No relation between 30-day MACE and number of available beds was seen (p=n.s). Conclusions: The number of available beds was associated to admission rate idependent of other clinical information, including hs-cTnT, and may have affected the admission decision. No relation between available beds and 30-day MACE was seen. Further studies are needed on the causal relationship and optimal number of available beds for chest pain patients.

#7461 : Accuracy of Alert times in major trauma patients could save substantial amount of money!

Preferred format : Oral presentation

Authors:

M Azam Majeed (1), Mohammed Tuhin (2), Asif Naveed (3), Qasim Ali (2)

1. University Hospitals Birmingham., NHS, Birmingham, UK
2. , NHS, Birmingham, UK
3. NHS, NHS, Birmingham, UK

Keywords: MAJOR TRAUMA, ALERT TIME

Abstract :

Background:

In the management of major trauma time to the treatment is of utmost importance. This time starts from the time of injury to the time patients receive specialist care. Traditionally all these suspected major trauma patients are received by a trauma team consisting of multiple specialities. The idea of having trauma team is that patient receives best possible care and in timely fashion to improve the outcome.

Objective:

Primary:

To analyze the data of expected time of arrival (ETA) and actual time trauma arrives in Resuscitation room.

Secondary:

To estimate the delay in ETAs, which in turn results in human resources unavailable, for clinical work.

Method:

We did a retrospective analysis of the notes from 1st July 2015 to 31st August 2015 at UHB. All adult major trauma patients were included in the study.

Results:

We had a total of 198 patients presenting during this time but only 82 were included due to insufficient record on trauma alert sheet. We had 39 females (20%) and 159 male (80%) with mean age of 50years. The most common single body region involved was the head 23% followed by chest injuries 10% rest had multiple regions involved.

We had only 7% patients arrived within the expected time with 5 minutes margin. Rest of the 93% patients were delayed to a varying length ranging from 6 minutes to 65 minutes with the mean delay of about 36 minutes.

Conclusion:

In the management of major trauma patients every minute counts. Based on the pre hospital information there might be a theater on standby or surgical team to delay their list, which has its own impact. In general the trauma team in our ED consists ED consultant, Trauma registrar, ITU

registrar, Trauma SHO and Trauma HO and 3 nurses. Now a mean delay of 36 minutes in 81 trauma patients will add up to 121 man hours for each clinician and nurse. This in total will add up to 607 man-hours for clinicians and 363 hours for nurses while dealing with 81 major trauma patients, which have been unproductive. We see about 1000 major trauma patients per year and this will lead to 1000s of hours and thus thousands of pounds wasted which potentially can be saved. The above data is for 2 months only but if done over the whole year the results could look even more concerning. We believe in view of above figures the pre hospital team should endeavor to improve the accuracy of the alert times.

#7462 : Clinical features of elderly patients admitted in the emergency department short stay unit

Preferred format : ePoster

Authors:

Mohamed Mezgheni (1), Mohamed ali Cherif (2), Farah Riahi (3), Walid Mhajba (3), youssef zied El hechmi (2), Ines Sedghyeni (4), Malek Hsouna (3), Zouhaier Jerbi (2)

1. service des urgences, hôpital habib thameur, tunis,
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis, TUNISIA
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: elderly,emergency,Clinical features

Abstract :

Introduction:

Elderly patients are an increasing population in emergency departments (ED).Dealing with elderly patients often requires hospitalization in the emergency department short stay unit (EDSSU). The aim of our study is to assess the epidemiological and clinical features of elderly patients admitted into the EDSSU of Habib Thameur hospital.

Methods:

A retrospective study including all patients aged 65 years or older who were admitted during more than 24 hours into the EDSSU starting from January 1st, 2014 to December 31, 2015.

We collected data regarding age, gender, past medical history, length of stay, diagnosis, intra-hospital mortality andreferralat the end of hospital stay to study the epidemiological and clinical features of this population.

Results:

Among 57711 of all emergency department visits during 2014 and 2015, 1769 patients were admitted into the EDSSU from whom 1285 stayed for more than 24 hours (2.22%).

Elder patients aged 65 years and older account for 55.09% (n=708). Mean age was 77±7 years with a sex ratio of 0.84. Past medical history included:high blood pressure (60.9%), diabetes (42.9%), atrial fibrillation (21.2%), stroke (18.2%), coronary artery disease (17.5%), heart failure (11.7%), dyslipidemia (10.9%), renal failure (9.2%), COPD (8.6%), asthma (1.3%).

Median hospital stay was 72 hours. Intra-hospital mortality was 15%. Patients were referred to another department in 7.9% of all cases. 77% of patients were entirely taken care of in the EDSSU and returned home at the end of hospital stay.

Conclusions:

The elderly are an ever increasing population in emergency departments. Atypical clinical presentation of illness and the presence of multiple comorbidities complicate their evaluation and management. A greater knowledge of the epidemiological and clinical features of such patients can help emergency physicians provide high-quality care, better quality of life and less morbidity to this increasing population.

#7463 : Clinical activity of the resuscitation room in an emergency department

Preferred format : ePoster

Authors:

Mohamed ali Cherif (1), Farah Riahi (2), Mohamed Mezgheni (3), Asma Ben ali (2), Walid Mhajba (2), youssef zied El hechmi (1), Ines Sedghyeni (4), Zouhaier Jerbi (1)

1. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
2. service des urgences, hôpital habib thameur, tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Clinical activity, Mortality,emergency

Abstract :

Introduction:

The assessment of the functioning of the emergency room in an emergency department is essential to identify the deficiencies and help providing high quality patient care.

Objective:

Assess the functioning of the emergency room in an emergency department.

Methods:

Observational prospective study conducted in an emergency department including all patients who were admitted in the emergency room from July 1 to august 31th 2015. Epidemiological and clinical features as well as patient's outcomes were recorded.

Statistical analysis was performed with SPSS software.

Results:

We enrolled 150 patients, sex ration was 1,5 , age mean was 60 years , 81,5 % of the patients had a medical history. Chief complaint was chest pain in 23,2 % , dyspnea in 21,2% , altered state of conscience in 19,2 %, bleeding in5,3% and trauma in 4% of the patients .

We performed blood tests for 98,6% of the patients and radiological investigations was required in 30% of the cases.

A specialist was requested for 27% of the patients.

Cardiovascular diseases were diagnosed in 56,6% of the cases, 14% of the patients had pulmonary disease, 13% had metabolic disease, 7% had nervous disease and 5% had surgical disease.

43,2% of the patients were discharged, 23% needed a short term observation in the emergency department, 12% were hospitalized in the intensive care unit and 17,6 % were hospitalized in other department.

Conclusion:

The emergency room is crucial for the management of critical patients, an appropriate technical support and the collaboration with other hospital department are necessary for its good functioning.

#7464 : Ultrasonography of the Internal Jugular Vein to assess intravascular status in the ED

Preferred format : Oral presentation

Authors:

Shahzad Anwer (1), M Azam Majeed (2), Asif Naveed (3), M Saif Rehman (1)

1. , NHS, Birmingham, UK
2. University Hospitals Birmingham., NHS, Birmingham, UK
3. NHS, NHS, Birmingham, UK

Keywords: Ultrasonography, IJV, Fluid assessment

Abstract :

Background:

Intravascular fluid status estimation continues to be one of the greatest challenges in critically ill patients. The current gold standard technique is the measurement of CVP, which requires an invasive central venous catheter, which is time consuming and is associated with complications. Point-of-care ultrasound has been used to assess the collapsibility IVC and Subclavian vein but requires advanced US skills. We currently propose the use of ultrasound guided Internal jugular vein measurement to assess the volume status as a potentially useful noninvasive adjunct to estimate CVP.

Objectives:

Primary: To assess the intravascular volume status using bedside ultrasonography of the internal jugular vein in the emergency department.

Secondary: To compare the results of two different techniques (quantitative and qualitative) mentioned in the literature.

Method:

A prospective observational study using a convenience sample of 21 patients was performed at the emergency department of University Hospitals Birmingham. The study was performed in 2 phases. In phase-1 we scanned 15 healthy volunteers to assess the normal shape and aspect ratio of IJV and in phase-2, 21 acutely unwell adult patients. The study was performed from October to November 2015. Emergency physicians with level-1 emergency ultrasound experience were trained in IJV ultrasound. The appearance and size (aspect ratio: height/width) of the IJV was noted first at 45 degrees and than in supine position.

We used a high frequency linear probe at a depth of 3- 4 cm. US pictures (stills and M mode) were taken at the level of cricoid. The EP performing the ultrasound was blinded to the clinical information and so was the EP treating the patient from ultrasound results. The results of the ultrasound were then compared with the final clinical diagnosis of the attending Emergency Physician using all available traditional data.

Results:

The results using the aspect ratio technique showed a Sensitivity of **83.33%** (95% CI:

35.58 to 95.58), Specificity of **73.33** (95% CI: 44.90 to 92.21), **PPV** of 55.56 (95% CI: 21.20

to 86.30) and **NPV** of 91.67 (95% CI: 61.52 to 99.79). The results using the appearance technique had a Sensitivity of **85.71%** (95% CI: 42.13 to 99.64), Specificity of **88.71** (95% CI: 57.19 to 98.22), **PPV** of 75.0 (95% CI: 34.9 to 96.8) and **NPV** of 92.31 (95% CI: 63.9 to 99.81).

Conclusion:

The results of this pilot study demonstrated that point-of-care ultrasonography of the IJV

in the busy ED can reliably aid in the assessment of intravascular volume status. Both techniques showed good sensitivities and specificities, however appearance technique was better and simpler. We propose to extend this study in ED with larger sample size in order to validate our current results from this pilot.

#7465 : 'Block the break'

Preferred format : Oral presentation

Authors:

Naveen Rachakatla (1), M Azam Majeed (2), Asif Naveed (3), M Saif Rehman (1)

1. , NHS, Birmingham, UK
2. University Hospitals Birmingham., NHS, Birmingham, UK
3. NHS, NHS, Birmingham, UK

Keywords: Fractured femur, Fascia iliac block, Femoral nerve block

Abstract :

Background:

Hip fracture is one of the most common orthopaedic emergencies presenting to the emergency department. Optimal pain management is crucial to improve the patient outcomes. Different ultrasound guided nerve blocks, including the fascia iliaca compartment block and the femoral nerve block, are used in reducing pain after hip fracture. Research suggests that analgesia via nerve blockade is more effective and safer than the conventional pain management with non-steroidal anti-inflammatory drugs and/or opioids.

Objectives:

Our primary objective was to compare the analgesic efficacy and safety of ultrasound-guided fascia iliaca compartment block to the ultrasound-guided femoral nerve block in patients with neck of femur fractures.

Methods:

We designed a prospective observational study in the emergency department of University hospitals Birmingham. A convenience sample of adult patients presenting to ED with a neck of femur fracture were included from August 2015 to October 2015. A total of 28 patients were included in the study. Patients were randomly allocated to receive either a US-FICB or a US-FNB by the performing emergency physician (Consultant or Registrar grade) with level 1 ultrasound experience, who was trained to do the blocks with the Ultrasound. We used 10ml (5+5) of lignocaine 1% and bupivicaine 0.5% for FNB and 30ml (10ml n/s, 10ml lignocaine 1% and 10ml 0.5% bupivicaine). Pain scores were assessed using verbal numeric rating scale (VNRS) on a standard data collection sheet. Patients receiving the block and the nurse assessing the pain score were blinded to the type of the block.

Results:

28 patients were included in the analysis. Our study results suggest that both blocks are equally effective in providing effective pain relief for patients presenting to ED with hip fracture (drop of 7 points on VNRS). Both blocks have quick onset of action (15 minutes), the time for maximal effect was 120 minutes on average and lasted up to 240 minutes. Pain scores were equivalent between the block groups at all times during the observation period.

In this study, there are no adverse events reported. The success rates of the blocks appears identical; 88% for US-FICB and 90% for US-FNB.

Conclusions:

Our study indicates that both US-FICB and US-FNB are equivalent in providing a quick and effective analgesia for prolonged periods (up to 4-6 hours) in patients with neck of femur fracture. Both blocks are safe, easily learnt and have similar success rates (90%). Emergency physicians can have confidence in either technique to relieve pain in patients presenting with neck of femur fractures.

#7466 : Anticoagulant-Induced Intramural Intestinal Hematoma: Report of two Cases

Preferred format : ePoster

Authors:

Mohamed ali Cherif (1), Asma Ben ali (2), Farah Riahi (2), Mohamed Mezgheni (3), Rim ben Kaddour (2), youssef zied El hechmi (1), Ines Sedghyeni (4), Zouhaier Jerbi (1)

1. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
2. service des urgences, hôpital habib thameur, tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Case,Anticoagulant,Hematoma

Abstract :

Introduction: Spontaneous intestinal hematoma is a rare and severe complication of anticoagulant therapy.

Cases: we reported two cases of intramural and submucosal small bowel hematoma resulting from warfarin administration. The first patient presented with abdominal pain, had intramural hematoma at jejunum, the most common site of intramural small bowel hematoma. Another patient who had submucosal duodenal hematoma presented with epigastric tenderness . Typical findings on abdominal computerized tomography yielded the diagnosis. All patients rapidly improved after conservative treatment.

Conclusion: The history of anticoagulant use with prolonged INR value in patients presented with abdominal pain should alert physicians to search for this entity. It is extremely important to recognize this syndrome in order to avoid an unnecessary operation since the outcome is usually excellent after conservative treatment

#7468 : First seizure: an uncommon Influenza A debut.

Preferred format : ePoster

Authors:

Fernando Constantino Briones Monteagudo (1), Francisco Javier Lucas Galán (1), Mónica López García (1), Nuria Sánchez Garrido-Lestache (2), Rafael Sánchez Iniesta (3)

1. Emergency department, SESCAM, Albacete, SPAIN
2. Emergency department, Osakidetza, Vitoria, SPAIN
3. Intensive Care Units, SESCAM, Albacete, SPAIN

Keywords: Influenza A virus, meningoencephalitis, seizure, Polymerase Chain Reaction,

Abstract :

Encephalitis by virus influenza A, is a rare disease in Western countries, furthermore, it has a difficult diagnosis, because it usually presents a normal results in the examination of cerebrospinal fluid (CSF) and neuroimaging tests.

In 1998, the amplification was achieved by polymerase chain reaction (PCR) RNA influenza virus serotype A in CSF, which facilitated the etiologic diagnosis of the disease, however this test is not available in many hospitals.

I present, the case of a 16 years old patient, with not known drug allergies or cardiovascular risk factors . She denies drugs use.

The patient came to A&E (Emergency department) with low GCS (Glasgow coma scale) and sudden onset dysartrhia. In previous days, she had had a headache, watery rhinorrhea and high temperature up to 39 ° C, and she was diagnosed with common cold. During our interview, the patient underwent an episode of tonic clonic movements, with vomiting and faecal and urinary incontinence.

The initial physical examination revealed normal coloration of skin and mucous, blood pressure of 105/ 63mmHg, heart rate of 80 bpm, breathing rate 21bpm, temperature 37.4 ° C; oxygen saturation , 97%.. On pulmonary auscultation she had left basal lung crankles and neurologically, Glasgow 9, no neck stifness, miotic and reactive pupils. The rest of the physical exam was normal.

In initial tests: Biochemistry was normal except transaminases, ABG with lactate, blood cell count , clotting and glucose without any alterations; Chest X-Ray and computed tomography (CT) cranial was normal. The rapid detection of toxic substances in urine was negative. Cerebrospinal fluid: proteins, 0,83g / l; glucose 83 mg / dl; leukocytes: 0. Nasopharyngeal Flu PCR determination was positive. Serology was negative for other viruses.

Treatment with antibiotics and intravenous antiviral was started. After admission in A&E, she had sudden general deterioration, with seizures, so was given 10 mg of Diazepam, and she was intubated.

The Electroencephalogram showed nonspecific encephalopathy moderate degree, influenced partially by drug component and associated post-critical component. and no status epilepticus associated. After 24 hours of sedation and improved EEG, she was extubated and she continued improving, and she was discharged home 1 week later.

In Europe, virus influenza is a rare cause of encephalitis, however, is important for A&E physician to recognice the encephalitis sympthoms, and think in the most common viruses, but also thinking in influenza virus, especially in the middle of seasonal flu epidemic.

#7469 : The Physiology component of Trauma Triage Tool has the highest PPV

Preferred format : Oral presentation

Authors:

M Azam Majeed (1), M Saif Rehman (2), Asif Naveed (3), Shereen Nabil (2)

1. University Hospitals Birmingham., NHS, Birmingham, UK
2. , NHS, Birmingham, UK
3. NHS, NHS, Birmingham, UK

Keywords: Trauma triage tool, Physiology component, PPV

Abstract :

Introduction: Injuries are a major cause of morbidity and mortality in both developing and industrialized regions [1]. Injury severity scores are simply a way to describe and quantify the severity of traumatic injury and also provide some sense of the probability of survival of the victims[2]. The Injury Severity Score (ISS) is a widely accepted method of measuring severity of traumatic injury [3].This study aims at evaluating the component of trauma triage tool with highest positive predictive value to identify major trauma patients.

Objective:

To determine the component of pre-hospital tool (Trauma Triage tool) with highest positive predictive value?

Methodology:

A Retrospective database analysis of Major trauma patients presenting to QEHB during the period January 2013 to January 2014 was performed. All Major trauma patients (TTT positive) presenting to QEHB during this period were included. The patients who were TTT Negative were excluded.

Data were coded and entered on Excel file and statistical analysis was done using the Statistical Package for Social Science (SPSS) version 16.0. Descriptive analysis was conducted to determine the sensitivity and specificity of pre- hospital TTT and each of its components (vital signs, anatomy, injury mechanism and special conditions). Pearson Chi- Square test, Fisher's exact test and Independent Student's t- test were used to evaluate the association between the severity of injury and certain variables: Mechanism of injury, Glasgow Coma Score (GCS) level and patient's age.

Results:

There were 694 trauma patients presented during study period. Only 597 patients met the inclusion criteria and were included in the study. The majority of our sample was male (70.7%), with a mean age of 53 years. About one third of these patients had involved in RTCs. Approximately 60 % of the study group had been alerted in as major trauma cases.

Out of the 597 trauma patients, 316 patients were identified as a major trauma cases (true positive cases) that had an estimated ISS more than 15 (Positive Predictive Value (PPV) = 0.529 at 95% CI 0.49, 0.57; p= 0.000).

The Trauma Triage Tool consists of four components: Vital signs, Anatomy, Mechanism of injury and Special conditions. The Physiology component had the highest PPV of 0.79 at 95% CI 0.73, 0.85, which was followed by the Mechanism of injury with PPV equals 0.618 at 95% CI 0.55, 0.69, then the Anatomy component (PPV= 0.523 at 95% CI 0.46, 0.69), then the Special conditions components which had PPV of 0.448 at 95% CI 0.39, 0.51.

Conclusion:

Within the pre-hospital management of seriously injured trauma victims the accuracy of the field triage is of utmost importance. The clinicians significantly depend upon the pre hospital information to activate the resources. Hence greater the PPV of TTT better the trauma team remix can be planned.

Our results clearly suggest the correlation of abnormal physiological parameters with high probability of ISS>15. Even when combined with other components of the TTT the PPV of the physiological component remains the highest.

#7470 : POINT-OF-CARE ULTRASOUND CHANGES THE AIRWAY MANAGEMENT DECISIONS IN THE EMERGENCY DEPARTMENT

Preferred format : Oral presentation

Authors:

LUIS ARCADIO CORTES-PUENTES (1), GUSTAVO ANDRES CORTES-PUENTES (2), GERARDO LINARES-MENDOZA (3), MONICA BUITRAGO (4)

1. Departamento Emergencias FUNDACIÓN CARDIOINFATNIL -IC AND FUNDACION SANTA FE DE BOGOTA, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
2. Resident - Internal Medicine , UNIVERSITY OF MINNESOTA, MINESOTA, USA
3. Departamento Emergencias, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
4. Emergency Physician, Fundación Cardioinfantil Instituto de Cardiologia, bogota, COLOMBIA

Keywords: Ultrasonography, Airway Management, Airway Obstruction, Respiratory Insufficiency

Abstract :

Very little is described in the literature regarding the utilization of ultrasound during the management of difficult airway in the Emergency Department (ED). Ultrasound-guided airway evaluation at the bedside has been described as an effective tool in identifying difficult airway in the perioperative setting. Additionally, point-of-care ultrasound has been used to identify the appropriate position of endotracheal tube, to guide procedures in the airway such as urgent cricothyroidotomy and to identify pathologies of the airway e.g. vocal cord malfunction, swallowing abnormalities, supraglottic hematomas or abscesses, respiratory papillomatosis, laryngeal stenosis, etc. Our work puts together a series of cases where the ultrasound-guided approach changed the initial airway management in patients admitted in the ED of Fundación Cardioinfantil in Bogotá Colombia.

Objective

To describe our clinical experience where airway ultrasound assessment has changed the initial approach for difficult airway management in the ED.

Methodology

We described 10 cases of patients admitted to the ED of Fundación Cardioinfantil who required airway management during the period of 1 January of 2015 to 30 March of 2016. We only described patients in whom the initial decision for airway management changed after ultrasound assessment. The following aspects were analyzed for each patient: indication for airway management, initial approach for airway intubation, ultrasound examination findings, approach for airway management after ultrasound assessment and outcomes.

Results

The main indication for intubation was upper airway obstruction due to inflammatory process (Ludwig's angina and anaphylactic reaction) and tumors. In the anaphylactic airway obstruction, the glottis swelling was monitored by ultrasound during management and finally the tracheal intubation was not necessary. In 3 cases the decision to perform orotracheal intubation was switched to surgical tracheostomy as the initial approach due to ultrasound examination findings of severe supraglottic obstruction and tracheal tumor that made orotracheal intubation. Ultrasound determined the need to change the size of the orotracheal tube due to the finding of unidentified subglottic stenosis. Additionally, in 2 patients with previous diagnosis of subglottic stenosis and apparent difficult airway, the ultrasound assessment concluded that it was a normal airway and rapid sequence intubation was performed without complications. Four patients admitted for inflammatory submandibular process and tumors had initial clinical observation and conservative management, however in a patient a dynamic airway obstruction were identified by ultrasound and immediate intubation (performed by fiberoptic bronchoscope) and surgical management were performed.

Conclusions

Based on our experience, ultrasound approach could be a valuable tool for decision making during difficult airway management. Airway ultrasound assessment is not only useful for identifying true difficult airway, but also for monitoring the dynamic changes in the airway during initial treatment.

#7471 : Management Of Hypertension In Intracerebral Heamorrhage (ICH): Auditing current practice

Preferred format : ePoster

Authors:

Etimbuk Umana (1), Kiren Govender (2)

1. , University Hospital Galway, Galway, IRELAND
2. , Portiuncula Hospital, Ballinasloe, IRELAND

Keywords: Patient, Blood, ICH, Stroke, Mortality, Treatment

Abstract :

Introduction: Intracerebral Haemorrhage is the 2nd most common form of stroke, accounting for 27% of stroke cases globally. Hypertension (elevated Mean Arterial Pressure (MAP)) is often present in these patients. Severe hypertension (HTN) can worsen ICH resulting in continued bleeding and hematoma expansion leading to poor out comes. The European Stroke Organization recommend that intensive blood pressure management below systolic blood pressure of 140mmHg or a MAP of 106mmHg within 6 hours of onset is safe and could improve functional outcome. It also reports that patients managed in acute stroke units had better outcomes for mortality and morbidity compared to general wards.

Aim: To assess and review the monitoring, treatment of patients with HTN presenting after ICH and note where their care was provided after transfer from the emergency Department (ED).

Method: Data was obtained from case files retrospectively for all patients presenting to University Hospital Galway (UHG) ED; who had ICH in 2015. Patient's demographics, monitoring, treatment, ward care and mortality were recorded. Those not seen in ED were excluded from the study.

Results: 39 patients were identified to have ICH in 2015; 28 were included within the study. There was a female predominance of 64%(18). The mean ages for males and females were , 73.6 and 66.8 respectively. Twenty patients presented with focal neurology (FAST+) the remaining 8 patients reported headaches and vague symptoms. Only 6 patients presented within 6 hours of symptoms. The modified Rankin and NIHSS scores were only recorded in 5 case files. Blood Glucose was not recorded in 13 cases. Initial CT-Brain results showed ICH in 25 patients, normal scan in 2 and an infarct. ICH was confirmed in the latter 3 cases on repeat CT and MRI.

The mean MAP was 123.5mmHg with the lowest value of 83mmHg and the highest value of 158mmHg. Over 50% of the patients had a MAP > 110mmHg. About 21 patients had their MAP monitored regularly and according to guidelines. Eight patients were treated with labetalol, another 8 with other medications such as GTN Patch, Nimodipne, Amlodipine and Hydralazine. The remaining 12 patients had no treatment for acute HTN. Nine patients were managed in intensive care unit, 2 in high dependency units, 6 in stroke unit while the rest were managed in general wards. A patient's MAP did not affect admission to high dependency units as there was substantial variation of patients managed across units. 24 patients had co morbidities. There was a 53.5% mortality recorded in this cohort within a 3 month period.

Conclusion: There was adequate monitoring of MAP in this cohort however there was a lack of documentation of Blood Glucose, Modified Rankin and NIHSS scores despite stroke pathway charts being available. Hesitancy in initiating anti-hypertensive treatment and transferring patients to general wards was notable. Interestingly comorbidities or transfer to ICU or ward did not affect mortality. Reinforcing knowledge and continuous education will facilitate compliance with guidelines and help achieve favorable outcomes for patients.

#7472 : Impact of WBCT in early diagnosis and management of Major Trauma

Preferred format : Oral presentation

Authors:

M Azam Majeed (1), Heren Wijesinghe (1), Jessica Hin (1), Bethan Jones (1), Lara Pilbeam (1), Zoe Mcmillan (1), Asif Naveed (2), M Saif Rehman (3)

1. University Hospitals Birmingham., NHS, Birmingham, UK
2. NHS, NHS, Birmingham, UK
3. , NHS, Birmingham, UK

Keywords: Major TRAUMA, Whole Body CT

Abstract :

Background

Major trauma describes serious and often multiple injuries that may require lifesaving interventions. It is the biggest killer of people aged below 45 years in the UK. The National Audit Office (2010) report estimated that there are 20,000 cases of major trauma per year in England; 5,400 people die of their injuries with many others sustaining permanent disability.

In poly trauma patients every second counts. Time is of the essence. Earlier WBCT is just like doing a primary survey to get earlier diagnosis for critically ill patients. Hence, direct scanning can expedite patient care; improve survival and a reduction in emergency department stay.

Objective:

To find out the incidence and Impact of positive WBCTs in suspected polytrauma patients.

Methodology:

We did the retrospective analysis of case notes from June 2014 to June 2015 for patients presenting at university hospital Birmingham. All adult major trauma patients who triggered TTT were included.

Results:

We had a total 489 patients over this period that had WBCT. They were predominantly male (88%) and 12% were females. The mean age was 53 years. The mean ISS score was 39 among these patients. The commonest cause was road traffic accident 37% followed by falls 20% and then assault in 6% of the cases.

We had 69% patients who had positive WBCT as multiple regions were involved. The commonest region involved was thorax followed by head 36% then pelvis 20% and then abdomen in 17% of the patients. The mean time to CT was 29 minutes.

Conclusion:

Major trauma patients require more time and resources to manage as traditionally the whole trauma team rather than 1 ED physician receives the patients. All these patients in the study had a diagnosis within 45 mins of their arrival and that lead to earlier treatment (Bloods, Theater, IR) and will improve the survival out come.

#7473 : ACID-BASE EQUILIBRIUM ANALYSIS IN PATIENTS WITH ACUTE BURNS INJURIES: CASE SERIES

Preferred format : Oral presentation

Authors:

LUIS ARCADIO CORTES-PUENTES (1), GERARDO LINARES-MENDOZA (2), NORBERTO NAVARRETE (3), MARIA VICTORIA NIETO (4)

1. Departamento Emergencias FUNDACIÓN CARDIOINFATNIL -IC AND FUNDACION SANTA FE DE BOGOTA, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
2. Departamento Emergencias, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
3. Emergency Physician, HOSPITAL SIMON BOLIVAR, bogota, COLOMBIA
4. Emergency Physician, FUNDACION SANTA FE DE BOGOTA, bogota, COLOMBIA

Keywords: Thermal Burn Injuries, Acid-Base Equilibrium, Lactic Acid, Anion gap

Abstract :

Introduction: Patients with acute thermal injuries have physiological disorders that make difficult characterizing their acid-base status and identifying factors of poor prognosis. Studies with non-conclusive results have being done on base deficit (BD) and a serum lactate. Due to the complexity of the pathophysiological characteristics that define burn patients; the physic-chemical analysis of the acid-base status may hypothetically provide a higher accuracy in detecting metabolic and perfusion disturbances as well as in predicting bad outcomes than the other methods.

Methodology: We performed the acid-base analysis of 15 patients older than 15 years-old, with a burned body surface area greater than 20% that were admitted to a burn intensive care unit within 48 hours after the injury. The analysis was performed by using three methods: 1) Conventional method based on Henderson-Hasselbalch's theory, 2) Anion-Gap (AG),and albumin-corrected AG, and 3) Physic-chemical approach of Stewart's acid-base state theory.

Results: After using the Henderson-Haselbach's method: 8 patients had metabolic acidosis, 4 patients had a low BD, 5 patients had medium BD, and 5 patients had severe BD elevations. When AG analysis was performed, only 5 patients showed an abnormal AG. In contrast, implementing the albumin-corrected AG it increased the number of patients with abnormal AG to 13 patients. Strong-ion difference was abnormally elevated in all the patients.

Conclusions:A higher agreement between abnormal acid-base statuses was observed when using the albumin-corrected AG method and Physic-chemical approach of Stewart's acid-base state theory.

#7479 : Blood products wastage in major traumas

Preferred format : ePoster

Authors:

Tom Barker (1), Abdo Sattout (1), Michael Hickey (1)

1. Department of Emergency Medicine, Aintree University Hopsital, Liverpool, UK

Keywords: Major Haemorrhage Protocol, Major Trauma, Blood Products

Abstract :

Introduction

The major haemorrhage protocol (MHP) is frequently activated in major trauma (MT) cases and consequently blood products wastage becomes inevitable.

Since Aintree University Hospital became a Major Trauma Centre (MTC) in June 2012 there have been 349 MHP activations for traumas alone.

Code Red (CR) activations were introduced at Aintree University Hospital in October 2014 whereby the MHP could be activated prior to patient arrival in the Emergency Department (ED) in anticipation of massive transfusion requirements.

Not all blood products that are ordered and issued are appropriately used or returned to the laboratory, resulting in avoidable wastage and extra costs. From November 2015 to March 2016, at Aintree University Hospital, there was £2,942 worth of wasted blood products on trauma cases.

Objective

To review the wastage of blood products when the MHP is activated in MT cases and to see if this has changed following the introduction of CR activations in October 2014.

Method

Data from MHP activations as a result of MT was collected and collated.

A 3-month period was chosen and data prior to the introduction of CR activations (June to August 2013) was compared with data after its introduction (June to August 2015) and analysed.

Results

There were a total of 26 MHP activations as a result of MT from June to August 2013 and also 26 activations from June to August 2015.

There were 3 units RBC (O-negative), 18 units FFP and 1 unit of platelets across 6 cases wasted from June to August 2013 compared to 2 units RBC (O-negative), 12 units FFP and 1 unit Cryoprecipitate across 5 cases (3 were CR cases) from June to August 2015.

Conclusion

This audit demonstrates that blood products are wasted in MT cases when the MHP is activated. Reasons cover blood products that are collected, not used and then returned out of their controlled temperature (>30 minutes post collection) to the laboratory or blood products that are ordered and issued post MHP activation but then no longer needed nor returned to the laboratory.

Interestingly the wastage of blood products did not significantly change following the introduction of CR activations for this cohort of data.

This wastage of blood products can be potentially avoidable. This audit highlights the need for the introduction and reinforcement of clear protocols within the ED for effective blood product management in MT cases to reduce blood product wastage and associated costs.

#7481 : Assessing accuracy and inter-rater reliability of the emergency severity index in triage in the al-rahba emergency department: A cross-sectional observational study

Preferred format : ePoster

Authors:

Binoy Mistry (1), Jeremiah Hinson (1), Kamna Balhara (1), Sarah Stewart de Ramirez (1), Xavier Anton (2), Scott Levin (1), James Scheulen (1), Maysoon Abdel Latif E'nouz (2), Iman Yassin Othman (2)

1. , Johns Hopkins University School of Medicine, Baltimore, USA
2. , Al-Rahba Hospital, Abu Dhabi, UNITED ARAB EMIRATES

Keywords: triage, esi,

Abstract :

Background: The Emergency Severity Index (ESI) is a five-level triage scale used by the vast majority of emergency departments (ED) in the United States (US) and a growing number of EDs globally. The scale was developed and validated within the US, and there is little data to support its use in other settings where clinical training, resource availability, and cultural norms vary. ESI relies heavily on operator experience and intuition, and accurate triage designation is dependent on rapid assessment of illness severity and accurate prediction of clinician treatment decisions. Reports of ESI performance in countries where emergency medicine (EM) is a relatively young specialty suggest sub-optimal performance of ESI in these settings.

The purpose of this study was to assess triage accuracy, variability, and self-perception among formally trained nurses performing ESI triage at Al-Rahba Hospital (ARH) in Abu Dhabi, United Arab Emirates. We hypothesized that ESI user performance would be lower than has been previously reported in the US, and there would be greater variability in triage decisions.

Methods: We utilized twenty-five standardized triage cases from the ESI Handbook to evaluate accuracy and inter-rater reliability in ESI score assignment in a cross sectional cohort of ESI-trained ED nurses at Al-Rahba Hospital in Abu Dhabi. The gold standard of accuracy was the ESI handbook answer key.

The survey data was analyzed with Krippendorff's alpha to assess for inter-rater reliability. Accuracy was calculated for each question and broken down based on ESI triage level and scenario type (medical, trauma, or pediatric case). We also determined percent "under-triage" and "over-triage" overall and for each case, and assessed self-perception of triage level assignment accuracy among nurses.

Results: Thirty-five ED nurses from ARH participated in the study. Overall accuracy in triage scale assignment was 58.7%, with 28.8% of cases under-triaged and 12.3% over-triaged. Range of accuracy by individual scenario was 2.9% to 100%. The lowest accuracy was observed for pediatric cases, with 48.9% of all scenarios scored correctly (range by individual scenario: 2.9% to 94.3%). Accuracy was slightly higher for adult trauma (56.2% overall accuracy, range 40% to 85.7%) and adult medical cases (overall accuracy 66.2%, range 28.6% to 100%). Overall inter-rater reliability was moderate (Krippendorff's alpha = 0.78), and self-perceived accuracy among nurses was either "moderately confident" (40%) or "very confident" (60%).

Discussion: We observed low accuracy in ESI score assignment and significant case-to-case variability for these standardized cases, yet nursing self-perception of performance was high. Nurses scoring these cases had 5 or more years of experience, were formally trained in ESI, and undergo regular triage performance assessments. While more work is required to determine causality, we believe that practice environment has a significant impact on ESI user performance, and that this triage scale, which relies heavily on provider experience, intuition and predictive capacity for treatment decisions, may not be suited to all practice environments. Future directions include semi-structured interviews with nurses to assess for barriers to using ESI in real-time and repeating this study at other sites globally.

#7482 : Fibrinogen use in trauma patients to control major haemorrhage: a literature review

Preferred format : ePoster

Authors:

Tom Barker (1), Abdo Sattout (1)

1. Department of Emergency Medicine, Aintree University Hopsital, Liverpool, UK

Keywords: Fibrinogen, Major Haemorrhage, Major Trauma

Abstract :

Introduction

A balanced transfusion of red blood cells, fresh frozen plasma (FFP) and platelets are recommended for massively bleeding trauma patients. The 2013 updated European guideline for the management of bleeding and coagulopathy following major trauma also recommends the treatment with fibrinogen concentrate (FC) or cryoprecipitate in the continuing management of the patient if significant bleeding is accompanied by thromboelastometric signs of a functional fibrinogen deficit or a reduced plasma fibrinogen level. The evidence supporting this practice is limited and largely derived from elective surgery and postpartum haemorrhage.

Search and Results

Does any evidence support the use of fibrinogen in trauma patients to control major haemorrhage?

A literature search of multiple databases was conducted via NHS Evidence and only 6 papers answered our query. These papers were based on small studies (4 retrospective and 2 prospective) which showed therapy with FC can decrease the exposure to allogenic blood products transfusions as well as morbidity.

Discussion

Current literature demonstrates that uncontrolled bleeding and coagulopathy are the main preventable causes of death in trauma patients. Although current use of platelets and FFP does produce favourable outcomes they do have their limitations. Fibrinogen has been identified as the most vulnerable coagulation protein, being the first to reach critically low levels and is required for both platelet aggregation and fibrin formation. Low plasma fibrinogen concentration is common amongst major trauma patients and is associated with poor clinical outcomes, suggesting replacement may assist early haemorrhage control. Fibrinogen supplementation may also compensate for dilutional coagulopathy or impaired haemostasis due to thrombocytopenia.

Several sources of fibrinogen are available; however, FC is not routinely used in current trauma settings. FC contains a well-defined concentration of fibrinogen, has a good safety profile and is immediately available for use. However, there are no adequately powered, well-designed, prospective, randomized controlled trials yet available to show the risk-benefit analysis of using FC in the management of the bleeding trauma patient, and such studies are urgently needed.

The Fibrinogen in Trauma-Induced Coagulopathy (FlinTIC) study is the first double-blind, placebo-controlled, multicentre, randomized clinical trial to assess the effect of early treatment with FC in trauma patients and recruitment is due to finish in 2016.

Conclusion

Retrospective research suggests that FC may improve haemostasis in the trauma patient and could potentially reduce or even replace the need for blood products. However, at present, there are no randomized control trials analysing its use in trauma patients.

#7483 : Diverticulitis in the Emergency Department: An Analysis of 35 Emergency Departments over 5 years

Preferred format : ePoster

Authors:

Hetal Patel (1), David Salo (1), Taylor Smith (1)

1. Emergency Department, Morristown Medical Center, Morristown, USA

Keywords: Diverticulitis, admission, retrospective

Abstract :

Introduction: Diverticulitis is a common disease encountered in the emergency department presenting with a spectrum of illness ranging from acute vs chronic, uncomplicated vs complicated. The decision to admit diverticulitis has both subjective and objective components. We set out to determine the admission rates for patients with diverticulitis and the 30 day ED return rate. We predict that the rates of admission will correlate with the age of the patient.

Study Objective: To determine the admission rates for patients with diverticulitis and the 30-day ED return rate. **Methods:** *Design:* A multi-center retrospective cohort study. *Setting*: 35 urban, suburban, and rural emergency departments (ED) in the Rhode Island/New York/New Jersey area. *Participants:* Consecutive patients with the final primary or secondary ICD9 or ICD10 diagnosis of diverticulitis from January 1, 2011 to December 31, 2015. We “a priori” decided to look at repeat visits, which were defined as unplanned ED encounter for diverticulitis up to 30 days. *Statistics:* Chi-square and Mann-Whitney for analysis with a significant P-value < 0.05. **Results:** A total of **6,540,668** patients were seen during the study period. A total of **21,221** patient visits were identified of which **2,212** were excluded for diagnosis of diverticulosis and missing disposition leaving **19,009** patient visits. Of those, **17,691 (0.3%)** unique patients were diagnosed with diverticulitis. Overall median age was **57.2** yrs **(IQR 21.3-92.5 yrs).** Female gender comprised **56% (N=9,955)** of patients. 49**% (N=8700)** were admitted. The number of patients for total number of visits were: **15,979** (**initial visit only**), **742** (**2 visits**), **58** (**3 visits**), **11** (**4 visits**), and **2** (**5 visits**) in 30 days. The age of the patient was found to be statistically significant for admission (**61.1 yrs, 95%cI 60.7-61.4**) vs discharge (**55.6 yrs, 95%cI 55.3-55.9**) **p<0.001**. We found there was a statistically significant difference in the odds of being admitted on the first visit versus for patients that have repeat visits. **OR 1.62** (**95%cI 1.4-1.9**) **p<0.001**. There was also a statistically significant difference of gender admissions, with women having higher rates. **OR 1.2** (**95%cI 1.1-1.3**) **p<0.001**. **Conclusion:** Diverticulitis is a common emergency department diagnosis with a high admission rates. Patients more likely to be admitted are older, and most patients that need to be admitted are admitted on their first visit. Diverticulitis appears to be more prevalent in women, who also have a higher admission rates.

#7484 : Spinal cord compresssion from a spontaneus hematoma: a diagnosis challenge in emergency room patients

Preferred format : ePoster

Authors:

Álvaro Martín Pérez (1), Concepcion De Vera Guillén (2), Juan María Fernandez Nuñez (2), Rosario Peinado Clemens (2), Miguel Angel Ruiz Sanz (3)

1. Servicio de Urgencias del Hospital Ciudad de Coria, Servicio Extremeño de Salud, Badajoz, SPAIN
2. Servicio de Urgencias del Hospital Infanta Cristina, Badajoz, Servicio Extremeño de Salud, Badajoz, SPAIN
3. Servicio de Urgencias del Hospital Perpetuo Socorro, Badajoz, Servicio Extremeño de Salud, Badajoz, SPAIN

Keywords: Spinal cord compresssion, spontaneus hematoma, neurological symptoms

Abstract :

SPINAL CORD COMPRESSION FROM A SPONTANEUS HEMATOMA:

A DIAGNOSIS CHALLENGE IN EMERGENCY ROOM PATIENTS

Spinal cord compression from a hematoma is a rare clinical entity which causes a quick and severe neurological damage that turns irreversible without an early diagnosis and surgical treatment.

It is presented usually as sudden acute pain followed by neurological symptons due to spinal cord compression. The most important prognostic factors are the degree of neurological afectation as well as the time interval between the diagnosis and the surgical drainage, and here lies the true importance of role of the Emergency Rooms.

We present 6 cases serie attended in the Emergency Room during last 3 years wich present acute pain associated to neurological symptoms with a confirmed diagnosis of spinal cord hematoma.

All 6 cases were spontaneus hematomas and no common risk factors were identified.

It involves males and females equally weighted, 50 %. An average age of 66,6 years, being the younger patient 41 years old and 85 the older. Extradural hematoma was found in 2 cases and epidural in the other 4.Only 2 patients were under anticoagulant therapy.

The main symptom was acute spinal pain followed by neurological progresive affectation. This neurological involment varies depending on the affected spinal area and hematoma magnitud.

Cervical spine hematomas were founded in 2 cases with upper limbs neurological symptoms.

Lower limbs neurological symptomatology was presented in 4 cases, 2 related with dorsal spine hematoma and 2 with lumbar affectation.

The surgical successfully drainage was made in four patients and the other two developed favourably with nonsurgical treatment provided. After 6 months, 5 out of 6 patients achieved fully recover. In all 6 patients, so far, they are free from recurences.

Spontaneus hematoma phisiopathology is a controversy and production mechanism are unknown. The spinal cord compression from spontaneus hematoma are uncommon and presented in a wide range of possibilities depending on their location and with the acute spinal pain as an overarching characteristic for all. Neurological symptoms that derive from compression can appear over time.

Medical diagnosis skills, above all in Emergency Room, can be crucials in identifying this clinical entity in order to immediatly provide and not delay a surgical treatment.

#7485 : The tip of the iceberg: Neutropenic Enterocolitis

Preferred format : ePoster

Authors:

Álvaro Martín Pérez (1), Concepcion De Vera Guillén (2)

1. Servicio de Urgencias del Hospital Ciudad de Coria, Servicio Extremeño de Salud, Badajoz, SPAIN
2. Servicio de Urgencias del Hospital Infanta Cristina, Badajoz, Servicio Extremeño de Salud, Badajoz, SPAIN

Keywords: Neutropenic Enterocolitis, chemotherapy complication

Abstract :

Neutropenic Enterocolitis (NEC) is a pathological entity which prevalence is around 5-7 %, asocciated with haematological malignancy, oftenly as a complication of chemotherapy. Given the frequent underdiagnosis of this life threatening process, it requires a team effort to reach an early and accurate diagnosis in the Emergency Hospitalary Room (EHR). NEC represents an important clinical challenge in order to improve healthcare quality in these patients. We present a NEC confirmed case report on a patient with not known haematological disease nor active chemotherapy as early presentation of an undiagnosed haematological malignancy process.

A 71 years old male with aortic valve replacement due to rheumatic disease as unique antecedent attending in the EHR with 38,5ºC fever, abdominal pain localized in the right iliac fossa and hipogastrium and loose stools with no patholycal products of 48 hours of evolution. No other symptoms, except asthenia The phycical examination showed peritoneal irritation and intense sharp pain upon hipogastrium superficial palpation and the rest was regular. Requested complete analytical determination was made. In complete blood count, pancytopenia with severe neutropenia with cell populations suggesting haematological malignancy process: Haemoglobin 4,1 mg/dl, hematocrit 11,4%, 70.000 platelets. At this time, other diagnosis could not been excluded initially, as acute appendicitis or even pseudomembranous diarrhea. With these results, an Emergency Computerized Axial Tomogrography was made and a 12 milimeters concentric oedematous wall thickening affecting cecum and ascendent colon was found, including adjacent fat affectation and also a transverse colon trabeculation, mesenteric adenopathies and normal appendix. Based on these clinical and radiological findings, the classic Gorchluter triad (fever, abdominal pain and intestinal wall thickening bigger than 4 milimeters) suggested NEC diagnosis. The patient entered to Intensive Care Unit in order to avoid complications and it run successfully with conservative management The NEC is a clinical syndrom associated with haematological malignancy process, specially in those with active chemotherapy treatment, but not in this cases. It's the result of an alteration of colonic mucous and endotoxin producer bacterial growth. The early recognition of this syndrome suposed a challenge because the atipical presentation

#7486 : Danger in the shopping malls – Escalator related injuries in children

Preferred format : Oral presentation

Authors:

Sharon, Si Min Goh (1), Sharon, Si Min Goh (1), Arif Tyebally (2), Shu-Ling Chong (2)

1. - , KKH Women's and Children's Hospital, Singapore, SINGAPORE
2. Children's Emergency, KKH Women's and Children's Hospital, Singapore, SINGAPORE

Keywords: Escalator, Escalator-related, Injuries, Children, Paediatrics

Abstract :

Introduction

Escalator-related injuries are a significant cause of morbidity in highly urbanized Singapore. This study aims to describe the types of escalator-related injuries sustained in children and the circumstances under which they occur so that preventive measures can be put in place

Methods

This is a retrospective study. The KKH injury surveillance database was reviewed from January 2012 to May 2015 for all patients who presented to the Emergency Department with an escalator related injury. Data on patient demographics, mechanism, nature, site and severity of injury, treatment given and disposition of patients were collected and analyzed.

Results

92 cases were identified (2.2 incidents per month) during the study period. 63% were males and the mean age was 5.34 years. 61.9% of the injuries involved falls, followed by entrapment (31.5%) and mechanical failure of the escalators (2.2%). The injuries sustained included open wounds (45.7%), sprains/contusions (40.2%), superficial injuries (20.7%) and fractures (13%). 22.8% of the escalator related injuries involved the use of strollers and the majority of incidents occurred at shopping centres (53.3%) and MRT Stations (15.2%). 23.1% of patients required admission to hospital of which 4 patients required inpatient surgical intervention

Conclusion

Despite the measures already in place to ensure escalator safety in Singapore, there is still a significant number of escalator related injuries in children, most of which are preventable. The stroller is the commonest object involved in escalator related injuries and simple measures can be put in place such as the installation of barriers to prevent the use of strollers on escalators

#7487 : Present situation of emergency of the elderly in our hospital

Preferred format : ePoster

Authors:

Keitarou Suzuki (1), Hiromasa Yakushiji (1), Arito Kaji (1), Motohiro Yamada (1), Masahiro Shinozaki (1), Wataru Shirasaka (1), Asuka Sunada (1)

1. Doctor, Kishiwada Tokushukai Hospital, Kishiwada-shi, JAPAN

Keywords: emergency of aged persons, length of hospital stay, changing hospital

Abstract :

Background:

Japan has one of the longest life expectancies in the world, and there is an increasing number of emergency of aged persons. In our hospital, we also accept many aged patients of emergency. Our hospital is the 15th emergency and critical care center in Osaka prefecture accredited in 2012. It covers the medical region which consist of about million people. Increasing a demand of the emergency of aged persons, especially from facilities for the elderly, becomes an issue in our hospital. In this time, we investigated the present situation of emergency of the elderly in our hospital.

Objective:

We researched patients transported by ambulance since January 2013 to December 2015 and factors as follows : emergency carrying number, number of admission of emergency department, length of hospital stay, and changing hospital number.

Outcome:

Emergency carrying number was 26,280 and number of aged persons was 12,853(48.9%). Number of admission of emergency department was 2,368 and number of aged persons was 1,546(65.3%). Length of hospital stay was 1 to 228 days. The average of length of hospital stay was 11.67 days in all patients. Aged patients stayed in hospital for 13.42 days on average and the others stayed for 8.37 days in the mean. Changing hospital number was 416 in all patients. Aged patients accounted for 78.1%, and the mean duration taken to changing hospital was 21.88 days.

Discussion:

This research showed that the hospitalization of aged patients tended to become prolonged and that they needed more time to change hospital. Because of prolonged hospitalization, beds inclined to be occupied and we sometimes had to refuse emergency patients. Japan has one of the longest life expectancies in the world and emergency medical care is required more than ever. However, in many cases, medical care of elderly people is not able to conclude only by treatment for an acute phase, and many of elderly patients cannot be discharged to home or facilities for the elderly and need to transfer to chronic care hospitals. Reasons they are not able to be discharged are as follows : disability of oral intake caused by aging or wasting, refusal by families or facilities, and so on. In this manner, the duration of treatment of elderly patients tend to be prolonged and this fact stagnate an emergency medical care. This is a problem and a present situation of elderly emergency in our hospital and in Japan.

#7490 : Diagnostic Importance Of “Neutrophil Gelatinase-Associated Lipocalin” and “Semaphorine 3A” at “Acute Kidney Injury” Developed Secondary to Experimental Rhabdomyolysis at Rabbits

Preferred format : Oral presentation

Authors:

Ayhan KORKMAZ (1), Gurkan ERSOY (1), Osman YILMAZ (2), Emel ALTEKIN (3), Sadiye Mehtat UNLU (4), Leyla Seden DURU (5), Emre KARSLI (1), Elvan Ocmen (6)

1. University of Dokuz Eylul, School of Medicine, Department of Emergency Medicine, University of Dokuz Eylul, Izmir, TURKEY
2. o University of Dokuz Eylul, School of Medicine, Department of Animal Research Center, University of Dokuz Eylul, Izmir, TURKEY
3. o University of Dokuz Eylul, School of Medicine, Department of biochemistry, University of Dokuz Eylul, Izmir, TURKEY
4. o University of Dokuz Eylul, School of Medicine, Department of Pathology, Izmir, University of Dokuz Eylul, Izmir, TURKEY
5. o University of Dokuz Eylul, School of Medicine, Department of Anesthesiology and Intensive Care, University of Dokuz Eylul, Izmir, TURKEY
6. University of Dokuz Eylul, School of Medicine, Department of Anesthesiology and Intensive Care, University of Dokuz Eylul, Izmir, TURKEY

Keywords: Acute kidney injury, neutrophil gelatinase-associated lipocalin, semaphorine 3A, rhabdomyolysis, serum cretinine

Abstract :

Introduction and Objective

Earliest increase of serum cretinine levels occur within 24 hours, which is used at the diagnosis of acute kidney injury (AKI), and the increase does not happen until 50% of renal functions are lost. This prolonges the time to diagnosis. “Neutrophil gelatinase-associated lipocalin” (NGAL) and “Semaphorin 3A” are new biomarkers for the diagnosis of AKI at early stage. Here, in our study, we aimed to compare the diagnostic importance of “neutrophil gelatinase-associated lipocalin” and “semaphorine 3A” at “acute kidney injury” developed secondary to experimental rhabdomyolysis at rabbits

Material and Method:

Here in this study, 14 New Zealand male rabbits were used. All rabbits are placed in cages and IV line was established through their right auriculer vein with 20G branule. Blood samples of 3 cc were drawn from each rabbit for the basal values of “serum cretinine”, “serum NGAL” and “serum semaphorin 3A” levels. Later, all rabbits were randomly divided into to 2; “study” (n=7) and “control” (n=7) groups. While 10 ml/kg, 50% glycerol was injected IM on the both back foot of rabbits in the study group in order to create experimental rhabdomyolysis (n=7), no additinal procedure was done for the control group. For to prevent development of acute renal failure due to hypovolemia, 20 cc normal saline solution was infused to all animals. At both groups, 3rd, 12th and 24th hour, “serum NGAL”, “semaphorin 3A” and “cretinine” levels were studied. At the end of the study, following left unilateral nefrectomy, the rabbits were sacrified under high dose of ketamine injection. The development of AKI through kidneys were examined in the pathology department and were classified in 4 levels (such as 0-I-II and III. degree).

Results:

According to pathological findings, AKI did not develop at rabbits in control group, however, in the study group “I. degree” AKI developed at six rabbits and “III. degree” AKI at one rabbit was developed. One of the rabbits in the study group developed “III. degree” AKI, and died before reaching 24th hour. No difference was found at 0. hour “serum creatinine”, “serum NGAL” and “serum semaphorine 3A” median levels between “control” and “study groups”. At 3rd hour of the study, while there was no statistically significant difference between “serum creatinine” and “serum NGAL” levels the difference between “serum creatinine” and “serum semaphorine 3A” levels were significant (p=0.01). At the 24th hour of the study, the difference between “serum creatinine” and “serum NGAL” levels was significant (p=0.03), however, the difference between “Semaphorine 3A” “serum creatinine” average levels were not.

Conclusion:

Here in this study model, we found that serum “Semaphorine 3A” is a more valuable biomarker than “serum creatinine” and “serum NGAL” at the early stage diagnosis of acute kidney injury developed secondary to experimental rhabdomyolysis created by intramuscular injection of glycerol.

#7491 : Utility of initial shock index and modified shock index as predictors of short term outcome in patients diagnosed with ST elevation myocardial infarction in an academic emergency department of north India: a pilot study

Preferred format : Oral presentation

Authors:

Dolly Yadav (1), VGR Shastry (2), Anupam Goel (3)

1. Emergency Medicine Resident, George Washington University, USA and Maxhealthcare, India, New Delhi, INDIA
2. Accident and Emergency, Max Healthcare, New Delhi, INDIA
3. Cardiology, Max Healthcare, New Delhi, INDIA

Keywords: acute coronary syndrome, STEMI, shock index, modified shock index, outcome predictors in STEMI

Abstract :

Introduction: There are approximately 8 million annual visits to emergency departments (EDs) for chest pain or symptoms consistent with myocardial ischemia in India. Unlike the developed countries, 61% of Indians presenting with chest pain have ST-segment–elevation myocardial infarction (STEMI). All these patients must undergo risk stratification soon after presentation. Given the speed with which reperfusion therapy is administered in a tertiary centre, like ours, the clinical utility of existing risk scores, in the ED, is limited. Shock index (SI) and modified shock index (MSI) have established roles in outcome assessment of critically ill patients. Their role, however, in Indian STEMI patients is yet to be stated.

Method: Prospective data was collected from 1st November 2014 through 31st October 2015 in the ED of Max Superspecialty Hospital, Saket, New Delhi, India and was analyzed with ROC curve. Appropriate cut off values of SI and MSI were obtained which maximized the correct prognostication of 30 day all cause mortality in STEMI.

Result: A total of 120 patients were included in the study. The cut off value of SI is found to be 0.8 with 100% sensitivity and 68.6% specificity. The cut off value of MSI is found to be 1.02 with 100% sensitivity and 65.7% specificity. Area under curve is 82% with $p < 0.01$ for both.

Conclusion: Both SI and MSI are noteworthy ED tools for early risk stratification of Indian STEMI patients. We now intend to validate these cut off values.

#7492 : REVIEW OF TWO AND A HALF YEARS OF EXPERIENCE IN BEDSIDE ULTRASOUND OF A COLOMBIAN EMERGENCY DEPARTMENT.

Preferred format : Oral presentation

Authors:

CARLOS-HERNAN CAMARGO-MILA (1), GERARDO LINARES-MENDOZA (1), LUIS-ARCADIO CORTES-PUENTES (1)

1. EMERGENCY DEPARTMENT, FUNDACION CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA, BOGOTA D.C., COLOMBIA

Keywords: Ultrasonography, Bedside Ultrasound, Ultrasound guided procedures, Ultrasound guided assessment, Emergency Treatment, complications

Abstract :

BACKGROUND:

Point-of-care ultrasound (US) has improved the quality and safety of patient care by helping both clinical decision-making and procedural techniques. The Bedside Ultrasound Group of the Emergency Department of Fundacion Cardioinfantil began its activity on October 2013 after an intensive training and certification. We aimed to describe the results of the first 2,5 years of implementation of this technology to our ED.

OBJECTIVE:

To describe the performance of the Bedside Ultrasound Group of the Emergency Department of Fundación Cardioinfantil – Instituto de Cardiología, Bogotá – Colombia after 30 months of activities in terms of number and type of procedures, timing, and success rate in the ultrasound guided procedures and complications.

METHODOLOGY:

We performed a retrospective analytic study of all the ultrasound studies and ultrasound guided procedures performed at the Emergency Department of Fundacion Cardioinfantil Instituto de Cardiologia from October 2013 to March 2016. The reports of the cultrasound assessments done to patients admitted in the ED were reviewed. All the data was extracted from the Bussiness Intelligence Module of AGFA RIS-PACS and the clinical correlation and outcomes from our Electronic Clinical Records System (Servinte Clinical Suite – Carvajal S.A.). All the studies were done with the same ultrasound machine (Sonosite EDGE from Sonosite Inc.)

RESULTS:

A total of 2112 exams were reviewed. In our study we describe the number by type of procedure, the time between the order and when the exam was done, the rate of success in ultrasound guided procedures, and the type and rate of complications.

CONCLUSIONS:

Among these 30 months the use of point of care ultrasound has confirmed to be a fundamental tool in the management of our patients, especially in those that require a rapid and correct diagnosis at the time of admission in the Emergency Department, and to safely guide invasive procedures with almost no complications.

#7493 : A case of minitracheostomy for post of tracheostomy patient

Preferred format : ePoster

Authors:

Maeda Yuji (1), Kurihara Maki (1)

1. Department of Disaster and Emergency Medicine, kobe University Hospital , Kobe, JAPAN

Keywords: cricothyroid puncture,cervical spinal cord injury,tracheostomy

Abstract :

Back ground . From the point of view for stenotic change of trachea, cricothroyd puncture,such as minitracheostomy is forbidden for posttracheostomy patient. However, we could safely performed minitracheostomy under observation of bronchoscopy . **Case 37-year old male.** He complained dyspnea,so he transferred to our emegency department. he underwent tracheostomy ,when he was 16 year-old due to cervical spinal cord injury.His ADL(activity of daily life)demonstrated ASIA(American Spinal cord Injury Association) impairment scale A (cervical 5 level).In daily,he moved by wheel chair.This time,he admitted due to bacterial pneumoniae. He underwent intubation due to worsening of poor excetion of sputum and hypoxia. Accidentally,the patient removed tracheal tube himself after 5 day later, and he could not enoughly breath spontaneously without suctioning. But the patient will not allow us conventional tracheostomy or re-intubation,because he want to speak anytime.in contrast of his willness,on the day 7th ,due to severe hypoxia, we had to intubate him.There is no standard guidelines concerning the indications, index of the intubation and extubation of this case.From the view of his willness, Cricothroyd puncture as minitracheostomy has not recommended after tracheal surgical procedure.But, this time ,we performed minitracheostomy safely under observation of bronchoscopy.On the day 13th,he could transferred to general ward,on the day 60th,he discharged.**Discussion** .There was no complication of minitracheotomy. We may consider minitracheotomy for airway management after anterior cervical surgical within 2 weeks.**Summary .**From point of the view of airway management and vocal communication, we consider it may be useful that minitracheotomy for airway management afte r tracheostomy. Further study is needed.

#7494 : First experience with Lifeline ARM – a new chest compression machine

Preferred format : ePoster

Authors:

Szarpak Lukasz (1), Truszewski Zenon (1), Smereka Jacek (2), Czyzewski Lukasz (3)

1. Department of Emergency Medicine, Medical University of Warsaw, Warsaw, POLAND
2. Department of Emergency Medical Service, Wroclaw Medical University, Wroclaw, POLAND
3. Department of Nephrology Nursing, Medical University of Warsaw, Warsaw, POLAND

Keywords: chest compressions, cardiopulmonary resuscitation

Abstract :

Background. The European Resuscitation Council Guidelines for Resuscitation 2015 highlight the significance of cardiopulmonary resuscitation (CPR) effectiveness and of reducing chest compression (CC) interruptions. As has been shown in many publications, the effectiveness of manual CC is very often low. The aim of the study was to compare the quality of CC with and without the Lifeline ARM (Defibtech, Guilford, CT, USA) CC machine during CPR performed by novice physicians.

Participants and methods. Participants were recruited during an emergency medicine workshop for physicians run by the Department of Emergency Medicine, Medical University of Warsaw, Warsaw, Poland. Thirty-eight novice physicians participated in this randomized cross-over study. Each participant performed 2-minute-long CC on a manikin with and without the ARM machine. The physicians were randomized into two groups to perform 2-minute-long CPR with ARM or using the manual (standard) technique in a random order. Data concerning the CC quality were recorded by the manikin software. Additionally, the participants' subjective fatigue score values were collected.

Results. All subjects completed 2-minute-long CPR using both methods. The usage of the ARM machine during resuscitation resulted in a higher percentage of effective CCs (100 [IQR, 99–101]) as compared with standard basic life support (42 [IQR, 37–45], $p < 0.001$). When the ARM machine was applied, the number of effective CCs decreased less over time ($p < 0.001$), the required depth of 5 cm was reached more often (98 vs. 58%, $p < 0.001$), and the recommended CC rate was obtained more frequently ($p < 0.001$). The median hands-off time was lower when using ARM. Also, the fatigue score values turned out lower when ARM was applied.

Conclusion. The Lifeline ARM device reduces the rescuer fatigue during continuous chest compression CPR, with better CC quality during CPR in a simulation setting.

#7496 : Predictive value of the NEWS-L for mortality and the need for critical care among general emergency department patients

Preferred format : ePoster

Authors:

Jo Sion (1), Yoon Jaechol (2), Lee Jae Baek (1), Jin Youngho (1), Jeong Taeoh (1)

1. , Chonbuk national University Hospital, Jeonju-si, KOREA, REPUBLIC OF
2. , Chonbuk national University Hospital, , Jeonju-si, KOREA, REPUBLIC OF

Keywords: NEWS, NEWS-L, ED, mortality, critical care

Abstract :

Study objectives

What is the predictive value of the NEWS-L for mortality and the need for critical care in general emergency department (ED) patients?

Methods

In this retrospective cohort study, we enrolled all adult patients who visited the ED of an urban academic tertiary-care university hospital in South Korea over two consecutive months. The primary outcome was 2-day mortality. The secondary outcomes were the need for critical care (advanced airway use, vasopressor or inotropic agent use, intensive care unit (ICU) admission) during an ED stay; 2-day composite outcome (2-day mortality and the need for critical care); 7-day mortality; and in-hospital mortality.

Results

During the study period, 4,624 adult patients visited the ED. Of these, 87 (1.9%) died within 2 days. A total of 481 patients (10.4%) required critical care during their ED stay. The 2-day composite outcome, 7-day mortality and in-hospital mortality were 10.9% (503/4624), 2.5% (116/4624) and 3.9% (182/4624), respectively. The NEWS-L demonstrated excellent predictive value for 2-day mortality with an AUROC of 0.96 (95% confidence interval (CI) 0.94-0.98); this value was better than that of the NEWS alone (AUROC 0.94 (95% CI 0.91-0.96), $p < 0.001$). The AUROC of the NEWS-L for the need for critical care was 0.84 (95% CI 0.82-0.86); for the 2-day composite outcome, it was 0.85 (95% CI 0.83-0.86); for 7-day mortality, it was 0.94 (95% CI 0.92-0.96); and for in-hospital mortality, it was 0.88 (95% CI 0.85-0.91). Logistic regression results confirmed that the ratio of the NEWS to the initial lactate level was 1:1. Similar results were shown in the subgroup analyses (disease-infection, disease-vascular and heart, disease-others, and non-disease). The high-risk NEWS-L group (NEWS-L ≥ 7) had an adjusted odds ratio of 28.67 (12.66-64.92) for 2-day mortality in the logistic regression model adjusted for basic characteristics.

Conclusion

The NEWS-L can provide excellent discriminant value for predicting 2-day mortality in general ED patients, and it also has the best discriminant value for the need for critical care and composite outcomes. The NEWS-L may be helpful in the early identification of at-risk general ED patients.

#7497 : Outcomes of computerised tomography trauma series scanning in trauma alert patients to a major trauma centre

Preferred format : Oral presentation

Authors:

Onn Shaun Thein (1), Charn Gill (1), Muhammad Azam Majeed (1)

1. Emergency Medicine, University Hospitals Birmingham NHS Trust, Birmingham, UK

Keywords: imaging, radiology, trauma, CT, emergency medicine

Abstract :

Rapid radiological investigation is a backbone of the UK Major Trauma Network, with Major Trauma Centres (MTCs) required to have immediate (

50 patients (44M, 6F; mean age 40) between March and June 2015 were transferred by the ambulance service as a ‘trauma alert’ to The Queen Elizabeth Hospital, Birmingham, UK. One patient was excluded as they were transferred from another hospital. Initial observations, injury mechanism, A-to-E assessment, CT scan and results were recorded. Shock was calculated according to ATLS guidelines. Qualification for WBCT on arrival was assessed according to local guidelines. Body regions were divided as per CT reporting: Head, Thorax, Abdomen/Pelvis, Spine and Long Bones. Primary survey findings were correlated to the CT report to calculate sensitivity and specificity for the body regions.

47/49 patients survived to discharge, with an average stay of 17.3 days. 26.5% (13/49) of patients were in class IV shock on arrival. 44/49 patients qualified for WBCT on arrival; of the remaining 5, 3 underwent WBCT, and 2 had partial body CT scans due to clinical judgement. 38 patients underwent a WBCT, 7 had partial body CT scans and 4 were not scanned (1 burn patient, 1 CT abandoned and taken to theatre, 2 not specified). Primary survey to WBCT report statistics were: Head: Sensitivity 60.9%, Specificity 94.4%; Thorax: Sensitivity 40.9%, Specificity 94.7%; Abdomen/ Pelvis: Sensitivity 40%, Specificity 84.4%; Spine: Sensitivity 93.8%, Specificity 27.6%; Long Bones: Sensitivity 50%, Specificity 77.5%. One patient underwent further imaging to include other body regions.

These results show a general trend of low sensitivity and high specificity of primary survey compared to CT report. A low sensitivity may be explained by the nature of WBCT scanning in the trauma patient. Rapid assessment is carried out, patient stabilised and then taken for scan if they qualify. Only spinal injuries showed a high sensitivity compared to specificity; which may be due to a low triple immobilisation threshold. Overall there is a high specificity, except for the Spine. Of the 5 patients who did not qualify for WBCT on admission, all had imaging done based on clinical judgement; those who were not scanned qualified for a WBCT. This study demonstrates the importance of WBCT scanning in the trauma patient given the low sensitivity of the primary survey, and would suggest all trauma patients should have a WBCT on admission. We plan to expand the study numbers to maximise the statistical power.

#7498 : Emergency Airway Management in an Emergency Department of a University Hospital in Germany - almost solely performed by ED-staffed physicians with a high success rate

Preferred format : Oral presentation

Authors:

Christina Laue (1), Steffen Herdtle (2), Christian Hohenstein (3)

1. , none, Je, GERMANY
2. , none, je, GERMANY
3. , none, Jena, GERMANY

Keywords: Emergency airway management - register

Abstract :

Introduction:

Securing the airway can be a life-saving procedure under emergency conditions. Techniques, indications, complications and adverse events vary widely in different settings and countries. In Germany, no data exist about emergency airway management in emergency departments. The aim of the study is to implement an Emergency Airway Registry in Germany starting with a pilot study collecting data about emergency airway management in our facility.

Methods:

We set up an internet based website with login options for emergency departments as well as emergency medical services in Germany (www.intubationsregister.de). We recorded data made on every airway management attempts in the ED between September 2015 and April 2016. We evaluated indications, methods, intubator characteristics as well as success rates and adverse events.

Results:

During the 6-month period we had a total of 49 emergency intubations, in 26 (53,0%) cases/encounters for neurological emergencies, in 18 (36,7%) for medical emergencies and in 5 (10,2%) for trauma. ED-staffed physicians managed 65,3% of encounters, anesthesiologists in rotation 16,3% and internists in rotation 18,4%. Rapid sequence intubation was the initial method chosen in 40 (81,6%) patients. Tracheal intubation was successful in all patients with ≤ 3 attempts. First time success rate was 81,6% and 93,8% of patients were successfully intubated with 2 or less attempts. Adverse events occurred in 17 (34,7%) patients, mainly due to hypotension with the necessity of catecholamines in 9 (18,4%) patients and significant hypoxia in 6 (12,2%) patients.

The updated numbers will be presented at the conference.

Conclusion:

The vast majority of emergency intubations in our university hospital ED is not performed by anasthesiologists, but by ED-staffed physicians. Up to now, the success rate of our emergency intubations is with 100% in ≤3 attempts very high compared to other registries. The complication rate is comparable to other registries and seems to be passable given the fact, that most patients are in a critical and unstable situation. It appears to be crucial to get more data from other hospitals about emergency airway management in emergency departments and emergency medical services, since this pilot study does not confirm the notion that a) airway management is mainly performed by physicians of the department of anaesthesiology and b) airway management by ED-staff is correlated with a high failure and low success rate.

#7499 : The meaning of neutrality and impartiality in humanitarian assistance in Complex Emergencies

Preferred format : Oral presentation

Authors:

Bernward Auf dem Kampe (1)

1. Department of Emergency Medicine, University Hospital Jena, Jena, GERMANY

Keywords: Humanitarian Assistance, Complex Emergency, Haiti earthquake

Abstract :

Introduction

Medical personnel, often on mission with small humanitarian Non-Governmental Organizations (NGOs), are increasingly not only required to have skills in Emergency and Tropical Medicine but also knowledge about the humanitarian principles of neutrality and impartiality. Intra state armed conflicts as frequent destination of their missions are additionally fuelled by natural disasters as earthquakes, floods and droughts as in the case study about Haiti in march 2010. In this *Failed State* United Nation blue helmet troops could contain the excess of violence since the late 2000s but the earthquake destabilized the fragile order by causing casualties among the blue helmets and infrastructure destruction. The humanitarian organisations put into this complex scenario had to decide either to position themselves according to political neutrality and impartial aid towards all parties of the conflict or to subordinate themselves under the coordination of the Haitian government and the United Nation bodies. Beyond this question the case study focuses on the consequences for the security of humanitarian personnel and their access to victims. Beside Non-Governmental Organisations (NGOs) the International Committee of the Red Cross (ICRC) and the World Food Programme of the United Nations (WFP) will be looked at.

Methods

Interviewing and observing humanitarian and military actors with following qualitative analysis.

Interpreting news and publications of political science and conflict research.

Results

Both humanitarian organisations of the United Nations as the WFP and numerous NGOs interpreted the *Complex Emergency* primarily as a natural disaster and ignoring the still existing dimension of an armed conflict. As a consequence, they subordinated design and location of their aid operations under the coordination of the Haitian government and the United Nations. By doing so, they got only limited or no access at all to those parts of the population living under the control of government hostile armed groups. In those territories almost only well-established humanitarian organisations as the ICRC or *Doctors Without Borders* who strictly followed the principles of neutrality and impartiality were accepted by the non-governmental armed groups and thus could perform aid projects.

Discussion

To be able to position themselves independently from political influences according to the principles of neutrality and impartiality humanitarian actors need comprehensive knowledge about the conflict history and conflict parties. Additionally, it is a paramount to perform the aid projects independently from blue helmet troops as they are often not neutral in complex conflict scenarios as in Haiti but conflict party involved in fighting against rebel groups or gangs. Those NGOs cooperating tightly with non-neutral United Nation troops should be clear about increasing their risk of getting under armed attack and loosing access to victims living in territory controlled by non-governmental armed groups.

#7500 : Critical Incidents reported in a Department of Emergency Medicine in Germany within 3 years.

Preferred format : Oral presentation

Authors:

Lisanne Kostek (1), Christian Hohenstein (2)

1. Department of Emergency Medicine, University Hospital Jena, Jena, GERMANY
2. , none, Jena, GERMANY

Keywords: Critical incident reporting - emergency medicine

Abstract :

Backround. Errors in healthcare put patient safety at significant risik. To err is human, but it is unnecessary to make the same mistake twice! It has been proven that a detailed analysis of medical errors is important, especially circumstances of preventable errors are helpful to develop preventive strategies.

What kind of incidents might harm patients during hospital care in the Emergency department?

Methods. Our intranet webside offers an anonymous reporting system any staff member of the hospital may use. We analyzed all reported incident reports related to the Emergency Department, University of Jena and classified them arbitrarily.

Results. From 2013 until 2016, the 3-year period of database relate to critical incidents in the Emergency Departement Jena includes 61 reports. We classified the main factors, which leaded to potential safety hazards into 9 groups: medical equipement errors (n=15), adequately qualified personnel availability (n=12), inadequate treatment concepts (n=11), data logistics and insufficient communication (n=8), medication (n=6), transport logistics (n=3), monitoring (n=3), mistakes (n=2), hygienics (n=1).

Conclusions. With the help of critical incident reporting system we were able to identify causes, which potentially threat patient safety in the setting of innerhospital emergency medicine. Frequently critical incidents were caused by technical errors, insufficient personnel availability and insufficient communication.

To improve patient safety in the emergency departement and consequently invest into a lifesaving project, we need to enhance the limited allocation of qualified staff, particularly in the care sector. The possibility of attending further education and special skill training for all staff members as well as investigating into high quality equipement seems to have high impact on patient safety.

#7501 : Effectiveness of non-invasive ventilation in patients with acute respiratory failure in improving distress and reducing need for intubation

Preferred format : Oral presentation

Authors:

Elisa Peron (1), Antonio Bonora (2), Valentina Serafini (2), Gianni Turcato (2), Domenico Veraldi (2), Massimo Zannoni (2), Giorgio Ricci (2), Mariano Belloni (2), Francesco Buonocore (2)

1. Emergency and Intensive Care Department, Santa Chiara Hospital of Trento, Italy, Trento, ITALY
2. Emergency and Intensive Care Department, University Hospital of Verona, Italy, Verona, ITALY

Keywords: Non-invasive ventilation, CPOD, Acute Heart Failure

Abstract :

Background: Non Invasive Ventilation (NIV) has turned to have a wide role in the management of acute respiratory failure, above all in patients suffering from recurrences of chronic obstructive pulmonary disease. NIV is effective in reducing the need for invasive ventilation and preventing the relapse of respiratory failure after intubation removed. Although its confirmed usefulness in the clinical practice, data are still limited and not conclusive.

Aim: To evaluate the effectiveness on NIV in the management of acute respiratory failure in the “real life” of Emergency Department and to identify factors that predict the need for ventilation to be continued.

Methods: We retrospectively considered all patients observed for acute respiratory failure and submitted to NIV in the Emergency Department of the University Hospital of Verona (Italy) from October 2014 to March 2015. Clinical history, morbidity, vital parameters, blood gas analysis and blood examinations were registered and used to calculate the APACHE II score. Data about aetiology of acute respiratory failure, chest x-ray findings, type and duration of NIV were further gathered. The effectiveness of NIV was evaluated in terms of improvement of respiratory distress, trend of blood gas analysis, early and late intubation rate, mortality rate.

Results: In the scheduled period we observed 93 patients (37 males, 56 females, mean age 80 years) with several morbidity (heart disease 86%, chronic obstructive pulmonary disease 47%, diabetes 28%, chronic renal failure 38%). Out of the, 84 patients (90%) were admitted with severe respiratory distress, due to heart failure in 61 (66%) and to pneumonia in 23 cases (24%). APACHE II score median value was 19.8. NIV was performed in PSV mode in 77 patients (83%) and in CPAP mode in 16 patients (17%). Median length of treatment was 3.5 hours. Ventilation had to be continued in 33 cases (37%), but only 6 patients required an invasive procedure. Predictive factors for prolonged ventilation resulted to be: APACHE II score, pH after ventilation, trend of blood gas analysis, diagnosis of acute pulmonary oedema or pneumonia ($p<0.05$). NIV proved to be effective in recovering respiratory distress in 67 patients (80%) and improving blood gas analysis in 77 patients (93%). Overall intubation rate was 6.4% and mortality rate 20%.

Conclusions: The improvement of respiratory distress plays as a reliable parameter to evaluate the effectiveness of NIVwhile its persistence as a risk factor as regards mortality. Furthermore, the cause of acute respiratory failure and the trend in blood gas analysis resulted to be well related with the need for ventilation to be prolonged.

#7502 : Serum biomarker levels and scene time interval are associated with outcome in out-of-hospital cardiac arrest (OHCA) patients

Preferred format : ePoster

Authors:

Po Cheng Chen (1), Cheng Yu Chien (2)

1. Resident , Department of Emergency Medicine, Chang Gung Memorial Hospital, Keelung, Taiwan, Taoyuan, TAIWAN
2. Physician, Department of Emergency Medicine, Chang Gung Memorial Hospital, and Chang Gung University College of Medicine, Linkou, Taiwan, Taoyuan, TAIWAN

Keywords: out-of-hospital cardiac arrest (OHCA), serum biomarkers, scene time interval

Abstract :

Objective. Predicting the outcome of out-of-hospital cardiac arrest (OHCA) patients is difficult. Thus, the objective of this study was to determine whether serum biomarker levels and the scene time interval differ between OHCA patients with favorable or unfavorable outcomes to identify potential predictors. **Methods.** Data from 233 OHCA patients between January and December 2014 at Taoyuan Chang Gung Memorial Hospital (Taiwan, R.O.C.) were analyzed in this study. Serum sugar, creatinine, AST, Na, K, CKMB, Trop-I, pH, and pCO_2 were determined in the emergency room while performing cardiopulmonary resuscitation (CPR). The response time, scene time interval (STI) and the STI plus CPR time were also recorded. **Results.** OHCA patients who were discharged with good neurologic responses had normal serum pH values and normal levels of creatinine and Trop-I. Moreover, patients with STIs of less than 20 min, or STI plus CPR times less than 36 min, had better neurological outcomes. **Conclusions.** Our data suggest that serum biomarkers may predict outcome in OHCA patients and hospital CPR times of less than 36 min are associated with a better chance of discharge.

#7503 : Gender differences in paediatric emergency medicine: a multicenter prospective observational study

Preferred format : Oral presentation

Authors:

Joany Zachariasse (1), Dorine Borensztajn (1), Claudio Alves (2), Paulo Freitas (3), Frank Smit (4), Johan van der Lei (5), Ewout Steyerberg (6), Ian Maconochie (7), Susanne Greber-Platzer (8), Henriëtte Moll (1)

1. Department of Paediatrics, Erasmus MC- Sophia Children's Hospital, Rotterdam, THE NETHERLANDS
2. Department of Paediatrics, Emergency Unit, Hospital Fernando Fonseca, Amadora, PORTUGAL
3. Intensive Care Unit, Hospital Fernando Fonseca, Amadora, PORTUGAL
4. Department of Paediatrics, Maasstad Hospital, Rotterdam, THE NETHERLANDS
5. Department of Medical Informatics, Erasmus MC, Rotterdam, THE NETHERLANDS
6. Department of Public Health, Erasmus MC, Rotterdam, THE NETHERLANDS
7. Department of Paediatric Accident and Emergency, St Mary's Hospital, Imperial College NHS Healthcare Trust, London, UK
8. Department of Paediatrics and Adolescent Medicine, Vienna General Hospital, Medical University of Vienna, Vienna, AUSTRIA

Abstract :

Introduction
The influence of gender on health and disease is increasingly being recognized. In emergency medicine, sex-specific differences are well described in adults, including the acute presentation of certain conditions, the epidemiology of illnesses and injuries, and the effects and side-effects of medications. Beside physiologic and biologic factors, gender-specific biases are found to influence physician’s treatment decisions. So far, little is known about how gender affects emergency care for children. The aim of this study was to assess the role of gender in presenting problem, disease management and outcome in children attending the emergency department(ED).

Methods
This study is part of the TrIAGE project, a prospective observational study in five ED’s in four European countries (the Netherlands, United Kingdom, Austria, Portugal). Data collection consists of routinely recorded patient data, automatically extracted from electronic medical records. Study sites are instructed in data collection and a minimum set of required variables. Data harmonization and quality checks were performed. We included all consecutive children aged

Results
In total, 84,747 children under the age of 16 were included in the study, and 54.2% were male. In all 5 hospitals, the proportion of boys visiting the ED was higher than girls, ranging from 52.0 to 58.4%. The proportion of boys decreased with age, from 56.5% (range 52.3-61.4%) in children 12 years. Boys presented more often with trauma and limb problems (22.0% versus 19.7%), presented more often with high-urgent problems according to the Manchester Triage System (12.9% versus 10.6%) and were more often admitted (11.9% versus 10.6%). When adjusted for clinical parameters, diagnostics and therapy, and patient disposition, some differences between boys and girls remained. Girls were triaged less often with a high urgent triage category (OR 0.85, 95%CI 0.81-0.89). Moreover, in girls significantly more lab tests were performed in case of medical problems (OR 1.09, 95%CI 1.04-1.14) and more radiologic tests in case of trauma (OR 1.16, 95%CI 1.09-1.24). Girls were less likely to receive inhalation medication (OR 0.72, 95%CI 0.68-0.77), while overall there was no difference in oral or intravenous medications administered.

Conclusion
In childhood, boys attend the ED more often than girls, and this trend decreases with age. When adjusted for potential confounders, girls were triaged less often to a high urgency category. Moreover, some gender-based differences were found in diagnostics and management. Further research is needed to explore whether these findings are caused by differences in disease type, disease presentation, symptom severity or whether gender subconsciously plays a role in management decisions in children.

#7504 : CHEST COMPRESSION QUALITY MONITORING BY PEAK SYSTOLIC VELOCITY OF FEMORAL ARTERY

Preferred format : Oral presentation

Authors:

LUIS ARCADIO CORTES-PUENTES (1), GUSTAVO ANDRES CORTES-PUENTES (2), GERARDO LINARES-MENDOZA (3), Carlos Hernan Camargo Mila (4)

1. Departamento Emergencias FUNDACIÓN CARDIOINFATNIL -IC AND FUNDACION SANTA FE DE BOGOTA, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
2. Resident - Internal Medicine , UNIVERSITY OF MINNESOTA, MINESOTA, USA
3. Departamento Emergencias, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
4. Jefe de Urgencias , FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA, bogota D.C, COLOMBIA

Keywords: Cardiopulmonary Resuscitation, Ultrasonography, Doppler

Abstract :

The chest compression is a key of High-quality cardiopulmonary resuscitation (CPR), for this reason the current Guidelines for Cardiopulmonary Resuscitation recommends ensuring chest compressions of adequate rate, adequate depth, allowing full chest recoil between compression and minimizing interruptions. Apparently feedback methods could improve the quality of chest compressions, however, subjective analysis showed poor accuracy to qualify adequate rate and depth of chest compressions, and a more complex methodology for evaluation is necessary. Physiological parameters such as quantitative waveform capnography or arterial pressure monitoring could assess the response to treatment and guiding interventions to improve the quality of CPR. In our work we measured the peak systolic velocity of femoral artery (FPSV) by ultrasound during chest compressions, as an indirect indicator of cardiac output and a quantitative measure of the quality of chest compressions.

Objective

Determine if is possible to measure the FPSV produced by chest compressions during CPR

Methodology

In 6 cases of cardiac arrest the conditions to perform the measurement were obtained. Patients were younger than 75 years and had nontraumatic cardiac arrests, patients with signs of abdominal vascular diseases were discarded. The FPSV measurements were performed in the common femoral artery, at the beginning and 30 seconds before the end of the compression cycle. Additionally a description of chest compressions quality was performed during each measurement.

Results

45 measurements were obtained, 9 were discarded due to poor quality of ultrasound view. The highest FPSV was 145 m/s, adequate chest compression techniques were associated with an average measurement of 110 m/s (range 90 to 120 m/s), most FPSV decreased to 90 m/s (range 80 to 100 m / sec) at the end of each cycle. Poor quality techniques were associated with FPSV between 60 to 80 m/s. One resuscitator with a history of elbow trauma, performed a poor quality compressions according to quantitative evaluation, however the FPSV during chest compressions resulted greater than 90 m / s

Conclusions

Measurement of FPSV is possible during CPR and could provide quantitative information about the quality of chest compressions, even provide a real-time feedback to improve the technique. Further studies are needed to confirm these findings

#7506 : Disaster medical report in Nepal as NPO TMAT.

Preferred format : ePoster

Authors:

Sakamoto Takamitsu (1)

1. , fukuoka tokushukai general hospital, fukuoka, JAPAN

Keywords: earthquake, NGO,TMAT,disaster

Abstract :

An earthquake of magnitude 7.8 was struck on April 25 2015, which brought serious damage in Nepal.

NPO medical assistant team ,known as TMAT in Japan, watch the circumstances carefully and□and sent advance medical team to check the situation and the nessesity of medical needs on 26th April□for further damage expansion, and based its activity in Barabise ,Sindhupalchowk area, with Iwamura Memorial Hospital as a counterparts on 30th April.

and as medical assistant team, FMTclass 1 type team ,TMAT performed medical treatment activity for approximately 10 days .Especially worth mentioning is about mobile clinic in mountenous area in Nepal. TMAT member carried medical□equipment in backpack and gave medical care where vihicle can not access.

Over 500 patients in this period visited our clinic from serous case to rare case. this presentation is about disaster medical report of TMAT.

#7507 : Use of Bedside Ultrasound To Diagnose Type A Aortic Dissection

Preferred format : ePoster

Authors:

Lubna Ghali Amin Andraous (1)

1. Emergency Department, Hamad General Hospital, Doha, QATAR

Keywords: Aortic Dissection, Type A Aortic Dissection, Bedside Echocardiogram, Intimal Flap , Pericardial Tamponade,

Abstract :

Introduction:

Aortic Dissection is a relatively uncommon yet an emergent,life-threatening condition with a high morbidity and mortality rate. It remains a challenging diagnosis for emergency physicians, due to its wide range clinical manifestations and atypical presentations. Hence diagnosis is difficult, but essential, considering the time-sensitivity of initiating treatment with intravenous antihypertensive agents and operative intervention.[1] Early recognition and treatment are crucial,especially when the proximal Aorta is involved. Dissections involving the Aortic Arch can lead to Myocardial Infarction, Pericardial Tamponade and Aortic valve failure resulting in death.[1]

Aim/Methods:

We report a case where an emergency physician utilized Bedside Transthoracic Echocardiogram & Abdominal Ultrasound to diagnose Type A Aortic Dissection in a timely manner (about 20 minutes from presentation) in spite of atypical presentation

Case

A 57-year old Sudanese male patient, previously healthy and non-smoker, presented to Emergency Department at Hamad General Hospital with mild localized chest discomfort that started 12 hours ago. Blood Pressure 105/60mmHg, Heart Rate 71 beats/min, Respiratory Rate 18 breaths/min, Oxygen Saturation 99% on room air and Temperature 36.7°C. No jugular venous distension. Normal heart sounds with no murmurs. Lungs were clear. Abdomen was soft, not tender. All extremity pulses were palpable with no focal neurologic deficits.

EKG showed sinus rhythm, rate of 75, no ischemic changes. Routine investigations were ordered including Complete Blood Count, Renal Function Test, Troponin T & Chest x-ray. Initial diagnosis was to rule out Acute Coronary Syndrome, however Aspirin was held, until Bedside Echocardiogram was performed. Bedside Echocardiogram showed EF55%, a dilated Aortic root measuring 4.2cm and visualized intimal flap extending from the Aortic Arch, to the Descending Thoracic and Abdominal Aorta. Mild Aortic regurgitation,no pericardial effusion.No free fluid in the abdomen was seen.

Cardio Thoracic surgeon was immediately consulted. CT Angiogram confirmed the diagnosis of extensive Type A Aortic Dissection. Patient had emergent Aortic surgical repair, extubated next day & discharged in good condition after 12 days.

Discussion:

Clinicians should have a high index of suspicion for the atypical presentation of Aortic Dissection. Aortic dissection is a catastrophic condition with significant mortality. It is fatal if not recognized early and treated with aggressive medical and/or surgical therapy. There are several benefits to use Bedside Ultrasound at the **point of care** to diagnose Aortic Dissection. It provides not only a rapid, noninvasive study, but also has a high specificity for detection of Aortic Dissection. Moreover, it evaluates other potential life-threatening emergencies such as concomitant Abdominal Aortic Aneurysm, intraperitoneal hemorrhage, Pericardial Effusion/Tamponade and Aortic regurgitation.[2]

Conclusion:

This case highlights the fact that, Bedside Trans-Thoracic and abdominal ultrasound by trained emergency physicians, can diagnose, in a timely manner Life-threatening Aortic Dissection and expedite proper consultations, definitive care and better outcome [2]

Acknowlodgemet

The author declares that she dosn't have competing interests

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#7508 : Catheterization laboratory or cardiology intensive care unit : destination of ST-elevation myocardial infarction

Preferred format : Oral presentation

Authors:

Jonathan GONZVA (1), Alexandre ALLONNEAU (1), Aurélie LOYEAU (2), Isabelle KLEIN (1), Yann-Laurent VIOLIN (1), Catherine RIVET (1), Jennifer CULOMA (1), Amandine ABRIAT (1), Olivier YAVARI (1), Olga MAURIN (1), Alain COURTIOL (1), Hugues LEFORT (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des registre ARSIF, Siège de l'AH-HP, Paris, FRANCE

Keywords: catheterization laboratory, cardiology intensive care unit, ST-elevation myocardial infarction, chest pain, emergency call, mortality

Abstract :

Introduction : The European Society of Cardiology recommends primary percutaneous intervention (pPCI) for ST-elevation myocardial infarction (STEMI) <2h when the delay between the first medical contact (FMC) and the balloon inflation is expected to be <90 min with a target of 60 min. The choice to send MiCU towards a cardiology intensive care unit (CICU) or a catheterization laboratory (cath-lab) depends on the medical assessment, the regulator doctor and the decision of the cardiologist. Aim : Knowing the distribution of patients, management delays and mortality.

Material and method : Data derived from a prospective register including STEMI having primary percutaneous coronary intervention (PCI), managed by 6 medical care intensive units (MCIU), from 2003 to 2014. Variables collected : chest pain onset schedule, emergency call schedule, first medical contact schedule, destination to CICU or cath-lab and mortality.

Results : 1066 STEMI were included : 88,7% (n=946) in cath-lab and 11,3% (n=120) in CICU. Chest pain – emergency call delay influences the patient's destination 55 minutes (min) [20 ; 144] for cath-lab versus 90 min [25 ; 332] for CICU (p<0,05). MICU – hospital door delay is faster for the cath-lab group : 50 min [43 ; 60] versus 55 min [47 ; 67] (p<0,05). Mortality is 3 times higher for the CICU group : 5,9% versus 1,9%(p<0,05).

Conclusion : Chest pain – emergency call delay influences the patient's destination to cath-lab. The recommendations are not applied to some patients CICU group because they have delay compatible with cath-lab admission. Mortality is more important for CICU’s patients. An epidemiological description of these patients would optimize medical care.

#7509 : Children and adolescents presenting to pediatric emergency department with chest pain

Preferred format : ePoster

Authors:

Zdenka Plesa Premilovac (1), Maja Batinica (2), Filip Rubic (3)

1. Pediatric Emergency Department, Children's Hospital Zagreb, Zagreb, CROATIA
2. Pediatric Cardiology, Children's Hospital Zagreb, Zagreb, CROATIA
3. Pediatric Oncology, Children's Hospital Zagreb, Zagreb, CROATIA

Keywords: chest pain, children and adolescents, pediatric emergency department (PED)

Abstract :

INTRODUCTION: Chest pain is a common presenting symptom in pediatric practice but, unlike in adults, the cause is rarely cardiac. The aim of this study was to assess the etiology and various factors related to childrens' and adolescents' visits to pediatric emergency department (PED) due to a chest pain.

METHODS: Retrospective hospital based study was conducted during one year - all visits to the PED because of a chest pain, recorded in a hospital database, were analyzed. For data analysis descriptive statistics and Fisher exact two tailed test were used.

RESULTS: Of 12.068 admitted children, the chest pain was presented in 138 patients (1.14%): 79 boys, 59 girls; age range 3-18 yrs, mean 12.4 yrs. There was no significant difference in age between the boys and girls (12.47±3.82 *vs.* 12.37±3.55 yrs; t=0.149, p=0.881). Most of them arrived as an emergency (81%), while 19% were sent by their primary pediatrician.

Most of the patients arrived between 14-22 hrs. The boys arrived more frequently at night and during the morning but the differences were not statistically significant (Fisher two-tailed test p=0.288). During the school year 2.85 child per week reported chest pain, and only 1.81 per week during vacations. Attendance was relatively more frequent during the weekend. Pain occurred mostly at rest (82%), less frequently during and immediately after physical activity (18%).

Out of all diagnostic procedures, the only significant gender difference was in ECG, which was performed more often in boys ($p<0.05$).

After the pediatrician's exam, 44% were sent to another specialist: cardiologist (21%); pulmonologist (commonly because of asthma attack) and gastroenterologist (both 5%); orthopedic surgeon (4%) and seldom to others. Most of the children were released home (69%), while 20% were kept in day hospital. Only 12% (17/138 patients) were hospitalized, mostly at the Cardiology Unit (15/17); only five diagnoses (5/138; 3.6%) could be potentially life-threatening: pneumothorax, cardiac arrhythmia, myopericarditis, chest trauma and electrical shock.

The etiology of the chest pain according to the diagnosis revealed that 34% were of musculo-skeletal etiology; 18% were discharged without specific etiology; 12% of them had idiopathic pain and only 6% of them had some cardiovascular disturbances: pericarditis, myocarditis, irregular heart rhythm with premature atrial beats, and mitral valve pathology.

CONCLUSIONS: The most of the children (over 95%), who present to the emergency department with the chest pain symptom are not life endangered by a cardiac or other underlying etiology, and the chest pain is of benign etiology. Still, the best practice in the emergency department would be a systematic approach including the detailed history and the meticulous clinical examination which could rule out the more serious etiology and identify the conditions that require the specific goal-oriented diagnostic procedures.

#7510 : Comparison with a prospective registry of management delay for patients presenting an early 2 hours ST segment elevation myocardial infarction (STEMI) in city or suburb. Should you avoid the suburbs?

Preferred format : Oral presentation

Authors:

Alexandre ALLONNEAU (1), Amandine ABRIAT (1), Aurélie LOYEAU (2), Jonathan GONZVA (1), Yann-Laurent VIOLIN (1), Isabelle KLEIN (1), Olivier YAVARI (1), Jennifer CULOMA (1), Catherine RIVET (1), Olga MAURIN (1), Alain COURTIOL (1), Hugues LEFORT (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des registre ARSIF, Siège de l'AH-HP, Paris, FRANCE

Keywords: prospective registry, management delay, ST segment elevation myocardial infarction, city, suburb, primary percutaneous intervention

Abstract :

Introduction: The European Society of Cardiology recommends primary percutaneous intervention (pPCI) for early presenters (<2 h) of ST-elevation myocardial infarction (STEMI) when the delay between the first medical contact (FMC) and the balloon inflation is expected to be <90 min with a target of 60 min. Our outcome was to compare the management delay for uncomplicated STEMI “early presenters”, by a mobile intensive care unit (MICU) in a city (C) or in a suburb (S) according to the recommendations.

Materials and methods : Data came from a prospective registry that includes all STEMI collected by one out-of-hospital emergency care services (6 MICU) in the greater Paris area. Early presenters (<2 h) of an uncomplicated STEMI with a reperfusion strategy were studied according to the place of management: city or suburb (C or S). The Khi2 test was used for testing the trends (statistical significance p< 0.05).

Results : Between 2012 and 2014, 289 early presenting STEMIs, uncomplicated and primary cared by MCIUs were included. Four (2,7%) had benefited from an out-of-hospital fibrinolysis, other patients pPCI. The distribution of patients according to the ESC objectives is reported in the chart : 45% (n=130) in the city and 55% (n=155) in suburb, no significant difference was found between the two groups. Patients treated by primary pPCI out of delay were in more than one third (35%).

Conclusion : There is not any significant difference in FMC-pPCI times between subgroups. Even if MICU in suburb tend to be faster than in city, we cannot show a lack of chance for the city patients. For the third of patients, fibrinolytic therapy remains a choice that should be considered.

#7511 : A RARE CAUSE OF HEMORRHAGİC OTORRHEA

Preferred format : ePoster

Authors:

SERDAR KAVAK (1)

1. Emergency Medicine, TSK, Marmaris, TURKEY

Keywords: HEMORRHAGİC OTORRHEA , TOOTH EXRACTİON

Abstract :

A RARE CAUSE OF HEMORRHAGİC OTORRHEA

(UNUSUAL COMPLİCATİON OF TOOTH EXTRACTION)

Serdar KAVAK, Aksaz Military Hospital, Marmaris, TURKEY

Introduction:Hemorrhagic otorrhea is known as blood coming from de external auditory canal. The most commen causes of hemorrhage is trauma to the external auditory channel, trauma to middle ear, basilar skull fractures and barotrauma

Case Report

A 27-years-old female patient visited our emergency medicine department (EMD) with complaint of hemorrhage from the right ear.She has no other complaints of pain, hear loss or fever. The hemorrahage had began two hours before she visited the emergency medicine . She has no history of physcial and baro trauma and bleeding disorders. She had an operation of tooth extraction(right lower impacted third molar tooth) six hours before the visit. Her vital signs were in normal ranges. The physical examination findings was blood in right the auditory channel and perforated tympanic membrane.After the detailed history the paitent told us that she had a ear pain six days ago. The pain reliefed one day later and purulant otorrhea occured for one day The source of bleeding was wound on the right mandibular region and while swalloving the salive, she swalloved some amount of blood. By the retrograde action the blood came to midear and then cam outside to auditory channel. After the physical examination we advise her to follow up with ear throat nose spacialist about the perforated tympanic membrane. After one month follow up the tympanic membrane closed spontanously and her hearin tests were in normal ranges.

Discussion : The most commen causes of hemorrhage is trauma to the external auditory channel, trauma to middle ear, basilar skull fractures and barotrauma. A detailed history must be taken from all the unusual situations.

#7512 : City or suburb, 15-call to angioplasty, management delays of ST elevation myocardial infraction (STEMI)

Preferred format : Oral presentation

Authors:

Alexandre ALLONNEAU (1), Alain COURTIOL (1), Aurélie LOYEAU (2), Jonathan GONZVA (1), Isabelle KLEIN (1), Olivier YAVARI (1), Amandine ABRIAT (1), Jennifer CULOMA (1), Catherine RIVET (1), Yann-Laurent VIOLIN (1), Olga MAURIN (1), Hugues LEFORT (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des registre ARSIF, Siège de l'AH-HP, Paris, FRANCE

Keywords: City, suburb, 15-call, angioplasty, ST elevation myocardial infraction, catheterization laboratory

Abstract :

Introduction : In the strategy of ST-segment elevation myocardial infarction (STEMI) management, response time of a mobile care intensive unit (MCIU) may be influenced by urban population density, and accessibility to the catheterization laboratory (cath-lab).

Primary outcome: Evaluate delays in STEMI management, for each stage, from onset chest-pain to the catheterization.

Methods : Data derived from a prospective register including non-complicated STEMI having primary percutaneous coronary intervention (PCI), managed by 6 medical care intensive units (MCIU) of a French city: 3 in town (T) and 3 in suburb (S). The observed variables were the place of management (T or S), the time delays of the various stages: time delay from chest-pain onset to the first medical contact (FMC) by the patient to the pre-hospital despatching emergency medical service – time delay FMC to MCIU arrival – cath-lab door (cath-lab) – needle – catheterization (KT). We compared delays between MCIU T and S using the Wilcowon test (p value<0,05).

Results : Over three years (2012-2014), 547 STEMI have been included, T= 228 (42%), S= 319 (58%). Chart reports time delays of various stages. The median time delay from chest-pain onset to the first medical contact was significantly (p = 0.016) faster in town with less dispersion: T = 45 [20;115] min, S = 65 [23;152] min. By stage, after the FMC, there was no significant statistical difference.

Discussion : The town patients are taken care of a few minutes faster than in the suburbs. The more dispersed distribution of cath-lab in the suburbs, but more accessible than in the city does not seem to influence the time delay of MCIU and does not affect the STEMI management.

Conclusion : City or suburb, management delay of the emergency chain is not affected. However patients in the suburbs should call the emergency medical dispatch center quickly, that can be a prevention campaign.

#7513 : ANGIOEDEMA SECONDARY TO TREATMENT WITH ANGIOTENSIN CONVERTING ENZYME INHIBITOR (ACEI): A CASES REPORTS

Preferred format : Oral presentation

Authors:

ANA MARIA MARTINEZ VIRTO (1)

1. , UIVERSITARY HOSPITAL LA PAZ, MADRID, SPAIN

Keywords: angioedema, angiotensin converting enzyme inhibitor, ACEI.

Abstract :

INTRODUCTION

Angioedema (AE) is a vasodilatation phenomenon associated to edema in deep dermis and subcutaneous tissue, without well defined contours, painless and elastically, that can be observed in any area of the body.

CLINICAL CASE

We presented a case of an 75-year-old men with no history of allergies, arterial hypertension and paraplegic due to a spinal cord injury in a traffic accident and secondary neuropathic pain. Usual treatment is omeprazol 40mg/24 hours, lactulosa 5ml/8 hours, acetyl salicylic acid 100mg/24 hours, pregabalin 150 mg/12 hours, enalapril 10 mg/24 hours and metamizol 575mg/8 hours.

She consulted in the emergency department for facial erythema and edema of the tongue from her awakening without dysfagia, difficulty in breathing, rash or pruritus. On physical examination she showed erythema and edema of the tongue without injuries in neither her thorax, nor her limbs. Her blood analyses findings were impaired serum creatinine (2 mg/dL).

We suspected AG secondary to enalapril, which was suspended, and methylprednisolone plus dexchlorpheniramine therapy was initiated. Clinical improvement was clear after 6 hours. Subsequently Icatibant was administered with clinical improvement by 4 a.m.

DISCCUSION

Angiotensing Converting Enzyme Inhibitor (ACEI) is the treatment of choice for arterial hypertension, heart failure and diabetic nephropathy with proteinuria. Dizziness, cough, migraine, hypotension and renal failure are the most frequent side effects. Angioedema Secondary to ACEI appears in 0,2 % of the treated individuals. A progressive incidence is estimated because of new therapeutic indications. AE should not be related with neither the administration nor the dose.

C O N C L U S I O N S

AG may vary from facial and tongue edema as well as in the supralotic area, worse conditions than other presentations, such as hands, feet and visceral edema.

Bradikinine is the nonapeptid and proinflamatory vasodilator in the physiopathologycal mechanism. Nevertheless, in AG secondary to ACEI an allergic reaction should not be considered and in some cases it can be refractory to the treatment with antihistaminics and steroids, being necessary the introduction of new therapies in the emergency department.

#7514 : Analysis of prognostic factors for surgical patients with traumatic acute subdural hematomas.

Preferred format : ePoster

Authors:

Hiroshi Yatsushige (1), Takanori Hayakawa (1), Kyoko Sumiyoshi (1), Keigo Shigeta (1), Toshiya Momose (1), Masaya Enomoto (1), Shin Sato (1), Jiro Aoyama (1)

1. Department of Neurosurgery, National Hospital Organization Disaster Medical Center, Tokyo, JAPAN

Keywords: acute subdural hematoma, prognosis, surgical patients

Abstract :

Background:

Acute subdural hematoma (ASDH) is a common traumatic brain injury with a relatively high mortality rate. However, few studies have examined the factors on admission predicting the outcome of traumatic ASDH. This clinical study analyzed the prognostic factors on admission in patients treated surgically for traumatic ASDH.

Participants and methods:

A total of 74 surgical patients for traumatic ASDH between January 2008 and October 2014 were retrospectively reviewed. If surgical evacuation of an ASDH in patient is indicated, it should be performed using a craniotomy with or without bone flap removal and duraplasty. Glasgow outcome score (GOS) was used for prognostic evaluations and favorable prognosis was defined as 4-5 points. We used univariate and multivariate logistic regression analysis to evaluate the influence of clinical variables on prognosis.

Results:

The majority were male (66.2%) and the mean age was 59 years. The percentage of patients with favorable prognosis was 25.7% and the mortality 36.5%. Age (OR = 0.874), Glasgow Coma Score on admission (OR = 1.851), D-dimer (OR = 0.756) and Rotterdam CT score (OR = 0.137) were independent predictors, while no independent association was observed between prognosis and platelet count, thickness of hematoma, although these variables were correlated with prognosis in univariate analyses. Sex, pupil abnormalities, light reflex, PT-INR, fibrinogen, glucose, electrolytes, arterial blood gas data were no correlated with prognosis in univariate analysis.

Discussion/Conclusion:

This study identified the risk factors for poor prognosis in patients who underwent surgical treatment for traumatic ASDH. Poor outcome in traumatic acute subdural hematoma is higher in elderly patients even after surgical intervention. There is a high incidence of coagulopathy following TBI. The presence of elevated D-dime as well as of severity of TBI are strong predictors of prognosis in these patients. The Rotterdam classification including compressed basal cistern, midline shift >5mm, absent of epidural hematoma mass, present of intraventricular blood or subarachnoid hemorrhage seems to be appropriate for describing the evolution of the injuries on the CT scans and contributes in predicting of outcome in surgical ASDH patients. In conclusion, older patients, lower Glasgow Coma Score on admission, elevated D-dimer, higher Rotterdam CT score tend to have poor prognosis. The findings might help clinicians determine management criteria and improve survival.

Acknowledgement: On behalf of all authors, the first author states that there is no financial other conflict of interests

#7515 : Icatibant treatment for non-histaminergic angioedema acute attacks in two emergency hospital departments

Preferred format : Oral presentation

Authors:

MANUEL QUINTANA DIAZ (1), ANA MARIA MARTINEZ VIRTO (2), M ANGELICA RIVERA NÚÑEZ (3), JAVIER JACOB (4), ROSARIO TORRES SANTOS OLMO (3)

1. INTENSIVE CARE UNIT, UIVERSITARY HOSPITAL LA PAZ, MADRID, SPAIN
2. , UIVERSITARY HOSPITAL LA PAZ, MADRID, SPAIN
3. EMERGENCY DEPARTMENT, UIVERSITARY HOSPITAL LA PAZ, MADRID, SPAIN
4. EMERGENCY DEPARTMENT, UNIVERSITARY HOSPITAL BELLVITGE, BARCELONA, SPAIN

Keywords: ICATIBANT, NON-HISTAMINERGIC ANDIOEDEMA

Abstract :

BACKGROUND

Angioedema is a relatively common reason of emergency department visits. Angioedema is due to different pathogenetic mechanisms with the same clinical manifestations. Around 80% of angioedemas are result of histamine release and in a lower percentage of cases bradykinin is the main mediator. Bradykinin- mediated angioedemas are generally unresponsive to corticosteroids and H1 antagonists. Icatibant is a selective bradykinin-2 receptor antagonist that blocks the vascular effects of bradykinin. ACE-induced angioedema and acquired angioedema are bradykinin- mediated angioedemas where Icatibant is not indicated and its use is off-label and requires signed informed consent for its administration.

OBJECTIVE

Description of use of Icatibant in bradykinin-mediated angioedemas without previous diagnosis

in two hospital emergency departments

METHODS

We retrospectively analyzed angioedemas treated with Icatibant following our protocol in Bellvitge hospital and Universitary La Paz hospital emergency departments during Two years Epidemiological data, safety data and Icatibant label and off-label use are analyzed

RESULTS

Thirty five episodes of angioedema were treated with Icatibant in 28 patients (median age: 65+/-2 years; 62% males); 85% of episodes were oro-facial attacks, 5.7% in extremities and 2.8% abdominal attacks. 62.8% had previous attacks of angioedema. All attacks were treated with corticosteroids and H1 antagonist without response and Icatibant following emergency protocol for angioedema at the two hospitals. Second dose were needed in 7 patients. Non adverse events were observed

Diagnosis of Icatibant treated angioedemas was: 22.85% idiopathic angioedema, 14.28% acquired angioedema and 37.14% ACE-induced angioedema.

CONCLUSION

Icatibant for non-histaminergic angioedema in emergency department were effective and well tolerated. Orofacial location was the most common location. The first frequent cause of Icatibant treated angioedema was ACE-induced angioedema and the second one was idiopathic angioedema

#7516 : The impact of rapid pregnancy test on the medical care of emergency patients: a prospective monocentric study.

Preferred format : Oral presentation

Authors:

CHAUVIN ANTHONY (1), calvo alain (2), enrique casalino (3), Patrick Plaisance (4), AFDJEI ALI (5)

1. Emergency Department, APHP, Paris, FRANCE
2. , NG BIOTECH, paris, FRANCE
3. EMERGENCY DEPARTMENT, APHP, PARIS, FRANCE
4. Emergency Department, PARIS, Paris, FRANCE
5. , EMERGENY DEPARTMENT, PARLY 2, LE CHESNAY, FRANCE

Keywords: Human chorionic gonadotropin, emergency

Abstract :

The impact of rapid pregnancy test on the medical care of emergency patients: a prospective monocentric study.

Background: Human chorionic gonadotropin (hCG) is a glycoprotein secreted by viable placenta tissue during pregnancy. In normal pregnancy, hCG can be detected in whole blood as early as 7 to 10 days after conception. hCG levels continue to rise very rapidly, frequently exceeding 100 mIU/mL make it an excellent marker for confirming pregnancy. The NG-Test hCG WB is a rapid visual immunoassay for the qualitative presumptive detection of human chorionic gonadotropin in human whole blood to aid in the early detection of pregnancy. In fact, the NG-Test hCG WB has a sensitivity of 10mIU/ml. The aim of this study was to evaluate the NG-Test hcg WB in the management of women presenting in the emergency department (ED).

Methods: We conduct a monocentric study in the Emergency Department, from June 2015 to January 2016. We included women who needed medical application of Beta hCG (suspected pregnancy, abdominal pain, bleeding) and woman suspected of being pregnant before radiography, drug administration, emergency surgery. The semi quantitative results were in intensity to the naked eye (+ to ++++) and confirmed by the values obtained in the laboratory on venous sampling. The outcomes were practicability test, the implementation of speed, ease of sampling and test reading, satisfaction, and patient comfort. This was evaluated by a standardized questionnaire designed by consensus among authors.

Results: We included 182 patients: 126 (69%) had a negative test and 55 (31%) tested positive. Eight (14.5%) patients had ectopic pregnancy.

Conclusion: The NG Biotech bHCG Test enabled rapid orientation and safety orientation for patients coming through Emergency Department. Laboratory blood test confirmations were consistent (concordance rate of 100%). The satisfaction of this test was evaluated as very good by Nurses and Physicians and patients in ED, especially due to the optimized waiting time into ED. It would be now relevant to confirm these tests by a larger study in ED to show medical and economic outcomes in addition to more efficient and effective medical care.

#7518 : Comparison of ST elevation myocardial infarction (STEMI) : mobile intensive care unit (MICU) immediately after emergency call or after first aid assessment

Preferred format : Oral presentation

Authors:

Jonathan GONZVA (1), Alexandre ALLONNEAU (1), Aurélie LOYEAU (2), Amandine ABRIAT (1), Olivier YAVARI (1), Jennifer CULOMA (1), Catherine RIVET (1), Yann-Laurent VIOLIN (1), Isabelle KLEIN (1), Alain COURTIOL (1), Olga MAURIN (1), Hugues LEFORT (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des registre ARSIF, Siège de l'AH-HP, Paris, FRANCE

Keywords: ST elevation myocardial infarction, mobile intensive care unit, emergency call, first aid assessment, characteristics of STEMI

Abstract :

Introduction : Any patient with suspicious chest pain has to immediately call the emergency medical dispatch center to any suspicious chest pain. As part of a risk of ST elevation myocardial infarction (STEMI), regulator doctor decided to send a mobile intensive care unit (MICU) immediately after emergency call or after first aid assessment (FAA).

Primary outcome : Compare the characteristics of STEMI between when MICU is immediately triggered after emergency call (EC group) or after first aid assessment (FAA group).

Methods : Data derived from a prospective register including non-complicated STEMI

Results : 1310 STEMI were included, 67% in EC group. The only significant difference between the 2 populations is when the caller is a healthcare professional ($p<0,05$). Chest pain – catheterization laboratory (cath-lab) delay and mortality do not show significant difference.

Conclusion : The regulator doctor’s decision is influenced when the call is made by a health care professional, contrary to history and cardiovascular risk factors. However it does not increase the risk for patients in terms of management delay and survival.

#7519 : Evaluation of professional practices in a emergency department for patients suffering from mild head injury

Preferred format : Oral presentation

Authors:

Alexandre ALLONNEAU (1), Pierre DARS (2), Hugues LEFORT (1), Delphine PAPEIX (1), Daniel JOST (1), Daniel BAUGNON (3), Jean-Pierre TOURTIER (1), Erick DURET (2)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des urgences, Centre Hospitalier de Verdun-St Mihiel, Verdun, FRANCE
3. Service des urgences, Brigade des sapeurs-pompiers de Paris, Verdun, FRANCE

Keywords: Evaluation of professional practices, emergency department, mild head injury, brain scanner, hospitalization for monitoring

Abstract :

Introduction : Since 2011, the French Society of Emergency Medicine (SFMU) recommends performing, for mild head injuries (MHI), a brain scanner if neurological signs, amnesia facts than 30 minutes, Glasgow coma scale <15 two hours after the traumatism, sign of fracture of the basis of the skull, anticoagulant or antiplatelet agent treatment... Hospitalization is recommended, among others if abnormal brain scanner, Glasgow coma scale <15 after brain scanner, persistent vomiting and/or severe headaches... Primary outcome : check if the guidelines are followed correctly within the emergency department of a regional university hospital in France, about performing a brain scanner, keeping secondarily in the hospital and giving the supervision instructions.

Methods : A prospective and monocentric before and after study of the practices taking (before and after specific information sessions) conducted in the reception of the emergency department of a regional university hospital in France. Inclusion criteria : patient >15 years, seen in the emergency room for MHI. The primary outcome was the performance of a brain scan and/or hospitalization for monitoring.

Results : From January to June 2013 “Before” period : 120 patients were included and from January to June 2014 “After” period : 162 patients. The concordance rate of good use of brain scanner was 93,3% (n=112) for « Before » and 90,1% (n=146) for « After » (p=0,34). The concordance rate of deciding an hospitalization was 80,8% (n=97) for “Before” and 84,6% (n=137) for “After” (p=0,41). The issuance of supervision instructions to patients going back to their home was significantly different between « Before » : 43,8% (n = 39 instructions/89 going back home) and « After » : 60,4% (n = 61 instructions/101 going back home) (p=0,029).

Discussion : It is important to reassess professional practices within hospitals. Medical support of a patient suffering from mild head injury was mostly respectful of the guidelines, regarding the use of brain scanner and hospitalization without being significantly improved by continuing education. However, instructions were significantly more delivered after the continuing education, but still insufficient. Since then, regular continuing education sessions have been established within the emergency department, which results will be evaluated.

#7520 : Mild head injuries under antiplatelet agents or anticoagulants : compliance guidelines before and after formation

Preferred format : Oral presentation

Authors:

Alexandre ALLONNEAU (1), Pierre DARS (2), Hugues LEFORT (1), Delphine PAPEIX (1), Daniel JOST (1), Daniel BAUGNON (3), Jean-Pierre TOURTIER (1), Erick DURET (2)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des urgences, Centre Hospitalier de Verdun-St Mihiel, Verdun, FRANCE
3. Service des urgences, Brigade des sapeurs-pompiers de Paris, Verdun, FRANCE

Keywords: Evaluation of professional practices, emergency department, mild head injury, brain scanner, hospitalization for monitoring, antiplatelet agent, anticoagulant

Abstract :

Introduction : Before 2011, no consensus existed concerning the management of mild head injuries (MHI) with antiplatelet agents or anticoagulants. Masters and al. classification (NEJM 1987: 316;84-91) was less accurate because there is no precision about patients under antiplatelet agents. Since 2011, the French Society of Emergency Medicine (SFMU) recommends performing a brain scanner and hospitalization under surveillance for every MHI under antiplatelet agent (AP) or anticoagulant (AC). Aim : checking is the guidelines are followed before and after specific information sessions.

Methods : A prospective and monocentric before and after study of the practices taking (before and after specific information sessions) conducted in the reception of the emergency department of a regional university hospital in France. Inclusion criteria : patient >15 years, seen in the emergency room for MHI and taking his usual treatment of antiplatelet agents or anticoagulant. The primary outcome was the performance of a brain scan and/or hospitalization for monitoring.

Results : From January to June 2013 : “Before” period : 26 patients under AP and 6 under AC were included. From January to June 2014 : “After” period : 38 patients under AP and 20 under AC were included. For patients under AP, performance of a brain scanner was 92% (n=26) Before and 95% (n=36) After (p=0,54). About hospitalization for monitoring : 35% (n=9) : Before and 66% (n=25) After (p=0,0014). All patients under AC had a brain scan (Before n=6 and After n=20) and hospitalization for monitoring was 50% (n=3) Before and 70% (n=14) After (p=0,33).

Discussion : It has been observed that the 2 groups did follow correctly the guidelines about mild head injuries and brain scanner, whether it was before or after specific information sessions. The rate of hospitalization for surveillance was low, mainly for AP. Better after specific information sessions but insufficient. Since, differents actions were established in the emergency department for increase the accordance with the guidelines.

#7521 : Does the pefect doctor exist?

Preferred format : ePoster

Authors:

Félix Manuel Domingo Serrano (1), Sergio Sánchez Ruiz (1), Maria José. Jiménez Meléndez (1), Eulalia López Naharro (1), Amor Gil Díaz (1), Eduardo Fernández Versteeg (1), María Pilar Lozano García (1), Mercedes Fernández-Escribano Hernández (1), Jose Antonio Laperal Martín (1)

1. Emergency, HGU Guadalajara, Guadalajara, SPAIN

Keywords: perfect doctor, physical appearance, medical interview

Abstract :

It was made in our Emergency Department, for one month period, an interview to the patients while they were in the Waiting Room. It was voluntary and anonymous, and we asked about the characteristics that they thought the "Perfect Doctor" should have. The total survey respondent were 106, 58 males and 48 females, the age median was 44 years old. 89% were Spanish, 4% came from UE countries, 4% from Latin America and the other 3% were from unknown origin. The academic level was: 53% universitary level, 42% basic level and 5% none.

We asked these patients about the kind of physician they should prefer to have. The answers were:

-Sex: 15% prefers a man (62,5% were males), 12% prefers a woman, 73% irrelevant.

-Age: 17% younger than 40 years old, 33% between 40 and 50 years old, 8% between 50-60 years old, 2% older than 60 years old and 40% irrelevant.

-Status: 47% staff doctors, 13% residents and 40% irrelevant.

-Nationality: 63% Spanish doctors, 2% foreigners and 35% irrelevant.

-Physical appearance:

-Weight: 1% fat, 4% thin, 29% well proportioned and 66% irrelevant.

-Dressing: casual clothes 7%, white coat 53%, surgical pyjama 18%, 22%irrelevant.

-Identity card: 90% yes, 1% no, 9% irrelevant.

-Tatoos: 11% yes, 42% no, 47% irrelevant.

-Piercings: 8% yes, 47% no, 45% irrelevant.

-If the doctor is a man:

-Hair: Short hair 33%, long hair 6%, irrelevant 61%.

-Beard: 8% yes, 20% no, 72% irrelevant.

-Perfume: 28% yes, 17% no, 55% irrelevant.

-If the doctor is a woman:

-Hair: upsweep 45%, unleashed 6%, irrelevant 49%.

-Make up: yes 17%, no 17%, irrelevant 66%.

-Perfume: 34% yes, 17% no, 49% irrelevant.

-Nail´s length: short 62%, long 4%, irrelevant 34%

-Nail´s colour: painted 5%, non painted 32%, irrelevant 63%.

-Jewels: 8% yes, 38% no, 54% irrelevant.

-Medical Interview:

-Position while reception: sitting 15%, up 34%, irrelevant 51%.

-Greeting: physical 20%, verbal 41%, irrelevant 39%.

-Introduction: Yes 67%, No 4%, irrelevant 29%.

-Visual contact: 82% yes, 2% no, irrelevant 16%.

-Manner: Close 76%, cool 4%, irrelevant 20%.

-Detailed explanations: Always 81%, Never 2%, it depends 17%.

-Information: Alone 17%, with family/friends 42%, irrelevant 41%.

The "Perfect Doctor" for the patients who were asked in Guadalajara (Spain) should be a 40-50 years old person, staff doctor with irrelevant sex, not foreigner, the weight shouldn´t matter, dressed with white coat and who wears an identity card, without piercings or tatoos. They would like that the doctor stands up while reception, a short introduction to know his/her name and a greeting without physical contact; they prefer visual contact and close manners, and they want to have detailed explanations of their disease, and, if it is possible, with companion.

Our conclusion is that, in despite that some of the questions were answered as "irrelevant", we could say that the appearance of the doctors is very important for the people who use our Health System. It could be very interesting to make similar interviews in another hospital in the world to compare our results.

#7522 : Differences in the paediatric population, diagnostics and outcome in emergency departments: a multicentre prospective observational study

Preferred format : Oral presentation

Authors:

Dorine Borensztajn (1), Joany M Zachariasse (1), Susanne Greber-Platzer (2), Claudio F Alves (3), Paulo Freitas (4), Frank J Smit (5), Johan van der Lei (6), Ewout W Steyerberg, (7), Ian Maconochie, (8), Henriëtte A Moll (1)

1. Department of General Paediatrics, Erasmus MC - Sophia Children's Hospital, University Medical Center Rotterdam, Rotterdam, THE NETHERLANDS
2. Department of Paediatrics and Adolescent Medicine, Vienna General Hospital, Medical University of Vienna, Vienna, AUSTRIA
3. Department of Paediatrics, Emergency Unit, Hospital Fernando Fonseca, Amadora, PORTUGAL
4. Intensive Care Unit, Hospital Fernando Fonseca, Amadora, PORTUGAL
5. Department of paediatrics, Maasstad Hospital, Rotterdam, THE NETHERLANDS
6. Department of Medical Informatics, Erasmus MC, University Medical Center Rotterdam, Rotterdam, THE NETHERLANDS
7. Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, THE NETHERLANDS
8. Department of Paediatric Accident and Emergency, Imperial College NHS Healthcare Trust, Londen, UK

Keywords: pediatrics, pediatric emergency medicine, diagnostics, management, outcome

Abstract :

Background / introduction

Little is known about differences in diagnostics and therapy in pediatric emergency medicine (PEM).

The aim of this study was to assess differences in population, management and outcome of children in Europe. To our knowledge this is the first large European study covering this area.

These differences can be relevant when interpreting multicentre studies and can be used to improve clinical care.

Participants and methods

This study is part of the TrIAGE project, a prospective observational study in five ED's in 4 different European countries (the Netherlands, UK, Austria, Portugal). Data collection consists of routinely recorded patient data, automatically extracted from electronic medical records. Study sites are instructed in data collection and a minimum set of required variables. Data harmonization and quality checks were performed. We included all consecutive children aged

Results

84,747 children were included. Between the settings, populations differ in Manchester Triage System (MTS) urgency. Some centres have a more "high urgency" population (defined as MTS category 1,2 and 3) than others (range: 62.5 % urgent patents in the high urgency setting versus 27.4% in the low urgency setting) and the rate of trauma- versus non-trauma-patients ranged from 4.7% to 50%.

Secondly, we saw differences in management, such as how often vital signs were measured (In 36% versus 78% of the cases at least 3 vital signs were measured) and how often diagnostic tests were performed (ranging from less than 8% to over 37%).

These differences were related to MTS urgency, age, gender, and trauma- versus non-trauma-patients. Admittance to hospital was significantly associated with these aspects of management, even when corrected for the previously mentioned confounders.

Finally the centres differed in outcome measures such as general admission rates and combined IC admission rates and mortality. These differences remained after correcting for MTS urgency, age, gender, and trauma- versus non-trauma-patients.

Discussion/conclusion

Our data showed substantial differences in presentation, management and outcome exist in different European ED's.

Some differences, such as admission rates, can be partly explained by differences in high-urgency versus low urgency settings or the ratio of trauma-patients versus non-trauma-patients.

However, significant differences remain even when correcting for these factors, showing that there seems to be a real and significant difference in population, management and outcome between settings, or even countries.

We believe it is worthwhile investigating the causes of these differences in outcome. Aspects of influence could be patient comorbidity or local practice differences caused by culture and local guidelines.

More research is needed to clarify the causes and clinical significance of these differences.

#7523 : Nurses' gut feeling about serious illness in children visiting the emergency department

Preferred format : Oral presentation

Authors:

Joany Zachariasse (1), Dominique van der Lee (1), Nienke Seiger (1), Rianne Oostenbrink (1), Henriëtte Moll (1)

1. Department of Paediatrics, Erasmus MC- Sophia Children's Hospital, Rotterdam, THE NETHERLANDS

Abstract :

Introduction

The recognition of children with time-sensitive conditions amidst the large group of children with benign or self-limiting illnesses remains a challenge at the emergency department (ED). Because children present to the ED with a wide spectrum of problems, it is unlikely that a single clinical feature, vital sign or diagnostic test can accurately rule in or rule out a serious condition in a child. "Gut feeling", the intuition that something is wrong despite a reassuring clinical assessment, may be a promising tool to identify children with serious illness. A previous study reported that primary care physicians' gut feeling increased the risk of serious infection in children. Little is known, however about the gut feeling of ED nurses. The aim of this study was to define determinants of nurses' gut feeling at the ED and to assess its diagnostic value for the recognition of children with a serious illness.

Methods

The study is based on a prospective observational cohort of all children aged

Results

During the study period, we included 6390 children who attended the ED with a medical problem and had information about gut feeling documented. A gut feeling was present in 20.0% of these visits. Gut feeling was associated with triage urgency (OR 10.2, 95%CI 8.0-12.9 for urgency category 1 and 2 and OR 4.2, 95%CI 3.4-5.3 for urgency category 3), fever (OR 2.7, 95%CI 2.3-3.1) and the presence of abnormal vital signs (OR 1.6, 95%CI 1.4-1.9 for 1 abnormal vital sign and OR 3.6, 95%CI 2.9-4.3 for 2 or more abnormal vital signs). Moreover, a gut feeling occurred less frequent in self-referred patients (OR 0.6, 95%CI 0.5-0.7) and patients presenting outside office hours (OR 0.8, 95%CI 0.7-0.9). When adjusted for age, gender, triage urgency and fever or abnormal vital signs, presence of a gut feeling was significantly associated with ICU (OR 4.4, 95%CI 3.0-6.3), and hospital admission (4.1, 95%CI 3.5-4.8). Sensitivity of nurses' gut feeling for the recognition of patients requiring ICU admission was 0.71 (0.63-0.79), and specificity 0.81 (0.80-0.82). Sensitivity for hospital admission was 0.48 (95%CI 0.45-0.52), and specificity 0.85 (95%CI 0.84-0.86).

Conclusion

Nurses' gut feeling at the emergency department is associated with clinical and non-clinical factors. The presence of a gut feeling increases the risk of ICU or hospital admission, but is in itself not an accurate predictor. It is important to combine gut feeling with other clinical parameters to determine the severity of illness of a child.

#7524 : Promoting medical students' self-awareness and self-management in emergency situations

Preferred format : Oral presentation

Authors:

Zoltán Höhling (1), Sarah-Lu Oberschelp (1), Axel Schmutz (1), Thomas Ahne (1), Mareike Bergmann (1), Michael Wirsching (1), Andrea Kuhnert (1)

1. , University Medical Center Freiburg, Freiburg, GERMANY

Keywords: emergency medicine students, self-awareness, psychiatric emergency, human simulation

Abstract :

Quick decision-making and determined action-taking are both essential to clinical crisis situations and especially in the realm of emergency medicine. The knowledge and awareness about one’s self-image as a doctor in relation to relevant aspects of the personality represent an important foundation for adequate self-management during highly complex and emotionally demanding crisis situations. Feelings of helplessness and overpowering can quickly arise and impede professional action taking.

The University Medical Center Freiburg (Germany) has been repeatedly organising a training day for medical students interested in emergency medicine. It offers an opportunity for the students to practice their skills in a number of different high-fidelity simulations of common scenarios in the emergency context. With the presence of other occupational groups of the emergency field - such as local fire-brigades - the multidisciplinary working environment represents a unique feature of the event. All students who enrolled for the elective course “emergency medicine” had the privilege to participate in it.

Through a co-operation between the department of anaesthesiology – responsible for the conceptualisation and organisation of the training day – and the department for psychosomatic medicine, an additional elective workshop was offered to the students, to confront them with the above mentioned important factors of self-awareness and self-management. Students were not only invited to learn from experienced experts about helpful coping strategies but were also encouraged to openly discuss insecurities and fears with fellow students, which was thought to promote a climate of self-reflection and mutual support among the students. For that workshop, a special focus was set on psychiatric emergency situations and professional handling of agitated (and/or suicidal) patients. This was not only due to the experience with the topic of one of the involved departments, but also because it was believed that the interaction with a patient of that kind poses a special challenge for emergency doctors.

In line with this focus of the preceding workshop, the psychiatric emergency scenario of the training day seemed particularly suitable for a pilot study trying to investigate students’ self-awareness in highly stressful and emotionally overwhelming situations. The ability to adequately self-monitor one’s stress-level serves as a basis for subsequent self-regulation. To investigate that ability, students’ heart rate during the training scenario was compared to their perceived stress-level (before, during and after the scenario took place).

Preliminary analyses of the obtained data provide hints for a discrepancy between measured and perceived stress-level of the students. Similarly, there are indications, that students who participated in the workshop were better in self-monitoring their stress-levels and applying self-regulatory strategies.

#7526 : Not all massages are relaxing

Preferred format : ePoster

Authors:

Félix Manuel Domingo Serrano (1), Sergio Sánchez Ruiz (1), Eduardo Fernández Versteeg (1), Maria José. Jiménez Meléndez (1), Mercedes Fernández-Escribano Hernández (1), María Pilar Lozano García (1), Amor Gil Díaz (1), Jose Antonio Laperal Martín (1), Eulalia López Naharro (1)

1. Emergency, HGU Guadalajara, Guadalajara, SPAIN

Keywords: deep vein thrombosis, Paget Schroetter Syndrom

Abstract :

Our patient is a woman, 43 years old, with Fibromyalgia and anorexia, who is treated by Psychiatry, she hat secundary malnutrition. Her treatment is Trazodone, Aceclofenac, Pantoprazole, Venlafaxine, Clorazepate, Retinol, Lorazepam and topic Mometasone. She comes to Emergency Room because of a pain in her left shoulder with mechanic characteristics, which began several days before, and it persists in despite of NSAID that her doctor prescribed her in consultation, with the suspicion of an acute tendinitis. She suffers frequently back pains, that she treats with physiotherapy and osteopathy, and her last session happened 10 days ago.

She was hemodynamically stable, without fever, normal breath ratio, 100% O2 Saturation. There were no findings in chest and abdomen, but her left arm was clearly higher than the right one, from shoulder to the hand,, with collateral circulation. There was no pain in bones or ligaments, but the mobilization of the arm was painful.

In the blood tests, there were no alterations, except for Ddimer 0.77, so, with the suspicion of deep vein thrombosis (DVT), it´s made an ultrasonography exploration, and we found a DVT in left axillary and subclavian veins, so we began with anticoagulation and the patient was admitted in Internal Medicine to begin the study.

In Hospital, the collateral circulation and oedema were resuced with treatment. A TC was made, which showed an embolism in lower lung arteries of the right lung, without nodules or adenopathies. All the other tests were normal.

The upper extremities DVT is an uncommon entity (10% DVT). It could be primary, because of a compression of the subclavian vein or because of physical exercise (Paget Schroetter Syndrom), or secundary (catheters, pathmakers, cancer, hormonal cause, thrombofilic state, or direct injury). There are cases which happen after a physiotherapy or osteopathy session, as our patient. A pulmonary embolism must be searched (in despite that is more common in DVT of lower extremities).

In conclussion, we have to consider always a DVT diagnostic in a patient with pain and oedema in upper extremity, and knowing the Risk Factors for a sooner diagnostic.

#7527 : Design: Risk stratification with suPAR in emergency medicine (Triage III)

Preferred format : Oral presentation

Authors:

Martin Schultz (1), Line Jee Hartmann Rasmussen (2), Jesper Eugen-Olsen (2), Andreas Højrup Sandø Kristensen (3), Lars Simon Rasmussen (4), Lars Køber (5), Erik Kjøller (3), Birgitte Nybo Jensen (6), Lisbet Ravn (7), Theis Lange (8), Kasper Karmark Iversen (3)

1. , Herlev Hospital, Herlev, DENMARK
2. , Hvidovre Hospital, Clinical Research center, Hvidovre, DENMARK
3. , Herlev Hospital, dept. of Cardiology, Herlev, DENMARK
4. , Rigshospitalet, dept. of Anaesthesia, Copenhagen, DENMARK
5. , Rigshospitalet, dept. of Cardiology, Copenhagen, DENMARK
6. , Bispebjerg Hospital, Dept. of Emergency Medicine, Copenhagen, DENMARK
7. , Herlev Hospital, Dept. of Emergency Medicine, Herlev, DENMARK
8. , University of Copenhagen, Dept. of Public Health, Copenhagen, DENMARK

Keywords: Risk stratification, triage, biomarkers, suPAR, emergency medicine, acute patients.

Abstract :

Background: Risk stratification with systematic triage plays a pivotal role in the emergency setting, ensuring that acutely sick patients are cared for first and observed closest. Current triage algorithms serve as risk stratification tools in many emergency departments (ED) and are all based on a combination of the patients' vital parameters and primary symptoms. Several retrospective studies have identified biomarkers that contain prognostic information, which goes beyond the current triage utilized, and these studies suggests biomarkers as supplement to triage to improve risk stratification. Identifying patients at high and low risk shortly after admission can guide clinical decision-making towards the patients in need, regarding treatment, observation, and allocation of resources.

Whether the implementation of a prognostic biomarker in initial risk stratification of acutely admitted patients translates into better management and treatment and *actually* decreases mortality, morbidity, admissions or readmissions has yet to be shown.

Soluble urokinase plasminogen activator receptor (suPAR) is a biomarker with potential use in the EDs, as several studies have found it to be an independent predictor of 30-day mortality and adverse outcomes such as readmission, admission to ICU, and longer length of stay. The suPAR blood level reflects immune activation, and it is strongly associated with presence, prognosis, and severity of a broad variety of acute and chronic diseases, as well as being a predictor of disease development in the general population. Although unspecific, suPAR might be an ideal biomarker for risk stratification of unselected patients.

Study hypothesis: The main hypothesis is that the introduction, fast measurement, and immediate reporting of the suPAR level to the attending physicians in the EDs will enhance risk stratification and be associated with an absolute risk reduction in all-cause mortality at 10 months after inclusion by 1.5%. The suPAR level can draw attention towards patients with an unrecognized high risk, leading to improved diagnosis and treatment.

Method: The study is designed as an open cross-over cluster-randomized interventional multicenter trial. suPAR is included in the routine blood work of all eligible patients admitted acutely during the interventional period, measured within 2 hours after admission, and immediately reported to the treating physicians in the ED. Prior to the inclusion period, these physicians are educated in the prognostic capabilities of suPAR.

Results: The inclusion period began January 11th 2016 and ends June 6th 2016. The study aims to include 10.000 patients in both the interventional and control arm. Results regarding the primary outcome are expected to be presented in 2017.

Conclusion: The present abstract describes the design and rationale of the TRIAGE III trial. If our hypothesis is confirmed, strong considerations should be given towards standardizing prognostic biomarkers as routine blood work in relation to early risk stratification in the ED. The TRIAGE III trial has the potential to investigate the concept: Having prognostic information can change the patients prognosis. This concept is central in triage and several other clinical situations, and the study might therefore have a central impact on future clinical organizing and decision-making.

#7528 : Can lactate guide the indication for thrombolysis in ischemic stroke of uncertain onset?Preliminary study in Emergengy Department

Preferred format : Oral presentation

Authors:

Massimo Zannoni (1), Luca Follador (1), Gianni Turcato (1), Antonio Bonora (1), Giorgio Ricci (1), Valentina Serafini (1), Gabriele Taioli (1), Domenico Veraldi (1), Mariano Belloni (1), Francesco Buonocore (1)

1. Emergency and Intensive Care Department, University Hospital of Verona, Italy, Verona, ITALY

Keywords: ischemic stroke of uncertain onset, thrombolysis, ischemic stroke.

Abstract :

Background: Ischemic stroke is worldwide the second single cause of death and disability among adult population. Intravenous thrombolysis with recombinant tissue plasminogen activator (rtPA) is currently the only approved therapy ; however current guidelines restrict its use to a 4.5 hours maximum interval time from onset of symptoms to treatment (Onset -to - Needle Time , OTN). Consequently patients without known time of onset of symptoms, which represent up to 30% of cases of ischemic stroke , are today excluded from thrombolytic treatment. Various prognostic scores have been proposed to assess the stroke patient risk/benefit ratio of thrombolysis but there are no randomized clinical trials to demonstrate sufficient confidence for their clinical use. None of the proposed scores consider the role of lactate in the ischaemic process. In fact, lactates represent a marker of hypoperfusion and metabolic stress and nowadays they are rapidly available in emergency room.

Aims: evaluate lactate concentration, before thrombolytic treatment, as a prognostic marker for treatment choices in patients affected by ischemic stroke, especially those whose symptoms onset time is not available. According to the current guidelines those patients would be excluded from the potential benefits of a thrombolytic treatment. Lactate prognostic activity had been compared with the shock index, a a reliable and easy to use tool for the early identification of hypoperfusion.**Methods:** we retrospectively analyzed 190 patients admitted and treated with systemic thrombolysis for ischemic stroke in the Emergency Department of the University Hospital of Verona (Verona - Italy) from June 2014 to July 2015. Accordingly to onset, patients were divided in two groups: patients with clear stroke onset time (133) and patients with uncertain stroke onset time (57). Each patient had OTN time, lactate plasma concentration and shock index before systemic thrombolysis. Outcome, expressed as difference in the National Institutes of Health stroke scale score, was evaluated at admission and a week after the treatment.

Results: patients with uncertain stroke onset time and worse outcome had a significant higher lactate concentration (1.80 mmol/L; 1.30-2.36) compared to the same patients with unchanged or improved outcome (1.08 mmol/L; 0.97-1.59; p=0.018). We also observed, in the this group of patients, that high pre-thrombolysis lactate concentration significantly correlate with clinical deterioration a week after the treatment (p=0.018; AUC 0,718, IC 95%: 0,556 – 0,879). We found no difference in the patient group with clear stroke onset time. Instead index shock and poor outcome had a significant correlation (p = 0.023) in this patient group.

Conclusions: the present study point out the role of lactate as a useful prognostic marker in patients with ischemic stroke of uncertain onset. Lactates concentration, quickly obtained by arterial blood gasses analysis at patient arrival in ED point of care, could be useful in choosing thrombolytic treatment or not. Although the limitation of retrospective analysis and limited sampling of patients, the preliminary data of the present study point out hypoperfusion and its markers, lactate in example, a possible prognostic tool for outcome of systemic thrombolysis in ischemic stroke patients.

#7529 : Implementation of one Patient Safety Practice in two emergency service in Bogota - Colombia

Preferred format : Oral presentation

Authors:

LUIS ARCADIO CORTES-PUENTES (1), GERMAN DEVIA (2), GERARDO LINARES-MENDOZA (3), Carlos Hernan Camargo Mila (4), JENNY TORRES (2), MONICA BUITRAGO (5)

1. Departamento Emergencias FUNDACIÓN CARDIOINFATNIL -IC AND FUNDACION SANTA FE DE BOGOTA, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
2. Emergency Physician, HOSPITAL UNIVERSITARIO MAYOR, bogota, COLOMBIA
3. Departamento Emergencias, FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA - IDIMEC, bogota D.C, COLOMBIA
4. Jefe de Urgencias , FUNDACIÓN CARDIOINFANTIL INSTITUTO DE CARDIOLOGIA, bogota D.C, COLOMBIA
5. Emergency Physician, Fundación Cardioinfantil Instituto de Cardiologia, bogota, COLOMBIA

Keywords: Ultrasound, Central Venous Catheters, Patient Safety

Abstract :

Use of real-time ultrasound for central line placement is a Patient Safety Practice according the Agency for Healthcare Research and Quality. Despite this, in our country and in similar countries in Latin America this practice has not been widely implemented, additionally had been published the limited development of point-of-care ultrasound in the Emergency Departments in Colombia. However, our working group implements this Patient Safety Practice in two highly complexity hospitals in Bogota Colombia. To our knowledge, being the first Emergency Services to establish this Practice. In our work we describe the experience during de first year of implementation.

Objective
To describe the outcomes of implementing a Patient Safety Practice in two hospitals in Colombia

Methodology
Since January 2014 all central venous lines were placement guided by ultrasound, this Practice was implemented in the Emergency Department of Hospital Universitario Mayor - Mederi and Fundación Cardioinfantil in Bogotá Colombia. The Emergency Physician performed these procedures to critical patients admitted in the Shock and Trauma rooms. The following aspects were analyzed for each Procedures: reasons for venous central line placement, access site, number of attempts and complications.

Results

762 procedures were analyzed. The main reasons for the implantation of a central venous line were the presence of shock (56.3%), respiratory failure (12.5%), monitoring of critically ill patients (21.2%) and other causes in 10 % of the cases. Approximately 22% of patients were enrolled with INR greater than 3.0. The access sites were distributed as follows: right internal jugular: 73.5%, left internal jugular: 18.5%, right subclavian: 4%, left subclavian 0.8% and femoral veins 3.2%. Success rates according to the number of attempts were: at the first attempt; 88%, at the second attempt 9.3% and need for more than 2 attempts 2.7%. The complication rate was 1.4%: arterial punctures (5 patients), visible hematoma (6 patients), pneumothorax (7 patients), infections (3 patients).

Conclusion
Despite the limited use of point-of- care ultrasound in emergency departments in Colombia, our working group has succeeded implementing this Patient Safety Practice and the complications rate were lower than those reported in the literature. Our data support the benefits of implementation of this medical technology in other Emergency Departments in Colombia and in other countries with similar populations.

#7530 : Why I can walk suddenly?

Preferred format : ePoster

Authors:

Lorea de Unamuno Lumbreras (1), Verónica Parent Mathias (2), Cristina Pérez Olivares (1), Irina Yezerska Sushko (3), Pablo de Unamuno Lumbreras (4), Vanessa Carrasco Almagro (1)

1. general practitioner, Andalucian Health System, Málaga, SPAIN
2. emergency medicine, Andalucian Health System, Málaga, SPAIN
3. general practitioner, Centro Sanitario de Altos Cuidados Medinaceli, Soto de la Marina, Cantabria, SPAIN
4. , Andalucian Health System, Málaga, SPAIN

Keywords: Guillain-Barre syndrome, paralysis, diagnosis

Abstract :

Personal Background: Type 2 diabetes mellitus 4 years of evolution in treatment with metformin and insulin; chronic liver disease with portal hypertension and hypersplenism of 15 cm in currently etiology; mild thrombocytopenia.

History: 51 year old man, several hours after an abdominal CT performed with iodinated contrast, begin to notice difficulty with walking and sense of loss of strength in feet progresses symmetrically legs and the next day to upper limbs. As background he has had a respiratory infection about 10 days ago that improved with anti-inflammatory.

Exploration: BP: 125/90, HR: 65 lpm, afebrile. Predominantly distal symmetric tetraparesis. In upper limb reflexes present and symmetrical. Achilles reflex abolished. Surface sensitivity without deficit, abolished vibratory sensation in both lower limbs. Cerebellar tests nonassessable by paresis. Romberg test unstable, paretic motion that needs support.

Additional tests: blood count: hb 17, leukocytes 7000, platelet count 99,000; normal hemostasis; gluc 152, normal renal function, normal ions, AST 64, ALT 100, GGT 469, FA 131, TB 0.61. Cerebrospinal fluid analysis: leukocytes 1, protein 56.2, negative culture cerebrospinal fluid. Chest radiography: increased cardio-thoracic index without other findings. CT skull without significant findings. Electroneurogram and electromyogram: findings consistent with an axonal and motor polyneuropathy with signs of moderate-intensity of upper limbs and lower limbs intense demyelination.

Diagnosis: Likely polyneuropathy acute motor axonal neuropathy type (clinical variety of Guillain-Barre syndrome)

Treatment: he was admitted to the neurology and put treatment with corticosteroids and immunoglobulins.

Evolution: Good clinical evolution, although gradually. Recovery of strength and tendon reflexes, lower limb faster than higher.

Conclusions: Guillain-Barre syndrome is an autoimmune disease more common in men. In two thirds of cases there is an infectious history, predominantly of upper respiratory tract, 2 or 3 weeks before the start of the symptoms, but it has also been associated with other entities as toxic, allergic, immune, metabolic, after surgery, after childbirth or after a vaccine. It has three phases: progression, regression and stabilization, which usually completed in 3 to 6 months. 80% of patients fully recover or have small deficit, between 10 and 15% left with permanent sequelae and the rest will die despite intensive care.

#7531 : Study of different nonspecific neurological symptoms

Preferred format : ePoster

Authors:

Lorea de Unamuno Lumbreras (1), Verónica Parent Mathias (2), Irina Yezerska Sushko (3), Pablo de Unamuno Lumbreras (4), Vanessa Carrasco Almagro (1), Cristina Pérez Olivares (1)

1. general practitioner, Andalucian Health System, Málaga, SPAIN
2. emergency medicine, Andalucian Health System, Málaga, SPAIN
3. general practitioner, Centro Sanitario de Altos Cuidados Medinaceli, Soto de la Marina, Cantabria, SPAIN
4. , Andalucian Health System, Málaga, SPAIN

Keywords: meningioma, neurological symptoms, study

Abstract :

Medical history: Chronic venous insufficiency, insomnia. Treatment: lormetazepam 2mg, flunarizine 5mg and trimetazidine 20mg.

Anamnesis: 54 year old woman consults for presenting a year ago about holocraneal occipital headache oppressive dominance, memory loss, feelings of loss of strength. A few months ago she had an episode of dysarthria. She has also had several episodes of dysphagia. Dysphonia of nasal voice that worsens throughout the day. Rotary several episodes of dizziness, one of them is accompanied by self-limiting diplopia.

Exploration: normal language. Isochoric and normol reactive pupils, no nystagmus, no diplopia, visual acuity preserved. Normal cranial nerves, preserved gag reflex. Strength and sensitivity preserved. Something exalted tendon reflexes in all four limbs. Cutaneous plantar flexor left, right indiferente. No dismetria, negative romberg.

Additional tests: Blood test with normal biochemical blood count, normal vitamin B12, negative serology for syphilis and HIV. NMR skull: Voluminous extra-axial tumor suggestive of meningioma probably related to the right tentorium which occupies the back of the right side of the posterior fossa causing significant mass effect on the right cerebellar hemisphere, collapsing the fourth ventricle, displacing the brainstem in anteroposterior direction left side and also causing herniation of cerebellar tonsils.

Clinical Trial: Meningioma with mass effect.

Differential Diagnosis: The cerebral meningioma can be slow growing, so it may be years before they begin to manifest the more obvious symptoms, sometimes not even give any.

When a person begins to show some symptoms, usually an NMR is performed in order to detect tumor. Sometimes a biopsy of tumor tissue for greater certainty in diagnosis is necessary.

Treatment: The patient underwent surgery.

Evolution: Good performance, although the patient has clinical depression adaptive process.

Conclusions: The major difficulty in the diagnosis of these tumors is different symptoms that may occur, depending on size and location. In this case it was first thought of the existence of a demyelinating disease. In addition she had gone to consult over months on different symptoms until the sum of all these symptoms alerted.

#7532 : Accidental Ingestion of Digitalis Tea

Preferred format : ePoster

Authors:

Matt Edwards (1), Mathew Vithayathil (2)

1. Kings College Hospital Foundation NHS Trust, Kings College London, London, UK
2. Kings College Hospital Foundation NHS Trust, Emergency Department, London, UK

Keywords: toxicology, cardiology, diagnosis

Abstract :

It is not surprising that there are frequent cases of mistaken identity when amateurs decide to pick their own wild flora herbal remedies. It is also not common for these mistakes to be life-threatening. We present here a case of life-threatening accidental toxic ingestion in an urban environment.

Wild Comfrey (Symphytum officinale) grows in the UK and throughout Europe and temperate Asia. It is frequently used in herbal remedies brewed into a tea and has throughout history been thought to treat many ailments. It was actually named after its supposed ability to assist in bone healing (Greek symphis – the growing together of bones). Unfortunately, during Spring in particular, the thick leaves are very difficult to distinguish between Comfrey and the foxglove (Digitalis purpurea) the plant from which the cardiac glycoside, digoxin is extracted. Reviewing the literature this appears to be a more common problem in China where herbal medicine is more common. It is illustrative to examine the pictures of both plants.

Case report

MM a 53 yr old female presented to the Emergency Department complaining of 12 hours of severe lethargy and feeling presyncopal on standing. The patient had no prior comorbidities but had been suffering from insomnia and was advised by a friend to try a herbal tea made from Comfrey at night. MM duly picked the leaves as instructed and ingested the brewed tea in the evening.

MM was bradycardic at a rate of 40 to 70 and without heamodynamic compromise. Her ECG (shown here with patient consent) showed Mobitz type 2, second degree heart block with t-wave changes consistent with digoxin effect. Her serum digoxin level was 5.3 µmol/L (therapeutic range for digoxin is 1.2-2 µmol/L) and normal potassium.

Not all hospitals stock supplies of the Digoxin antidote, digoxin binding antibodies, and so there were significant delays acquiring the therapy. During this period the patient remained stable while supine without deterioration or improvement in her brady-arrhythmia. Following treatment with ‘Digi-fab’ the patient was in sinus rhythm by the next morning.

Discussion

It is frequently easy to forget that in our urban environment that the wildlife can still be dangerous. This case report serves to highlight a few useful lessons: -

- It would have been easy to miss or dismiss the herbal remedy part of the history, believing the patient had another cause of new onset arrhythmia.

- Homemade ‘herbal remedies’ are not as benign as many believe. Especially when the identification and preparation is so easy to get wrong. It is also impossible to know what dose the patient has had.

- Procuring digoxin binding antidote frequently takes prolonged period in the UK as it is not always stocked locally.

#7533 : Sweet syndrome. A case report.

Preferred format : ePoster

Authors:

Lorea de Unamuno Lumbreras (1), Verónica Parent Mathias (2), Vanessa Carrasco Almagro (1), Pablo de Unamuno Lumbreras (3), Irina Yezerska Sushko (4), Cristina Pérez Olivares (1)

1. general practitioner, Andalucian Health System, Málaga, SPAIN
2. emergency medicine, Andalucian Health System, Málaga, SPAIN
3. , Andalucian Health System, Málaga, SPAIN
4. general practitioner, Centro Sanitario de Altos Cuidados Medinaceli, Soto de la Marina, Cantabria, SPAIN

Keywords: sweet´s syndrome, diagnosis, treatment

Abstract :

Medical history: dyslipidemia, hepatic steatosis, lumbartrosis, depression, insomnia. Regular treatment: venlafaxine, mirtazapine, midazolam.

History: A 61 years woman consults for two days appearance of painful skin lesions that are spreading and increasing in size. She refers not taking medication differently than usual in previous days.

Exploration: She presents different scattered lesions, papules, pustules, vesicles clustered with pale center, some lesions with erythematous halo and thickening of subcutaneous tissue. In inner corner of left eye presents a hyperemic injury and upper eyelid edema.

She starts antibiotic treatment with amoxicillin-clavulanic on suspicion of bullous impetigo. The next day she suffers worsening of injuries, chest pain and fever of 38 ° C so she is derived to emergency to expand study.

Additional tests: Blood count: hb 14.9,leukocytes 12.290,platelet count 275,000,elevated erythrocyte sedimentation rate, normal hemostasis, normal biochemistry. Chest radiography without pathological findings.

Diagnosis: Sweet's Syndrome

Differential diagnosis: Stevens-Johnson Syndrome, toxicoderma, erysipelas, skin lesions of Behcet's disease, other neutrophilic dermatosis (atypical gangrenous pyoderma, neutrophilic hidradenitis, the bypass intestinal syndrome), vasculitis (erythema elevatum diutinum) and erythema nodosum may pose problems of differential diagnosis, both clinically and histopathology.

Treatment: 50 mg prednisone downward pattern.

Evolution: Initially she was treated with antibiotics and then with antiviral (brivudine) because of suspected impetigo and herpes lesions. This made she had poor outcome with worse injuries. Later she was valued by dermatology with diagnosis of Sweet syndrome and after initiation of corticosteroid therapy the lesions were regressing to the total disappearance.

Conclusions: The pathogenesis of Sweet's syndrome is unknown. The importance of this syndrome lies in its associated diseases or triggers and which is classified into five groups: idiopathic, para inflammatory, paraneoplastic, drugs related and associated with pregnancy. The extracutaneous clinical sometimes presents complicated practical assessment of it because it is not easy to differentiate if the affected organ is the cause or part of it. The clinical response to oral glucocorticoids is so fast that is a clinical judgment. Other treatments are potassium iodide and colchicine. Although the response is quick, recurrences are common. It is also important research and treatment of possible underlying process.

#7534 : Child abuse and neglect in the emergency department of a northern Taiwan community hospital

Preferred format : ePoster

Authors:

Po-Sheng Chih (1)

1. Department of emergency medicine, Department of community medicine, En Chu Kong hospital, New Taipei City, TAIWAN

Keywords: Child abuse and neglect

Abstract :

Background:

Emergency department(ED) is one of the most important port for child abuse and neglect (CAN) victims to seek medical attention. As CAN would recur, an ED mandatory CAN report system was implemented in Taiwan in a hope that timely intervention can prevent avoidable mishaps. Though previous studies revealed that nursing training in CAN reporting may not be adequate, the efficacy of the report system was not widely reported. The purpose of the study was to explore the demographic characters of CAN cases reported from the ED of a northern Taiwan community hospital. The compliance of ED nurses-oriented report was examined.

Methods:

Child abuse and neglect (CAN) cases who presented to the ED of a northern Taiwan community hospital in 2015 were retrospectively examined. The report was either by a social worker or by an ER nurse. During office hour, while the patients with suspected CAN being evaluated in the ED, the social worker will be notified to come to the ED and evaluate the patients. The CAN report will be completed with 24 hours. When the patients presented during the hours when social workers are usually not on service, the ED nurses will complete the report as the system required.

Results:

The CAN reported cases numbers in 2015 was 93. Compared to the annual patients visit number of 60,458 in the same year, the CAN repot cases constitute only a small fraction of total visits. Among the victims, 57 cases (61%) were male, while 36 (39%) of them were female. The age distribution spanned all the pediatric group, yet almost half of the patients (49%) were younger than 6 years old. Thirty-five cases (38%) were reported by ED nurses, while 58 cases (62%) were reported by social workers. The report form compliance, either by ED nurses or social workers, was satisfactory.

Discussions:

Child abuse and neglect (CAN) is a serious threat to the children and the whole society. It carries not only immediate mortality and morbidity to the victims, the long term negative impact may be even difficult to estimate. The study revealed satisfactory CAN report compliance by both ER nurses and social workers. However, it is far from concluding that the current report system was satisfactory. It can be easily identified that if the symptoms and signs of a CAN case is missed in the front line, the social worker and even the report mechanism will not be activated. Although the magnitude of missed CAN cases is difficult to assess, these vulnerable patients deserve more of our devotion.

#7535 : Emergency medical system and emergency department: role of protocols in critical patient emergency treatment

Preferred format : Oral presentation

Authors:

Massimo ZANNONI (1), Gianni TURCATO (2), Alberto RIGATELLI (3), Valentina SIVERO (2), Domenico VERALDI (3), Mariano BELLONI (3), Francesco BUONOCORE (3)

1. Emergency and Accident Department, Azienda Ospedaliera Universitaria Integrata, Verona (VR), Italy, VERONA, ITALY
2. Postrgraduate Emergency School, University of Verona, VERONA, ITALY
3. Emergency and Accident Department, Ospedaliera Universitaria Integrata, Verona, VERONA, ITALY

Keywords: critical care, protocol, emergency medical system, emergency room

Abstract :

Background: Emergency medical services (EMS) transport is expensive, and resource consuming. On the other hand a close collaboration between EMS dispatch center and receiving hospital in paramount to not collapse the receiving hospital. On the other hand in-hospital emergency response vary significantly among medical centres influencing patients outcome. The Medical Emergency Team (MET) was developed in order to rapidly manage critical ill patients at risk of cardiac arrest or high-risk conditions.

OBJECTIVES: The aim was to characterize the EMS and hospital response system for critical patient in the Emergency Department of Verona (Italy), hub centre of the county. In our Emergency Department Shock room and MET system activation is based on established clinical anatomical criteria or situational dynamic criteria of the event as described by the EMS Dispatch Center.

METHODS: This was a retrospective analysis of critical patients who were transported by EMS to the level II Emergency Department in Verona from January 2015 to December 2015. We included all trauma and no traumatic critical patients treated in the Shock Room accordingly the activation criteria. Patient, clinical characteristics and acute outcome are reported.

RESULTS: During the study period 1,054 critical patients, full filling the activation criteria, were admitted to the Emergency Department and managed by the MET in the Shock Room. Mean age was 65. years (SD 22.1), gender distribution was 41,7% male; 58,3% female and trauma patients accounted of 248 (23.5%). Mean treatment time was 300' (SD 395.9'). Outcomes analysis pointed out 39 fatalities (3.7%), 135 (12,8%) discharged home and 880 (83.5%) admitted. Only 196 (44.6%) of these patients needed admission to Intensive Care Unit.

CONCLUSIONS: Better recognizing which patients with falls and penetrating trauma have serious injuries that could benefit from being flown may lead to the more cost-effective use of helicopter EMS. More research is needed to determine why patients without insurance, who are most at risk for high out-of-pocket expenses from helicopter EMS, are at higher risk for being flown when only having minor injuries.

Results: The study shows two critical points in the management of critical patients: the high rate of patients discharged home and the reduced rate of Intensive Care Unit admission. A reading key could be the activation criteria based mostly on EMS Dispatch Center information and a scoop and run working system on the site. Such criteria have to be reviewed in order to better target those patients who will need advanced resources. This has a pivotal relevance in a medical emergency system overwhelmed but with reduced resources. This suggests that interventions to optimize cost-effectiveness resources utilization will likely require an evaluation of EMS-ED shared protocols in the context of provincial and patient needs.

#7536 : Seizures management in emergency department

Preferred format : ePoster

Authors:

Walid Mhajba (1), Mohamed ali Cherif (2), Farah Riahi (1), Mohamed Mezgheni (3), Rim ben Kaddour (1), youssef zied El hechmi (2), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. service des urgences, hôpital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Seizures ,management, ED

Abstract :

Introduction: seizures are quite common grounds for emergency consultation, knowledge of their causes and their prognostic factors could improve their support. The objective of our study is to describe the aspects of epidemio-clinical, etiological, therapeutic and prognostic seizures admitted to emergency.

Methods: Retrospective study including all patients hospitalized in the ED who consult for a seizure between January and December 2015

Results: 111 topics have been collected with a median age of 63 and a sex-ratio to 1.71

30.6% of our patients had a neurological history type of ischemic stroke.

The crisis was accompanied in 88.3% cases with seizures generalized in 60 patients the diagnosis of poorly convulsive was retained in 28 patients.

All patients received a clinical examination, a biological assessment, an electrocardiogram and a brain imaging was made in 95% of cases. An electroencephalogram has been practiced in 13 cases and the lumbar puncture in 10 cases. Vascular pathology remains the most common etiology in 38.7% followed by epilepsy in 10.8%.

Initial coma was found in 34 patients as well as a post deficit critical in 22.5%. Main associated failure was respiratory order associated especially with pneumonia of inhalation with use of intubation in 10 patients.

The mortality rate was 18% and antiepileptic treatment in the long course at base of phenobarbital was introduced in 52% of the patients.

Conclusion: a seizure requires a rapid and adequate support guided by a pre-established therapeutic protocol that should not neglect the etiological treatment associated with the symptomatic in support.

#7537 : ASCITES IS NOT ALWAYS FROM A CAUSE DIGESTIVE

Preferred format : ePoster

Authors:

María Teresa Fernando Gros (1), Patricia Boned Blas (1), María Pilar Poveda Serrano (1), Rocío Escriche Ros (1), Alicia Baguena García (1)

1. Emergency department, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Ascites, Edema, Cardiomyopathy dilated

Abstract :

Medical history:
Male 72 years old witha history of atrialfibrillation, severeaorticinsufficiency and hypertension treatedwith anticoagulantsandACE inhibitors, which came due to have increasedtheirabdominal perimeterandoliguriainthe previous two weeks. Blood presure 105/85,157bpmheart rate,tachypneic. Flapping++.IY+AC:panfocalrhythmicsystolic murmurgradeII-III.AP:hypophonesiswidespread. Abdomen:globular,significant increase inabdominal circumference,signwave+.peneoescrotaledema.EEII:edemawithfovea+tothigh.Analytical:2.3ureacreatinine119regularrest.AcxFAECG157. Bilateralpleural effusiononchest X-ray. Due to an importantpenoscrotaledemaand presentinginability tobladdercatheterization, bladder size was carried out despite beinganticoagulated, because of this punctureascitic fluid was discarded. Treatment was initiatedwithSegurilat maximumdoseand Digoxin, and as oliguria and elevated heart rates persisted was necessary to add Amiodarone to the treatment. InEchocardiographywas observed dilated cardiomyopathywith severe systolicdysfunctionand ejection fractionof 45%. Moderate mitral regurgitation. Moderatepulmonary hypertension. Having suspicions of dilated cardiomyopathy andAnasarca, he hospitalized in Cardiology,wherecontrolEchocardiographywas performedat 24 hoursobjectifyingserious deteriorationwithejection fraction20%and significantpericardial effusion. Severe pulmonary hypertension. Severe mitral-aorticinsufficiency. Because ofthe poor performanceand poor generalcondition of the patient, the family agreed alimitationof the therapeutic effort, passing awaya few hours after.
Conclusion:
Dilated cardiomyopathy isa disease of theheart muscle thatcauses theheart becomes enlarged and cannot pump blood efficiently. The causesare uncertainand varied:viral, autoimmune, alcohol abuse,coronary artery disease, hypertensionand valvulardisease, which may triggerheart failure and, inthe worst case, may becongestive causing edema, pleuraleffusion, ascitesandanasarcainfinal stages. The most reliable diagnostic test is the echocardiogram and the treatmentis based onthecontrol of heartrate and blood pressureanddiuresisreinforcement. In very advanced cases orwhen there are severe arrhythmias, themost appropriateoption is usuallycardiactransplantor placement ofICDs. The probabilityof deathin the final stagesis high.

#7538 : PSYCHOMOTOR AGITATION BY SEVERE HYPONATREMIA

Preferred format : ePoster

Authors:

María Teresa Fernando Gros (1), Patricia Boned Blas (1), María Pilar Poveda Serrano (1), Alicia Baguena García (1), Rocío Escriche Ros (1)

1. Emergency department, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Hyponatremia, Brain edema, Syncope

Abstract :

Medical history:
71 year old woman with a history of hypertension, dyslipidemia and depressive syndrome, treated with Enalapril, Rivotril and Deprax. Since 4 days ago Hidrocliorotiazida is added to treatment due to a poorly controlled
hypertension. She come to emergency department for loss of consciousness without prodromal symptoms and spontaneous recovery, with subsequent post-traumatic headache. On examination; bradipsiquica, oriented in time and space, with no apparent neurological deficit. Normalauscultation. The clinical analysis objectifies plasma sodium 124meq / l, ECG and Rx compatible with standard chest. The patient is transferred emergency room observation unit where presented episode of disorientation, agitation and subsequent muteness. Glasgow 6-4-0, complete aphasia. Control analysis; sodium 117 meq / l. Due to worsening clinical, a cranial CT scan is performed which gave normal results and then we proceed to correct cranial hyponatremia. Due to persistentsymptoms andworsening in agitation, which Midazolam IV needs to be administered, it is performed lumbar puncture giving normal results and normal thyroid hormones, and ruling out encephalitis and subarachnoid haemorrhage and myxedema coma. Begun sodium correction slowly following formulaand administration ofhypertonic saline3%, she is transferred to intensive care unit with suspected secondary brainedema (although not objectifies by cranial CT) and severe hyponatremia and thiazides. Thepatient evolves positively after that is moved toplant and discharged with normal sodium levels.
Conclusion:
Hyponatremiais the most commondisorderhydroelectric inside and outside hospitals so knowingyourdiagnosis and treatmentis very necessary. For thisis sufficientfirstdeterminingplasma sodiumvaluesbelow135 mmol\l(meq\l). Once confirmedhyponatremia,in mostcasesbe enough withan accurate medical historyto reach theetiological causetrigger. It is alsoimportant to know andcalculate theextracellular volumeto discern betweennormovolemic or hypovolemic hyponatremia, since theetiologiccause andtreatment may vary. Suchtreatment should be aimed atcorrecting themain causeand the establishment,in each case, of the correctfluid therapy. Onlyseverehyponatremiaare associated withneurological symptomsand should be treatedurgentlybythe risk ofcerebraledemaandencephalopathy.

#7539 : Introduction Of A New Terminology: Acute Life Threatening Pulmonary Embolism (ALTPE)

Preferred format : ePoster

Authors:

Lubna Ghali Amin Andraous (1), Alhady Alfian Yusof (1)

1. Emergency Department, Hamad General Hospital, Doha, QATAR

Keywords: Acute Life Threatening Pulmonary Embolism(ALTPE), Masssive Pulmonary Embolism (PE), Sub-massive Pulmonary Embolism (PE), Bedside Echocardiogram, Right Ventricular (RV) Dysfunction, Thrombolysis, Computed Tomography Pulmonary Angiogram(CTPA)

Abstract :

Introduction:

Pulmonary Embolism (PE) is an important cause of morbidity and mortality. Currently, Thrombolytic Therapy is reserved for cases of Massive PE when patients are hypotensive.[1] The definition, diagnosis and management of Sub-massive PE is debatable. It relies on clinical characteristics, cardiac imaging, cardiac bio-markers, and possibly assessment of clot burden by CT scan.[2] Patients may present with a variety of symptoms (chest pain, dyspnoea, dizziness, collapse, syncope, palpitation, seizure, cardiac arrest, etc). Low Molecular Weight Heparin (LMWH) administered and Computed Tomography Pulmonary Angiogram (CTPA) is requested based on clinician's index of suspicion. There is still a debate whether Sub-massive PE cases should be thrombolysed. [2]

Methods:

1.To introduce the new term "**Acute Life Threatening Pulmonary Embolism**" **(ALTPE)**.

2. To report cases of ALTPE presented to Hamad General Hospital (HGH) Emergency Department (ED), who were thrombolysed despite of being normo-tensive.

3.To propose a Policy/Protocol for early management of possible ALTPE presenting to Emergency Department (ED)

Results:

We present here the clinical findings that we propose, should trigger the consideration for thrombolysis, in cases of proven PE on Computed Tomography Pulmonary Angiogram (CTPA). **We define patients with any one of these criteria as having ALTPE:**

1. Hypotension (on presentation or ongoing), defined as systolic blood pressure (SBP) < 90mmHg or ≥40mmHg drop from baseline SBP and not caused by sepsis, hypovolemia or anaphylaxis [1]

2. Need for inotropes or vaso-pressors[1,3]

3. Respiratory distress/Oxygen dependence [2]

4.Persistent tachycardia/ Arrhythmias/ Right Ventricular (RV) strain pattern on Electrocardiogram ECG [4]

4. Signs of Right Ventricular (RV) Dysfunction on Echocardiogram[5]

6. Signs of end-organ hypo-perfusion (decrease level of consciousness, oligurea,increased lactate..)[5]

7. Syncope (on presentation or ongoing symptoms)[6]

8.Symptoms that are provoked or worsen with minimal exertion

Conclusion:

We propose that all PE patients that are considered for thrombolysis, to be re-categorized in one subgroup **called ALTPE (in correspondence to the above mentioned criteria)**. This group of patients, should have a standardized rapid work-up plan & a pre-planned management strategy in case of rapid deterioration. We recommend the establishment of Emergency/Critical Care protocol for the management of ALTPE. Further research studies & audits are needed to determine the safety, effectiveness, and outcome of this strategy.

Acknowledgment:

The authors declare no conflict of interest.

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#7540 : Patterns for pre-hospital emergencies in Romania

Preferred format : ePoster

Authors:

Marius Smarandoiu (1), Alin Canciu (1), Denisa Falamas (1), Dania Lunca (1), Daniela Taran (2)

1. SMURD, SMURD Sibiu, Sibiu, ROMANIA
2. , SMURD, Sibiu, ROMANIA

Keywords: mathematics, patterns, pre-hospital, SMURD, Romania

Abstract :

BACKGROUND

Current days, Emergency Medicine field is characterized by interdisciplinarity. Abstract sciences like Mathematics provide powerful tools to predict optimize and allocate sufficient resources to meet the needs in staff and equipment. The current staffing and resources allocation method for Romanian EMS and other countries in Europe is mostly static. Our goal is to find a tool that can be used approach to improve this process by finding a pattern and predict the needs.

Typical medical cases patterns are successfully identified in emergency medicine. Starting from the logical assumption that during special occasions like public holidays or religious fasting, the number of emergency incidents rises, and as a result an extra number of ambulances are required to meet the expectations.

The purpose of this study is to propose a functional mathematical model based on main events in time associated with the need for extra MICU resources. A correct prediction model could allow a more efficient way of ambulance distribution, based on necessity.

METHODS

Source data for this study is Romanian SMURD national database, comprising of 900.000 cases for a period of 4 years. The quantity of emergencies addressed by EMS is calculated for main types of emergencies correlated with important social events.

RESULTS

National holidays generate an increase of the number of all types of emergencies. Medical cases involving toxic increase by **40%** (we speculate to be ethanol consumption), trauma by more than **10%**, involving aggression and road accidents. False alarms multiply as well.

The pattern is during religious fasting. Toxics cases increase by **a quarter** followed by cardiovascular afflictions with **19%** and other pathologies by **15%.** Neurological and trauma cases are significantly higher.

Amazing results are characterized by periods with school holidays when most incidents of all types significantly decrease.

CONCLUSIONS:

Using the right mathematical model bring the possibility to predict a pattern change of medical incidents based on contextual events like holidays or special events etc.

Current planning approaches of medical resources based on assumptions or heuristics ways may not always meet all the needs and each information about possible predictable behavior will bring an increase of efficiency. Everywhere in the world Emergency Medicine is expensive and a good allocation of resources based on needs will reduce the costs without affecting the quality.

#7541 : A New Immunomodulatory Drug, A New Adverse Effect; Adrenal crisis

Preferred format : ePoster

Authors:

Funda Karbek Akarca (1), Ozge Can (1), Sercan Yalcinli (1), Yusuf Ali Altunci (1)

1. Emergency Department, Ege University School of Medicine, Izmir, TURKEY

Keywords: Nivolumab, immunomodulatory, checkpoint modulator, immune-related side effects, adrenal crisis

Abstract :

Background: Owing to the advancements in medicine, almost everyday, new information is obtained regarding cancer, and new antineoplastic agents are developed. Frequent use of these new pharmacological agents because of their promising properties propels emergency physicians to be vigilant about their side effects. We present a case of adrenal crisis in a patient with non-small cell lung cancer (NSCLC), caused by nivolumab, which is an immunomodulatory drug.

While adverse events are related to other immunomodulatory drugs have been reported in literature, our case is the first nivolumab-related adrenal failure to be reported.

Case: A patient with lung cancer presented to the emergency room(ER) with nausea and vomiting. The patient also had a seizure in the ED. Hyponatremia, hyperkalemia, persistent hypoglycemia led to the diagnosis of adrenal crisis. The patient was admitted into the ICU and externated after successful treatment.

Discussion: Immunomodulatory drugs are lately popular among new anticancer treatment agents. Having direct effect on the immune system, these drugs were claimed to be highly reliable and were chosen as the drug of the year in 2013. However, there is no reliable data on the side effect profile of these agents. In order to ensure early diagnosis and treatment of these cases, it should be kept in mind that life-threatening auto-immune reactions may occur, even though most side effects are mild.

#7542 : FROM GALLSTONE TO BILIARY ILEUS

Preferred format : ePoster

Authors:

María Teresa Fernando Gros (1), María Pilar Poveda Serrano (1), Patricia Boned Blas (1), Alicia Baguena García (1), Rocío Escriche Ros (1)

1. Emergency department, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Ileum, Lithiasis, Multiple organ failure

Abstract :

Medical history:

Woman 71 years old without RAM, with AP HTA, DLP, type 2 diabetes mellitus. Possible asymptomatic cholelithiasis diagnosed 10 years ago and untreated. Current treatment with metformin, furosemide and simvastatin. She went to hospital emergency rooms due to recurrent vomiting, chills and malaise. In clinical analysis highlights leukocytosis 16000 / mm3 and Cr 1.85 mg / dl. After hydration, omeprazole and antispasmodic, improved and is discharged the next day diagnosed with gastroenteritis, type 2 renal failure to dehydration and diabetic ketoacidosis. She came back 4 hours later by intense malaise and vomiting fecaloid appearance. Blood pressure 155/95, heart rate 120 lpm, SaO2 95%, Tª 36.2ºC. Preliminary examinations indicate a distended abdomen, not painful on palpation, soft and depressible, tympanic, without other signs of peritoneal irritation, no masses and organ enlargment noted. Rectal examination without findings. In the AS highlights: Glucose 323, Cr 1.65, 17.80 and PCR Leukocyte 16800 / mm3. Abdominal radiography: intestinal pneumatisation. Abdominal CT: Mass gastric dilatation, SNG well placed. Severe intestinal dilatation with abrupt change of gauge in right flank region (at that level, impacted gallstone, probably vesicular origin). Normal colon structure. Collapsed bladder. Aerobilia in left hepatic lobe. Absence of free liquid or extraluminal air. Summary: intestinal obstruction, likely gallstone ileus. Surgical emergency was performed under general anesthesia (longitudinal enterotomy and stone removal). The patient had a poor postoperative course, having to be operated on again due to the sutures dehiscence and evisceration, during which carries an aspiration of gastrointestinal contents. Admitted to the intensive care unit where severe type 2 respiratory failure evolves to aspiration, septic shock and irreversible multiple organ failure.

Conclusion:

Gallstone ileus is a digestive disease that often goes unnoticed, sometimes interpreted as biliary colic or cholecystitis, making its diagnosis difficult. Complications and mortality are related to the time of evolution and the patient's condition, because of its high percentage we must be alert to the warning signs that can make us suspicious in the box and act in the shortest possible time.

#7543 : The Stage Role of Electroencephalography in Diagnosis of Emergency Department Patients

Preferred format : Oral presentation

Authors:

Funda Karbek Akarca (1), Ayse Guler (2), Tanzer Korkmaz (3), Yusuf Ali Altunci (1), Gulsum Saruhan (2), Ayçin Yıldız Tabakoglu (2), Ibrahim Aydogdu (2)

1. Emergency Department, Ege University School of Medicine, Izmir, TURKEY
2. Neurology Department, Ege University School of Medicine, Izmir, TURKEY
3. Emergency Department, Izmir University, Izmir, TURKEY

Keywords: Electroencephalography, emergency diagnose, seizure

Abstract :

Background: Electroencephalography (EEG) has been using for the differential diagnose of patients with consciousness problems in neurology practice. Our aim was to evaluate the role of EEG records which were applied to emergency department patients with seizure (first or frequent) and/or changes in consciousness in last three years.

Material and Method: The EEG reports of emergency department patients with seizure (first or frequent) and/or changes in consciousness in last three years included to study and evaluated retrospectively.

Results: We included 284 patients who had EEG reports. There were 70(24.6%) patients diagnosed as epileptic abnormal patterns and 8 (0.2%) were nonconvulsive status epilepticus. Totally of 284 patients, 67 (23.5) of them hospitalized to neurology ward.

Conclusion: EGG can be a pathfinder as a useful method for the differential diagnose and the medication of emergency patients with first seizure.

#7544 : Learning from clinical incidents that occur in English emergency departments

Preferred format : Oral presentation

Authors:

Sally-Anne Wilson (1), Emma Redfern (2)

1. , None, Leeds, UK
2. , None, Bristol, UK

Keywords: incidents, mortality

Abstract :

Patient safety incidents that could have or did harm a patient receiving NHS funded care should be reported so they can be learnt from on a local and national level. All NHS trusts in England routinely share the incidents reported to them by uploading them to the National Reporting and Learning System (NRLS). The Royal College of Emergency Medicine (RCEM) examines the reported incidents that relate to care within Emergency Departments.

In the first half of 2015, there were 61 448 incident reports coded as from Accident and Emergency. This represents just 0.9% of all attendances at type 1 Emergency Departments in England. The incidents resulting in severe harm or death are a small proportion of the data (0.4% and 0.2% respectively). The average age of patients involved in an incident was 63 years.

Incidents leading to death: The strongest theme to come out of the analysis is that of abdominal pain, especially in the elderly. These accounted for 20% of all the deaths. The other worrying themes were the lack of/inadequate monitoring of patients, at times specifically as a result of crowding (18% of cases).

Severe Incidents: The most common themes were falls in the ED (18% of ED severe incidents), crowding/exit block (16%), unsafe transfers (11%), and failure to adequately monitor patients or review results (10%). On a more clinical theme, abdominal pain cases was the cause of serious incidents in 9% of cases, stroke/TIAs in 7% of cases, and missed trauma (including neck of femur fractures and cervical spine fractures), in the elderly was the cause of severe harm in 6% of cases.

Sharing short clinical vignettes serves to demonstrate some of the themes and highlights areas where improvement is needed. The incident data informs the work of the RCEM safety committee, and also aids the direction of RCEM national audits and guidance documents.

#7545 : An interesting case of chicken pox in the elderly with Intestinal perforation and Prevertebral abscess

Preferred format : ePoster

Authors:

vetrivel ramar (1), irfan abdulrahman sheth (2), faizur rahman mohamed madeena (2), evelyn wong (3)

1. Resident Physician,A&E, singapore general hospital, singapore, SINGAPORE
2. Resident Physician, singapore general hospital, singapore, SINGAPORE
3. head of the department, singapore general hospital, singapore, SINGAPORE

Keywords: chicken pox,intestinal perforation

Abstract :

INTRODUCTION

Chicken pox also known as Varicella is a highly contagious disease caused by Varicella Zoster Virus(VZV).
It is an uncommon inefction presenting in the elderly population which has more morbidity and mortality.
This case report is to present one such interesting clinical presentation of an elderly man with chicken pox and a set ofunusal clinical findings.

CASE PRESENTATION
A 64 yr old chinese male was brought in by the family to the fever zone of the hospital with c/o vesicular rashes
and lowerlimb weakness for the past 3 days.
Pt was appropriately triaged and was isolated in the fever area of the emergency department.
Patient had no past medical issues.His weakness had started simulataneously in thelower limbs overpast week
and progressively worsened to the extent he needed assistance to walk.

Physical examination revealed widespread vesicles over the limbs.
Neurological examination was significant for power 0/5 both lower limbs and 4/5 both upper
limbs.Pt was insensate below T2 sensory level and lax anal tone along with mild
tenderness in the RUQ.
x rays revealed opacity in rightlung apex and free air under the right hemidiaphragm.
Pt was hypotensive on arrival from radiology and was uptriaged to resuscitation room and found tobe in ?spinal shock.
Urgent CT-Abdomen and pelvis showed Pneumoperitoneum - site of perforation was likely greater curvature/fundus
of the stomach.He had bilateral psoas abscess with presence of gas within the fluid collection.
MRI cervical spine was done which showed C5-6 discitis with a large prevertebral abscess extending from C2 to T3.

Resulting mass effect contributed to central canal stenosis with possible cord compression at c5-6 and c6-7

CLINICAL COURSE IN HOSPITAL

Pt underwent exploratory laparotomy and omental patch repair noted to have perforated D1 anterior duodenal ulcer of abouut 4cm diameter.
Pt developed refractory hypotension post operatively and required triple inotropes and
activation of massive transfusion protocol.
Repeat CT showed ?subcapsular bleeding form liver and haemoperitoneum.Pt underwent another exploratory laporotomy and splenectomy.
Patient underwent ACDF-anterior cervical discectomy and fusion for prevertebral abscess extending from C3 to T1.
pt also underwent percutaneous drainage of psoas abscess .
His hospital stay was further complicated by disseminated MSSA bacteremia and tracheostomy .

DISCUSSION

Chicken pox a common childhood disease is more severe in adults. This is because a key immune response – cell-mediated immunity
weakens with age.
This can lead to complications which are potentially fatal, especially among the elderly.
Presentation of multiple significant clinical findings in a previously healthy person should alert the physician about the likelihood of
immunocompromised states.

CONCLUSION
Chicken pox in elderly is a rare pesentation in A&E. So it is pertinent for a doctor in A&E to be extra vigilant while handling such patients
It can lead to complications like Pneumonia and Encephalitis.
A high level of suscpicion and thorough investigations in patients of this group may benefit from early interventions and hence better outcomes.

#7546 : Hygiene in the emergency medical services – A systematic review.

Preferred format : Oral presentation

Authors:

Heidi Storm Vikke (1), Matthias Giebner (2), Hans Jørn Kolmos (3)

1. Head of Department (research), Falck Danmark, Medical Department, Kolding, DENMARK
2. Medical director, Falck Danmark, Medical Department, Kolding, DENMARK
3. Professor, Department of Clinical Microbiology, Institute of Clinical Research, University of Southern Denmark, Odense University Hospital, Denmark., Odense, DENMARK

Keywords: Hygiene, infection control, compliance, prehospital, emergency medical service, EMS

Abstract :

Introduction Infections caused by microbial contamination in healthcare settings result in increased morbidity, mortality and economic burden. Hygiene in the emergency medical service is challenged due to the non-static environment with limited access to cleaning equipment etc. The personnel are working in varying environments e.g. retirement homes, industrial farms or at roadsides after a car incident, often with little time to prepare the acute care and treatment. In addition, continually patient courses lead to limited time to clean and prepare the ambulance in-between patient courses, thus posing a risk of transferring infection. Knowledge of bacterial contamination in environment, on medical equipment and the personnel and related challenges is therefore substantial, thus future hygiene interventions can be organized and effectuated according to evidence (1, 2). The aim of this review is to create a systematic summary of the current evidence concerning hygiene in the emergency medical service focusing on 1) environmental contamination, 2) cleaning interventions and 3) personnel compliance. **Methods** A scoping review including English or Scandinavian literature, were performed in PubMed Central (PMC) from March to April 2016. At least two of the investigators decided the relevance of each report, and all inclusions/exclusions were unanimous, and the articles not blinded. **Results** We found documentation of environmental contamination by several different pathogenic bacteria, on a wide variety of equipment and materials within the ambulance environment and limited effect of conventional cleaning, and risk of cross contamination. Furthermore, hygiene compliance appears challenged on a number of aspects e.g. hand- and uniform hygiene, cleaning and disinfection procedures etc. **Conclusion** Hygiene in the emergency medical service appear challenged on several aspects. This review reveal risk of infection due to environmental contamination by pathogens and lack of personnel compliance, thus underpinning a necessity of focus on prehospital hygiene and future research in order to secure evidence-based practice.

#7547 : Machine learning with acute coronary syndrome

Preferred format : Oral presentation

Authors:

GOKSU BOZDERELI BERIKOL (1), GURKAN BERIKOL (2), OKTAY YILDIZ (3), ISMAIL TURKAY OZCAN (4)

1. EMERGENCY MEDICINE, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
2. NEUROSURGERY DEPARTMENT, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
3. COMPUTER ENGINEERING, GAZI UNIVERSITY, ANKARA, TURKEY
4. CARDIOLOGY, MERSIN UNIVERSITY, MERSIN, TURKEY

Keywords: machine learning, artificial intelligence, acute coronary syndrome

Abstract :

Introduction: Acute coronary syndrome (ACS) is a serious condition arising from an imbalance of supply and demand to meet myocardium’s metabolic needs. Patients typically present with retrosternal chest pain radiating to neck and left arm. Electrocardiography (ECG) and laboratory tests are used indiagnosis. However in emergency departments, there are some difficulties for physicians to decide whether hospitalizing, following up or discharging the patient. The aim of the study is to diagnose ACS and helping the physician with his decisionto discharge or to hospitalizevia machine learning techniques such as support vector machine (SVM) by using patient data including age, sex, risk factors, and cardiac enzymes (CK-MB, Troponin I) of patients presenting to emergency department with chest pain.

Materials and Methods: Clinical, laboratory, and imaging data of 228 patients presenting to emergency department with chest pain were reviewedand the performance of support vector machine. Four different methods (Support vector machine (SVM), Artificial neural network (ANN), Naïve Bayes and Logistic Regression) were tested and the results of SVM which has the highest accuracy is reported.

Results: Among 228 patients aged 19 to 91 years who were included in the study, 99 (43.4 %) were qualified as ACS, while 129 (56.5 %) had no ACS. The classification model using SVM attained a 99.13 % classification success. The present study showed a 99.13 % classification success for ACS diagnosis attained by Support Vector Machine.

Conclusion: This study showed that machine learning techniques may help emergency department staff make decisions by rapidly producing relevant data.

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2.Conforti, D., and Guido, R., Kernel-Based Support Vector Machine Classifiers For Early Detection Of Myocardial İnfarction. Optimization Methods And Software 20(2-3):401–413, 2005

Acknowledgments: There is no conflict of interest in this study.

#7548 : ETView SL video tube for prehospital intubation by inexperienced novice physicians

Preferred format : ePoster

Authors:

Szarpak Lukasz (1), Smereka Jacek (2), Truszewski Zenon (1), Czyzewski Lukasz (3)

1. Department of Emergency Medicine, Medical University of Warsaw, Warsaw, POLAND
2. Department of Emergency Medical Service, Wroclaw Medical University, Wroclaw, POLAND
3. Department of Nephrology Nursing, Medical University of Warsaw, Warsaw, POLAND

Keywords: endotracheal intubation; cardiopulmonary resuscitation; physician; prehospital care

Abstract :

Background. Endotracheal intubation is a gold standard for airway management during cardiopulmonary resuscitation (CPR). Endotracheal intubation enables asynchronous resuscitation, which, owing to minimal interruption in chest compressions (CC), improves CPR effectiveness. In the case of direct laryngoscopy, vocal cords visualization during CC may be difficult to achieve. An alternative may be the usage of a videolaryngoscope or an ETView SL, constituting a kind of a video tube.

Participants and methods. This was a randomized crossover manikin trial. Twenty-six novice physicians with limited experience in the videolaryngoscopy technique participated in the study. The time to intubation (TTI) using 2 methods of laryngoscopy (Macintosh and ETView) during and without CC were compared.

Results. The median TTI with the Macintosh laryngoscope in the scenario with uninterrupted CC was 42 (interquartile range [IQR], 38–47) seconds, which turned out significantly longer than the TTI in the scenario with interrupted CC (35 [IQR, 31–39] seconds, $p < 0.001$). The TTI with the ETView was similar in both scenarios: 32 (IQR, 26–34) seconds vs 26 (IQR, 21–31) seconds, respectively ($p = 0.002$). A statistically significant difference between ETView and Macintosh was observed in the TTI both in the scenario during CC ($p < 0.001$) and without CC ($p < 0.001$).

Conclusion. The ETView video tube helps novice physicians intubate a manikin in a CPR scenario in a shorter time and with fewer attempts than the classical Macintosh, both in the case of ongoing and stopped CC. Applying ETView in real clinical situations could improve the quality of CPR performed by physicians.

#7549 : Clinical and demographic characteristics in NSTEMI for younger and elderly patients

Preferred format : ePoster

Authors:

Sana boukadida (1), asma zorgati (1), naouefel chebili (1), wael chaabane (2), ali ousji (2), riadh boukef (1)

1. service des urgences sahloul, CHU Sahloul Sousse, sousse, TUNISIA
2. emergency department of Sahloul, CHU Sahloul Sousse, sousse, TUNISIA

Keywords: NSTEMI, emergency department, elderly patients

Abstract :

Acute coronary syndrome significantly contributes to mortality and morbidity in developed and developing countries. ECG can readily diagnose ST-elevation myocardial infarction (STEMI) to allow myocardium-saving interventions; however, ECG is not effective for diagnosing patients with non-ST-elevation myocardial infarction (NSTEMI). Clinical feature can be not specific especially for elderly patients making diagnosis more difficult. More attention is now paid for NSTEMI to detect those patients especially the older one and stratify their prognosis risk for adequate strategy. The aim of our study was to identify demographic and clinical characteristics of patients (both elderly and younger patients) having NSTEMI in emergency department.

It is a prospective analytic study that enrolled 150 patients in the emergency department in a period of 3 months in 2016. We consulted our local acute coronary syndrome registry. All the socio demographic and clinical characteristics are collected. The score of chest pain was noted.

We enrolled 150 patients. The sex ratio = 2.12. We made 2 groups: young patients: age<65 years (52%) and elderly patients: age>65 years (42%). For the younger group, a history of STEMI was noted in 21% of cases, and a history of NSTEMI in 39% of cases. We found that 32% of this group had a history of angioplasty. Cardiovascular risk factors were found in this group: diabetes in 41% of cases, hypertension in 41% and dyslipidemia in 17% of cases. The Average score of chest pain was: 4.1 ± 1.9. electrocardiographic abnormalities were found in 83% of our confirmed NSTEMI.

For the group of elderly patients, the mean age = 73 ±6.15 years ranging from 66 to 83 and a sex ratio =1.48. In 24% of cases, a history of STEMI was noted. 38% of this population had a history of angioplasty. In this group we found the some cardiovascular risk factors. Indeed, a history of diabetes was noted in 61% of cases, hypertension in 69% and dyslipidemia in 21% of cases, 28% of those patients were active smokers. An electrocardiographic abnormality (ST depression and T wave abnormalities) was noted in 77% and the average scores of chest pain were: 4.2 ± 2.03. In those two groups, the diagnosis of NSTEMI was confirmed and we noted a significant elevation of troponin. More than 83% of those patients were hospitalized in cardiology department. Our two groups were not similar regarding the cardiovascular risk factors with significant *p (*The history of diabetes with p = 0.015 and Hypertension p = 0.004, active smoking with p = 0.007). But there were no significant differences in the pain scores between the two groups. For the two groups, chest pain was specific for coronary syndrome.

The results of this study show that there were no statistical age- related differences in chest pain scores. Elderly patients having NSTEMI had specific chest pain and clinical diagnosis was as evident as for younger patients.

#7550 : follow we the recommendations of the CHA2DS2Vasc Score diagnosed atrial fibrillation in our emergency department?

Preferred format : ePoster

Authors:

Daniela Rosillo Castro (1), Amalia Castaño Villar (1), Carmen Hernández Martínez (1), Maria Dolores Pascual Muñoz (1), Rocío López Valcarcel (1), Estefanía Carreño Aroca (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: Atrial fibrillation, Prophylaxis, Antocoagulation

Abstract :

Objective: Assess whether the discharge of our emergency department conducted a proper thromboprophylaxis in atrial fibrillation is not known following the score CHA2DS2-VASc

Material and methods
Observational, longitudinal, retrospective review of medical records. All patients diagnosed with Atrial fibrillation selected discharge not known in 2014 and 2015. Variables studied: sex, age, time of evolution, if frequency control is attempted or cardiovierte. EKG at discharge, calculation CHA2DS2-VASc score, HAS-BLED score of if discharge is not due pautar anything, whether to antiplatelet therapy or anticoagulation and with that drug. If they are reviewed in outpatient cardiology, ECG in consultation and change is made to the drug for prophylaxis.

Results: Of the 237 patients discharged with a diagnosis of the FA; 91 were not known Middle Ages 69.81%. 51.6% were women. Time evolution of the clinic was> 48 hours 53.8% and 2: anything 20%, 66.1% anticoagulated and 13.9% t antiplatelet agents. Were reviewed 87.9% in outpatient cardilogy in less than 1 month.
When they reach cardiology clinics, taked nothing 36.6 %%, anticoagulated 45.1%, 18.3% antiplatelet agents. Remain the same 82.9. 17.1% change them

Conclusion: In our service we tend not to make a correct cardioembolic CHADSvASC prophylaxis following two criteria so that those who should be anticoagulated we do in 6 out of 10, leaving 40% without prophilaxys.. In the case of scrore 1 half left without prophylaxis and those who are tone only are you antiplatelet therapy. In all cases it is used acenocumarol. Given the results has started a cycle of improvement to try to perform better this prophylaxis

#7551 : The predictive value of triage early warning score on mortality of trauma patients presenting to the emergency department

Preferred format : ePoster

Authors:

gökhan torun (1), suna eraybar (2), serhat atmaca (1), okan aydın (1), nuran sandal (1), yasemin nennicioglu (3), erol armagan (4)

1. emergency, none, bursa, TURKEY
2. emergency, eusem, bursa, TURKEY
3. emergency, none, medical doctor, TURKEY
4. emergency, eusem,eacem, bursa, TURKEY

Keywords: Trauma triage, Triage Early Warning Score, Advanced Trauma Life Support

Abstract :

Introduction:

Trauma is the most comman cause of emergency admissions.In our country %3-20 of all emergency visits are trauma patients.(1-3). American College of Surgeons recommended to use four step activating rules due to advanced trauma life support guidelines (ATLS) for trauma evaluation.(4) Triage early warning score that contains mobility,level of conciousness and vital signs usually helpfull in classification of patients with mortal patologies. In South africa society MEWS adapted with adding trauma as an another criteria and named again as TEWS. (5-8) In the current study, we aimed detecting the predictive accuracy of the triage early warning score (TEWS) in the prognosis and emergency treatment for trauma patients admitted to the emergency department (ED) whose triage were made by ATLS protocols.

Materials and methods

A total of 381 trauma patients admitted to Uludag University Faculty of Medicine Emergency Department in three monts period were evaluated. All patients meets criteria of ATLS protocol.After initial treatment anda diagnostic tests emergency emergency phisians evaluate TEWS score and all datas collected in study form. Patient demographics, Glaskow Coma Scale, AVPU score, vital signs,mobility, trauma mechanism, injured part, emergency treatment and status after evaluation were recorded. After 4 week period patients were followed by telephone or by their follow charts if admission happens and their mortality and morbidity parameters recorded. Patients 4 week mortality rates calculated.

Results

In our study population in abnormal vital signs evaluation in %5,5' (n=21) advanced airway management were needed, in %6 (n:23) GCS

The most comman trauma cause were collisions %32.7 (n:125). Age >55 was the comman comorbidity value of patients in %17.5 (n:67)

The TEWS value evaluated in major trauma patients due to ATLS parmeters; among 65 patients with abnormal vital signs in 43 (66.1) patients TEWS was >7 and in anatomic part, injury mechanism, comorbidity rates were n:22 (16.5%) , n:26(6.8%) and n:3 ünde (4.4%) respectively.

4 week eksitus rates were %2 (n:8) and n:2 patients eksitus in emergency servise while their initial treatment were going on.

The AUCROC of TEWS in predicting the emergency responses for entubation [0,979 (0,962-0,996)], for tube thoracostomy [0,924 (0,887-0,962)], for blood product replacement [0,964 (0,939-0,989)] and for emergency operation was [0,919 (0,881-0,956)] respectively.

In predicting mortality rates during 4 weeks, the cut-point was greater than 5, the areas under the receiver operating characteristic curves (AUCROC) was 0,973 (0,944-1).

Conclusion:

Emergency scoring siystems need for predicting major patologies and faster and effective treatment. Our study shoes that TEWS is effective in trauma victims. Triage early warning score can help anticipation of trauma and determine the importance. Triage early warning score should use with ATLS criteria for more significant results.

#7552 : Assessment of antibiotic prescription in the Emergency Department.Prospective study (about 100 patients).

Preferred format : Oral presentation

Authors:

ibtissem chaieb (1), asma zorgati (2), naouefel chebili (2), houda ben salah (2), khaoula belhadj ali (1), riadh boukef (2)

1. emergency department of Sahloul, CHU Sahloul Sousse, sousse, TUNISIA
2. service des urgences sahloul, CHU Sahloul Sousse, sousse, TUNISIA

Keywords: antibiotic, emergency department, assessment.

Abstract :

Introduction: sepsis is associated with high mortality worldwide. It is now accepted that the precocity of the treatment is related to a significant prognostic improvement. Antibiotic therapy which is the specific treatment is usually started in emergencies. Furthermore, there is a consumer increasing use of antibiotics in emergency services generating some reservations for its justification. In this work, we tried to evaluate antibiotic prescription in terms of justification, relevance and compliance.

Materials and Methods: This is a prospective study over 5 months that enrolled 100 patients admitted to the unit of hospitalization of the emergency department for sepsis. We used our local registry of sepsis. We collected Clinical, biological, microbiological, the final diagnosis and characteristics of antibiotic therapy for each patient. An evaluation of antibiotic prescription was conducted by two experts blindly regarding 3 items: justification, relevance and the compliance (of doses and the route of administration) of the antibiotics.

Results: hundred patients were enrolled. The average age was 62 years. The sex ratio was 1.04. The most common sites of infection were urinary and pulmonary in 43% and 28% of cases. Among our patients there were 46 cases of sepsis, 49 cases of severe sepsis and 4 cases of septic shock. 99 patients received antibiotics. The most used drug was cephalosporin in 83.83% of cases (in association in 71.08% of cases) followed by Quinolone in 52.52% of cases. The antibiotic therapy was considered justified in more than 95% by the two experts. A mismatch was noted between the two experts regarding the relevance and compliance (Kappa=0,34). However our choice of antibiotic was deemed appropriate in 53% of cases (expert 1: 53.7%, expert 2: 80.8%), the largest rate relevance concerned the pulmonary pathology for both experts. The administration route was deemed compliant in more than 76% of cases (expert1: 76.8%, expert 2: 100%). There was an agreement between the two experts regarding the unit dose and the spacing of doses (the compliance rate has exceeded 80%).

Conclusion: The assessment of prescription of antibiotics is important. Some disparities were noted in our practice. An available guide for antibiotic prescriptions in emergency case is essential to ensure the quality of prescriptions.

#7553 : The side effect of the treatment of ectopic pregnancy

Preferred format : ePoster

Authors:

Ozge Can (1), Funda Karbek Akarca (1), Sadiye Midik (1), Sercan Yalcinli (1)

1. Emergency Department, Ege University School of Medicine, Izmir, TURKEY

Keywords: Methotrexate toxicite, ectopic pregnancy treatment, emergency service

Abstract :

Introduction

Ectopic pregnancy is a common gynecologic problem (1). Treatment of unruptured ectopic pregnancy occurs differrent procedure of therapy used for conservative, medical and surgically (2). Methotrexate, is one of the drug for medical management of ectopic pregnancy. That is prevents with DNA synthesis, repair, and cellular replication and causing cell death (1). The side effects of this drug have to recognised and taking a desicion carefully to given for because it is life-threatening adverse events (2).

Case

Twenty five years old woman was admitted to the emergency department with nausea, dyspnea, bruises that occur in the body and lesions on her mouth. She denies any past medication or disease history. But she was treated a week ago from an ectopic pregnancy. Vital signs are in physiological limits. In her physical examination diffuse, petechia, abdominal tenderness and oral mucositis occur. Her lung sounds were normal. The differential diagnosis are septicemia, disseminate intravascular coagulation (DIC), idiopathic thrombotic purpura (ITP), methotrexate intoxication. On her laboratory findings neutropenia was detected. Thrombocyte and INR values are normally. Septicemias, DIC, ITP were excluded. Leucoverin treatment started and she hospitalized in ICU.

Discussion

Methotrexate (MTX) is a folic acid antimetabolite. The drug use in the treatment of cancer, autoimmune disease and ectopic pregnancies (3). Methotrexate apply many intercellular pathways and inhibiting the synthesis of RNA and DNA with antagonize folate (2,4). the target cell of this is supress on rapidly growing and dividing cells such as malignant cells, myeloid cells and oral and gastrointestinal mucosa (2,4). Adverse events related with the dose and the duration of therapy. In less than 10% of the cases most common side effects were observed (2). Common adverse effects occurs, leukopaenia, nausea, vomiting, ulcerative stomatitis, abdominal distress and liver and lung toxicity (2,3) The most seen toxicity of methotrexate is bone marrow suppression (1). The specific antidote calcium folinate (LeucovorinR), a form of folic acid, can antogonize effects of MTX. Leucoverin does not affected by dihydrofolate reductase and this mechanism prevent the drug from inhibiton of MTX (5). In our case leucoverin started immediatly and her symptoms get better.

Conclusion

Clinicians should be recognise that a low dose of MTX treatment for the termination of ectopic pregnancy can cause severe side effects.

#7554 : Oncology patients profile attended at the emergency deparment

Preferred format : ePoster

Authors:

Maria Gil Lopez (1), Elena Prado Mel (2), Almudena Lozano Vicente (1), Antonio Bernabé Rojas Ramirez (1)

1. Emergency Service, Andalusian Health System, Seville, SPAIN
2. Hospital Pharmacy Service, Andalusian Health System, Seville, SPAIN

Keywords: Oncology, Emergency , Reason for consultation, Palliative Care, Neoplasm

Abstract :

Introduction: In recent times , there is an increase in oncology patients who come to emergency deparment due to improved diagnostic and therapeutic procedures, as well as an aging population.
Whenever possible, the emergency personal should consult the patient's medical record to know the clinical patient situation and the active treatment who the patient is receiving for the optimal therapeutic management.

Objetive:Describe the oncology patient profile attended in the emergency department, the reasons for consultation and clinical management.

Methods:There was realized a descriptive and retrospective study of the oncology patients attended in the emergency department of our hospital between January and December, 2015.
Data were extracted from the record of the digital medical history Diraya ®.
For the study of the profile and management of patients were collected as variables: sociodemographic characteristics (age and sex) , reason for consultation, diagnosis at discharge, type and location of the tumor, tumor stage , final destination and mortality in emergency department.

Results: A total of 118 patients were attended from January to December 2015. 62% of patients were males. The median age was 64 years (SD 9.8 years). The most common reasons for consultation were fever/infection in 46 cases , (38,9% , of which 11 % were febrile neutropenia), digestive complications in 24 cases (20.3 %, of which 54.1% were vomiting or diarrea) and thrombosis in 11 cases (9.35).
Both pain and the direct clinical reaction to chemotherapy were infrequent reasons consultation (4% in both cases). According to the location of the tumor, the most common neoplastic diseases included digestive tract (48%), lung (18%), breast (15%) and urologic tract locations (10%). Of the 118 patients , 94% were receiving chemotherapy. 66% of patients (78 cases) were diagnosed with stage IV advanced neoplasia compared to 3% (4 cases) in initial stage of disease. After evaluation in the emergency department, 49 patients (41,5%) required hospital admission and 17 cases were exitus.

Conclusions: More than 60 % of oncology patients who come to the Emergency deparment have advanced disease . Most of Stage IV patients were being treated with chemotherapy , so the reason for consultation may be influenced by both the stage of the disease and chemotherapy treatment. The value of chemotherapy treatment, in certain stages can be questioned.

#7555 : The Evaluation Of Reduction Success In The Patıents With Dıstal Radius Fracture Under The Guidance Of Ultrasonography

Preferred format : Oral presentation

Authors:

Ercüment Umdu (1), Funda Karbek Akarca (1), Sercan Yalcinli (1), Ozgur Bozkurt (1), Levent Kucuk (2)

1. Emergency Department, Ege University School of Medicine, Izmir, TURKEY
2. Orthopedics and Traumatology Department, Ege University School of Medicine, Izmir, TURKEY

Keywords: Dıstal radius fracture, ultrasonography, reduction success, emergency

Abstract :

Introductİon

Distal radius fracture, which is most commonly seen in the upper extremity, comprises 1/6 of the fractures treated in the emergency department (1). In this study, it was primarily aimed that the effect of ultrasonography performed on the adult patients in the course of the closed reduction of distal radius fracture on reduction success be evaluated.

Materıal And Method

Our randomized, controlled, prospective and cross-sectional research was carried out in the university hospital. After we received an approval from the local ethics committee, the patients aged over 18, who had wrist (carpus) trauma and in whose direct graphies a displaced distal radius fracture was detected, which required a reduction process, were examined between the periods, March 2014 and April 2015. The patients in whose graphies a distal radius fracture was detected were randomized as case and control groups according to the application order. The patients in question were informed about sedation and analgesia to be applied before and during the reduction process to be performed, and their informed consent forms were received, as well. Ultrasonography was performed on the patients comprising the case group in which distal radius fracture was detected through the use of a 7,5 Mhz-linear probe on two planes as dorsal and lateral by the assistants of emergency medicine.

Results

A hundred twenty patients comprising the inclusion criteria of the research were incorporated into the study; however, one of the patients was excluded from the study later on because of treatment rejection; for this reason, the study population consisted of 119 patients. The case group to which ultrasonography was applied comprised 60 patients, whereas the control group on which standard approach was performed consisted of 59 patients. No difference was observed between the case and control groups.

In our research, it was determined that when the use of ultrasonography and the standard approach were compared, the reduction success in the ultrasonography group had showed an increase in the reduction of the patients with distal radius fractures. Separately, the requirement for re-reduction in the patients in whom reduction was provided through ultrasonography was determined as 25% in the case group and 45,8% in the control group. When compared with X-Ray, which is currently the golden standard approach in evaluating the status of post-reduction success, it was ascertained that the reduction success could be evaluated through ultrasonography with 97,7%, 86,6%, 95,6%, and 92,8% sensitivity, specificity, ppv and npv.

Dıscussıon

In conclusion; ultrasonography promotes the reduction success of the patients with distal radius fractures in the practice of emergency medicine. With the use of ultrasonography, fewer re-reduction processes are required in this patient population. In the prospective studies, the effect of ultrasonography on reduction success can be scrutinized in the patients with instable radius fractures.

#7556 : OXIDATIVE STATUS AND DNA DAMAGE FOLLOWING ANALGESIC TREATMENT IN PATIENTS WITH ACUTE PANCREATITIS

Preferred format : Oral presentation

Authors:

Gulen Bedia (1), Abdurrahim Kocyigit (2), Cenker Eken (3), Mustafa Serinken (4), Karcioglu Ozgur (5), Ali Dur (6), Elif Kilic (7)

1. Department of Emergency Medicine, Bezmialem Vakif University, Istanbul, TURKEY
2. , Bezmialem Vakif University Medical Faculty, Istanbul, TURKEY
3. Department of Emergency Medicine, Akdeniz University, Antalya, TURKEY
4. Department of Emergency Medicine, Pamukkale University Medical Faculty, Denizli, TURKEY
5. Department of Emergency Medicine, Acibadem University School of Medicine, Istanbul, TURKEY
6. Department of Emergency Medicine, Bezmialem Vakif University Medical Faculty, Istanbul, TURKEY
7. Department of Biochemistry, Bezmialem Vakif University Medical Faculty, Istanbul, TURKEY

Keywords: Acute pancreatitis, treatment, pain, paracetamol, tramadol

Abstract :

Background

This study is designed to investigate the effect of three different analgesics used to treat pain in AP on oxidative stress, DNA damage in mononuclear leukocytes and on oxidative status.

Methods

This parallel design randomized controlled trial is composed of three treatment arms, intravenous paracetamol, intravenous dexketoprofen and intravenous tramadol.

Results

A total of 107 patients were diagnosed with acute pancreatitis within the study period in the ED. Seventy-seven of them were included for the study; 26 patients for the paracetamol group, 24 patients for the dexketoprofen group and 27 patients for the tramadol group. The mean age of study subjects was 52.73 ± 15.38 and 66% (n = 51) of them were men**.** At the beginning of the study (before treatment) mean levels of DNA damage, TOS and OSI levels significantly higher and TAS was significantly lower in the acute pancreatitis groups than in the control group. DNA damage and OSI in HAPS-positive patients were found to be significantly greater than HAPS-negative patients ($p = 0.046$). DNA damage and oxidative stress were compared between the three groups. There were no differences between the groups in terms of DNA damage ($p = 0.42$) and also for the oxidatif stress parameters (OSI,TAS,TOS respectively $p = 0.26$, $p = 0.78$, $p = 0.35$)

Conclusions

There is no difference between the effects of paracetamol, dexketoprofen and tramadol which are commonly used to manage acute pain in AP on DNA damage in human T-lymphocytes and on serine parameters of oxidative status.

#7557 : Point-of-care ultrasound: training medical students

Preferred format : ePoster

Authors:

Nathan Hudson-Peacock (1), Richard Kendall (2), Alexander Taylor (1)

1. , University of Cambridge, School of Clinical Medicine, Cambridge, UK
2. Emergency Department, Addenbrooke's Hospital, Cambridge, none, Cambridge, UK

Keywords: Ultrasound, point of care, USS, POCUS, emergency medicine, medical education, medical students

Abstract :

Introduction

Use of ultrasound in clinical practice is a burgeoning field, not least in emergency medicine. However, the teaching of ultrasound scanning (USS) in most U.K. medical schools does not currently reflect its increasing clinical application. Cambridge University Emergency Medicine Society (CUEMS), a student-led society promoting the emergency medicine specialty, in collaboration with Dr. Richard Kendall, Consultant in Emergency Medicine at Addenbrooke's Hospital, designed and delivered a course introducing USS to a group of Cambridge University medical students.

Aims:

1. To design and deliver an effective USS training course to medical students
2. To increase confidence and skill in the use of ultrasound
3. To evaluate student opinion on whether USS training should be in the curriculum

Method

50 students signed up for the course and a further 9 students acted as healthy volunteers to be scanned. Prior to the course, all students were asked to complete: a multiple-choice questionnaire (MCQ) testing ultrasound knowledge; a questionnaire enquiring about previous experience and confidence in USS; and an online teaching module outlining some basic ultrasound principles. Students rotated around four 30-minute stations covering core uses of point-of-care ultrasound in emergency medicine: identification of abdominal aortic aneurysm; identification of intra-peritoneal free fluid; focused echocardiography and basic lung fields; and peripheral/central vascular access techniques. Each station was supervised by emergency department physicians or radiologists from Addenbrooke's Hospital. Healthy student volunteers and vascular-access mannequins were used to enable delegates to practise USS skills effectively. After the course, the MCQ and questionnaire were repeated.

Results

In the pre- (n = 54) and post-course questionnaire (n = 44), the delegates reported improvements in their confidence in all areas, including the technical use of USS (1.3/5.0 to 3.4/5.0 (pre- and post-course mean scores)), and in using USS to aid diagnosis and management (1.6/5.0 to 3.5/5.0 (pre- and post-course mean scores)). In response to the questions: "How useful was the event?" and "Do you think USS should be part of undergraduate training?" the delegates scored 4.8/5 to both questions (mean scores; n = 44). In the MCQ test, delegates showed an improvement from 57% (pre-course; n = 59) to 79% (post-course; n = 45).

Conclusion

There was a strong desire by the student population to introduce clinical ultrasound teaching to their curriculum. Furthermore, this course demonstrated that small-group, practical ultrasound training on volunteers and vascular-access mannequins, supplemented by an online preparation course, is an effective way of improving skill and confidence in the use of ultrasound, and is a feasible way of delivering USS teaching to medical students. This course sets a strong precedent for ultrasound teaching in medical schools. The course designed here was effective and its expansion and incorporation into the curriculum of future years should be pursued.

Acknowledgements

Thank you to G.E. Healthcare for providing ultrasound machines to CUEMS to enable us to run this course.

#7558 : Diagnostic value of scube1 protein in patients diagnosed with acute appendicitis in emergency department

Preferred format : Oral presentation

Authors:

Ertan Sonmez (1), Dursun Akbay (1), Bedia Gulen (1)

1. Bezmialem Vakif University Department of Emergency, Mr, Istanbul, TURKEY

Keywords: SCUBE1, Acute Appendicitis, Alvarado Scoring

Abstract :

Objective: SCUBE1 (Signal peptide - CUB (complement C1r/C1s, Uegf, and Bmp1) - EGF (epidermal growth factor) - like domain - containing protein) is recently studied in researches as a diagnostic biomarker for acute coronary syndrome, various cancers, ischemic stroke and Crimean-Congo Haemorrhagic Fever (CCHF). The aim of this study is to evaluate the value of SCUBE1 in patients diagnosed with acute appendicitis.

Material and Method: We evaluated 150 patients with initial diagnosis of acute appendicitis (AA) who admitted to the emergency department. 103 patients were excluded from the study for various reasons. 47 patients with definitive diagnose of AA as patients group and 43 volunteers as healthy controls were enrolled to the study. SCUBE1, Alvarado scoring (ASK), C-reactive protein (CRP) values and routine tests are compared between two groups.

Results: SCUBE1 plasma levels were not statistically significant between two groups (p=0, 209). SCUBE1 values were found significantly higher in CRP (+) patients (p=0, 048). There was no correlation between SCUBE1 values with ASK (p=0, 304). Both the diameter of appendix on CT (computed tomography) and SCUBE1 values were increasing proportional. (p=0, 043). CRP levels were significantly higher in the perforated appendicitis (PA) group when compared with non-perforated appendicitis (NPA) group (p=0, 007). White blood cells (WBC) values were found insignificant to distinguish perforation (p=0, 06).

Conclusion: In this study SCUBE1 values were not diagnostic in AA, although SCUBE1 was significantly higher in CRP positive patients. There was positive correlation between SCUBE1 values and diameter of appendix which measured on CT.

#7559 : Validity of the Manchester Triage System in different settings

Preferred format : Oral presentation

Authors:

Joany Zachariasse (1), Vera van der Hagen (1), Ian Maconochie (2), Henriëtte Moll (1)

1. Department of Paediatrics, Erasmus MC- Sophia Children's Hospital, Rotterdam, THE NETHERLANDS
2. Department of Paediatric Accident and Emergency, St Mary's Hospital, Imperial College NHS Healthcare Trust, London, UK

Abstract :

Introduction

Triage aims to sort patients according to their urgency for treatment or ability to safely wait. The Manchester Triage System (MTS) is the most widely used triage system in Europe. Several studies have been conducted to evaluate the performance of the MTS. It is known that the performance of prediction models depends on the target population in which they are evaluated. However, little is known about the performance of the MTS for children in different settings. The aim of this study was to assess the validity of the MTS for children in various settings.

Methods

First, we conducted a systematic review to assess the available evidence on the performance of the MTS. We identified 7 studies (2 adults, 3 children, 2 combination) with a median of 13,554 patients (range 872 - 45,469). We were able to compare 4 studies that used the same reference standard: hospitalisation. Second, we conducted an observational study on the validity of the MTS in children to validate these results. We included all consecutive ED visits in two large academic hospitals during the 6 to 12 month study period. Hospital 1 is a relatively high- prevalence setting (hospitalisation rate: 24.4%) and hospital 2 a relatively low- prevalence setting (hospitalisation rate: 11.2%). We used the same reference standard as the systematic review (hospitalisation) and added ICU admission and immediate lifesaving interventions as reference standards for high-urgent patients.

Results

Of the 7 included studies in the review, patient populations differed as indicated by differences in hospitalisation rate (range: 4.6-32.9%). Despite these differences, sensitivity and specificity of the MTS for hospitalisation were similar. Sensitivity ranged from 0.37 (95% CI 0.36-0.38) to 0.49 (95% CI 0.41-0.56) and specificity ranged from 0.86 (95 CI 0.86- 0.87) to 0.93 (95% CI 0.93-0.93). We included 18,598 children in our observational study, 6012 in hospital 1 and 12,586 in hospital 2. Despite the differences in setting, sensitivity and specificity were more or less similar for the different reference standards. Hospitalisation had a sensitivity of 0.34 (95% CI 0.32-0.37) in hospital 1 and 0.45 (95% CI 0.42- 0.48) in hospital 2. Specificity was 0.93% (95% CI 0.92-0.94) and 0.88% (95% CI 0.88-0.89) respectively. For ICU admission sensitivity was 0.66% (95% CI 0.58-0.73) and 0.77 (95% CI 0.57-0.90); specificity was 0.88 (95% CI 0.87-0.88) and 0.85 (95% CI 0.84-0.85). For immediate lifesaving interventions sensitivity was 0.80% (95% CI 0.65-0.90) and 0.67% (95% CI 0.60-0.74); specificity was 0.87 (95% CI 0.86-0.88) and 0.85 (95% CI 0.85-0.86).

Conclusion

The performance of the MTS has not yet been compared in different settings. In a systematic review of studies evaluating the MTS, it seems as if sensitivity and specificity remain in the same range regardless of the variation in settings. We found the same results when we validated these findings in a high and low prevalence setting, indicating that performance of the MTS is relatively independent of the setting. Future observational studies with a larger variation in settings is needed to confirm these findings.

#7560 : Evaluations of Occupational Injuries Presented to the Emergency Department. Mechanisms, Causes, Features of Accidents and Solutions Suggestions of Injured Employees.

Preferred format : Oral presentation

Authors:

AHMET ÇAGDAŞ ACARA (1), SEDAT YANTURALI (1), OMER CANACIK (1), RAMAZAN SABIRLI (1)

1. Emergency Medicine, Dokuz Eylul University Hospital, Izmir, TURKEY

Keywords: occupational accidents, occupational health practice, emergency medicine, trauma, Occupational Injuries.

Abstract :

Objectives: The aim of this study was to evaluate the sociodemographic features, safety of the work environment and characteristics of work-related accidents and solution offers of injured patients who presented to the emergency department after occupational accident.

Material and Method: A cross-sectional study was conducted from 26 September 2014 to 26 December 2014 in Dokuz Eylul Univesity Hospital, Department of Emergency Medicine. The study was carried out with sequential patients presented to the emergency department results from occupational injuries whose age is 18 and above. Face-to-face interviews with survey were conducted. The survey has 4 main sections. The first section is about patients' demographics, the second section is about occupational safety of the work environment, the third section includes the features of occupational injury and the fourth section includes the questions about occupational injury solution offers of workers.

Results: 40,185 patients presented to department of emergency medicine in the study period. There were 287 occupational injuries of them (0,71 % of all presentation). 170 (%59,2) of 287 were included to the study. The average age of the patients is 31, 1. The youngest patient was 18 and the oldest patient was 64.

Injured patients who presented to the emergency department after occupational accident (n=156, % 91, 8) were low-medium educated workers. The %90 of injured patients had SSK as a social insurance. 34 % of the patients (n=57) are presented within the first three hours after the accident. Most of their presentation (n= 95, % 55, 8) to the emergency department were in afternoon (between 13.00 am to 15:00 am). Only half (n=85, % 50) of the injured workers had occupational safety training. The %68,4 of the study group (n=118) had an opinion that physical environment of the working places were suitable in terms of occupational safety. The most common cause of injuries were sharp and penetrating tools (%29,4 , n=50). Eleven patients (%6, 4) admitted to the hospital, and the majority of the patients (%92,9, n=158) were treated ambulatory and discharged from the emergency department. Three patients (1,7 %) had severe injury and one patient was dead (%0,58). Most of the workers (n = 113, 66.5%) were in favor regulation of the lack of protective equipment can not be corrected prevent the accident. The injured workers (n= 111 % 65.2) stated that if the necessary precoutions had taken the injury would not had happened.

Conclusions: Frequency of occupational injuries to the Dokuz Eylul University, department of Emergency medicine is low. Patients who presented to the emergency department after occupational accident were low-medium educated young workers. Although they stated that they did not receive adequate occupational safety training and they work in inadequate workplace safety environment that if the necessary precautions had taken the injury would not have happened.

#7561 : Early clinical reassessment in emergency department short stay units by emergency physicians helps to reduce antibiotic use in community-acquired pneumonia

Preferred format : Oral presentation

Authors:

Emmanuel Montassier (1), Fares Moustafa (2), albert Trinh-Duc (3), Maxime Maignan (4), Caroline Annoot (5), Ogielska Maja (6), Pascal Louis Orer (7), Jean Benoit Hardouin (8), Thibault Schotté (9), Jacques Bouget (10), Ruxandra Cojocaru (11), Pierre-Alexis Raynal (12), Antoine Eche (12), Nesrine Benaouicha (13), Gilles Potel (13), Eric Batard (13)

1. Emergency Department, no, Nantes, FRANCE
2. Emergency Department, none, Clermont Ferrand, FRANCE
3. Emergency Department, none, Agen, FRANCE
4. Emergency Department, none, Grenoble, FRANCE
5. Emergency Department, none, La Roche sur Yon, FRANCE
6. Infectious Diseases, none, Tours, FRANCE
7. Emergency Department, none, Bobigny, FRANCE
8. , none, Nantes, FRANCE
9. Emergency Department, none, Angers, FRANCE
10. Emergency Department, none, Rennes, FRANCE
11. Emergency Department, none, Strasbourg, FRANCE
12. Emergency Department, none, Paris, FRANCE
13. Emergency Department, none, Nantes, FRANCE

Keywords: community-acquired pneumonia, clinical reassessment, procalcitonine, antibiotic

Abstract :

Background: Community-acquired pneumonia (CAP) is a frequent reason for consulting with the healthcare system and is a leading infection-related cause of death in developed countries. The diagnosis of CAP is difficult, because of the limitations of clinical, radiological and biological examinations, leading to an overprescription of antibiotics. Several studies accessed the contribution of procalcitonin (PCT) with the development of an algorithm to guide initiation of the antibiotic treatment in CAP. Another strategy relies on an early clinical reassessment made in the first 24 hours of hospitalization to confirm the diagnosis of CAP and the need to maintain antibiotic treatment. To date, these two strategies have not been compared. Thus, the objective of our study was to compare these two strategies to reduce the duration of antibiotic treatment in CAP in a randomized clinical trial. **Material/methods:** Prospective, randomized and controlled trial including adult patients admitted in the ED with the main diagnosis of CAP. In the clinical reassessment group, antibiotic treatment was systematically started in the emergency department. A clinical reassessment was made during the first 24 hours of hospitalization in the ED short stay unit to reconsider the diagnosis of CAP, and to stop the antibiotherapy initiated in the emergency department if the diagnosis is not confirmed. In the PCT guided group, initiation and discontinuation of the antibiotherapy was based on the PCT cut-off ranges previously published. **Results:** In total, 286 patients were included in 10 hospitals in France and randomized in the clinical reassessment group or into the PCT guided group. In the clinical reassessment group, CAP diagnosis was reconsidered and antibiotic treatment was stopped in 8.9% of the patients. In the PCT guided group, antibiotic treatment was not started in 8.1% of the patients. The difference was not significant between the 2 groups. Globally, the antibiotic treatment duration was shorter in the clinical reassessment group when compared to the PCT guided group (8 days Vs 10 days, $p<0.05$). There was no difference in terms of success rate at day 30 between the 2 groups. **Conclusions:** Our study showed that an early clinical reassessment in ED short stay units is a safe strategy and can reduce antibiotic consumption in CAP.

#7562 : Heart Failure in an Irish ED: Presentation patterns, clinical trajectories and European guidelines.

Preferred format : Oral presentation

Authors:

Kelly Janssens (1), Nigel Salter (1), Rory O'Hanlon (2)

1. Emergency Department, St. Michaels Hospital, St. Vincent's University Healthcare Group, Dublin, IRELAND
2. Cardiology Department, St. Michaels Hospital, St. Vincent's University Healthcare Group, Dublin, IRELAND

Keywords: Chronic Disease, Heart Failure, Care Bundle, Integrated Care,

Abstract :

BACKGROUND

Noting that chronic disease (CD) accounts for 2/3 of emergency medical admissions and approximately 80% of all healthcare costs, the Irish Health Service has an initiative to improve CD quality of care. Presently, ‘integrated care’ of CD generally refers to care by GP punctuated by specialist input and does not explicitly involve the emergency department (ED). However, while CD’s do account for 2/3 of ED admissions, less than 1/4 of ED presentations are admitted. This study is part of a larger project that has previously shown (1) there is a nearly 3-fold larger cohort of CD-related ED presentations that are discharged, (2) ED acute management of CD is often inconsistent with evidence-based guidelines used by specialists, (3) inconsistencies in care for CD patients can be improved, and in so doing the ED can make a meaningful contribution to integrated care of CD.

This study aims to: (1) Characterize heart failure (HF) related presentations to the ED; (2) Compare discharged and admitted cohorts; (3) Assess the applicability of European Society of Cardiology (ESC) guidelines in the assessment and treatment of HF-related presentations.

METHODS

During a 1-year period, ED physicians were asked to complete a questionnaire in cases when HF was a contributing factor to presentation. Questions related to: establishment of HF diagnosis, presenting complaint, availability of HF baseline data, admission, and clinical concerns of the ED physician. ESC guidelines were examined as to their applicability in these presentations.

RESULTS:

Surveys from 65 HF-related presentations were received: In 63% of cases, patients were admitted. A diagnosis of HF was known in 70% of cases and 30% were likely de-novo diagnoses. Of established HF cases, 70% were receiving care in our hospita andl 40% of these were discharged. Of the de-novo presentations, 37% were discharged. In these, 88% had a dyspnoeic component to their complaint, but only 39% in the established HF patients.

ESC guidelines for HF is a 50-page document containing 29 tables. While comprehensive, at a practical level this document is not used in ED. Interestingly, section 7.1 states 'Reductions in mortality and hospital admission rates both reflect the ability of effective treatments to slow or prevent progressive worsening of HF'.

DISCUSSION

This project has shown previously that 3% of ED presenters have HF of which 30% are admitted. ED physicians in this study reported only completing the survey for HF related presentations they found challenging. Challenges most reported were (1) the lack of explicit admission criteria (2) lack of guidance in therapy for discharges, particularly in the context of renal failure. No one interviewed had used the ESC guidelines, though all were aware of them. Many cited the COPD care bundle used in our hospital as an effective ED tool.

CONCLUSION

(1)There is a significant cohort of HF-related presentations who are discharged directly from ED. (2) ESC-HF guidelines lack practical functionality for application in ED, particularly admission criteria and discharge advice. (3) Distilling the ESC guidelines in to a functional ED care bundle should be explored.

#7563 : Eye complications of patients with head injuries. Cranio-facial trauma emergencies.

Preferred format : Oral presentation

Authors:

Marius Smarandoiu (1), Adriana Stanila (2), Alin Canciu (1), Dan Mircea Stanila (2), Alina Adriana Panga (2)

1. SMURD, SMURD Sibiu, Sibiu, ROMANIA
2. Ophtalmology, Department of Ophthalmology, Emergency Clinical Hospital Sibiu, Sibiu, ROMANIA

Keywords: Eye trauma, head injuries

Abstract :

BACKGROUND

Eye trauma is recorded to be a main cause of blindness or partial loss of vision worldwide. The figures are even more dramatic in the countries that lack head trauma injury protocols that prioritize the first medical measures taken in the first stages to avoid losing the therapeutic time frame required in such cases so the eye surgery measures are not to be delayed.

About 25% of head injuries are associated with ocular and visual defects. The role of ocular injuries secondary to head trauma in the causation of blindness has become a subject of importance.

As a result of head trauma multiple systemic complications the damage to the visual system is most likely to be ignored in many cases and late assessment is futile.

As there are a series of possible mechanisms underlining ocular manifestations of head trauma that are not fully understood, many untested hypotheses have been advanced to explain these defects. As an example eye movement disorders are thought to be due from direct trauma to orbital contents, cranial nerves, and other brain areas.

The aim of this study is to evaluate the clinical profile of visual complications in patients hospitalized and managed for head injury in Sibiu.

METHODS

Source data for this retrospective study is Sibiu Emergency Hospital database, for a period of 2 years. A selection of all head injuries cases is done to analyze the impact on visual system.

RESULTS

Ocular and visual complications occurred in many cases (almost 20%) with a number close to double in favor of males against females. Main causes of visual complications are road accidents, fights and other types of trauma. In road accidents pedestrians are more affected than drivers with more complications.

CONCLUSIONS:

Eye injuries remain one of the most common cause of different types of vision reduction, a life-long disability. An important number of them can be prevented or reduced implementing a prioritized trauma guide for all head injury patients addressing ocular and vision injures in the first stages of advanced medical care. Our study highlights the need of such a protocol to be designed and implemented in Sibiu to reduce these unfortunate situations.

#7564 : Trauma simulation: developing non-technical skills in medical students

Preferred format : Oral presentation

Authors:

Nathan Hudson-Peacock (1), Alexander Taylor (1), Matt Ellington (2)

1. , University of Cambridge, School of Clinical Medicine, Cambridge, UK
2. Maidstone and Tunbridge Wells NHS Trust, 254 Medical Regiment, Kent, UK

Keywords: Emergency medicine, medical education, trauma, simulation, battlefield, pre-hospital, non-technical skills, transferable skills, military, CRM, crisis resource management; teamwork; leadership

Abstract :

Background

As clinicians, it is necessary to be able to adapt to unfamiliar, high-pressure situations. Under these circumstances, effective non-technical skills such as crisis resource management (CRM) and leadership skills are crucial. However, these are poorly taught in medical schools and often have to be acquired as working doctors. In the military, there is a strong emphasis on non-technical skills development. Additionally, simulation-based learning is commonly used as a valuable education method, enabling practise of both technical and non-technical skills in a safe, controlled environment. The student-run Cambridge University Emergency Medicine Society, in collaboration with 254 Medical Regiment and Magpas Helimedix, designed and delivered a simulation-based training course on pre-hospital and battlefield trauma scenarios to 50 medical students. This course aimed to use military scenarios and expertise, and simulation, to generate enthusiasm for this area of medicine, whilst simultaneously developing effective non-technical skills.

Method

50 students from UK medical students attended. Delegates were sent pre-course reading on the management of a trauma patient and given a verbal briefing at the start of the course. The day consisted of five civilian/military trauma scenarios and used a combination of patient actors and skills mannequins, to provide both realism and time pressure. Doctors from civilian and/or military backgrounds facilitated the scenarios whilst delegates took turns to team lead their group of five. Data was collected by paper questionnaire using visual analogue scales.

Results

Delegates (n=42) rated the course 9.4/10 for usefulness with 100% of the delegates saying they felt more confident dealing with a trauma patient after the course. Additionally, 98% of delegates said they felt more confident assessing any acutely unwell patient, trauma or otherwise. When asked whether inclusion of military scenarios and personnel added positively to the course, they scored 9.1/10.

Conclusion

Battlefield and pre-hospital trauma simulation exposes medical students to high-pressure situations in an unfamiliar but safe environment. Students found this a highly effective method for developing skill in trauma management, as well as confidence in managing the non-traumatic patient, through acquisition of transferable, non-technical skills such as crisis resource management, leadership and teamwork ability.

#7565 : Potential improvement of acute respiratory infection surveillance through usage of emergency department data

Preferred format : Oral presentation

Authors:

Felix Greiner (1), Armin Baillot (2), Dominik Brammen (1), Felix Walcher (1), Bernadett Erdmann (3)

1. Department of Trauma Surgery, Otto-von-Guericke University Magdeburg, Magdeburg, GERMANY
2. Virological Surveillance, The Governmental Institute of Public Health of Lower Saxony, Hanover, GERMANY
3. Emergency Department, Klinikum Wolfsburg, Wolfsburg, GERMANY

Keywords: Acute respiratory infections, influenza, syndromic surveillance, public health, emergency care data

Abstract :

Background:

Acute respiratory infections (ARI) may lead to increased hospitalization and excess mortality during the annual flu epidemic. Besides laboratory surveillance of influenza [1], syndromic surveillance of ARI in Germany is based on reports of primary care physicians (e.g. ICD-10-GM coded diagnoses) [2]. Hospitalization rate is likely to be underestimated as severe cases may consult an emergency department (ED) directly. The joint research project for establishing a German emergency department data registry (AKTIN) is evaluating a decentralized approach to access data routinely recorded and stored in EDs. We investigate if the flu season 2014/2015 can be shown on the basis of ICD-coded data from one of our project hospital's ED.

Participants and methods:

We included all patients in our analysis that were hospitalized after attending the emergency department of Wolfsburg hospital between calendar week (CW) 27/2014 and CW 26/2015. An ARI was defined if the following ICD-10-Codes were recorded as admission diagnosis J00 to J22 (including subgroups), J44.0 and B34.9. Reference data were retrieved from public health databases on a regional (laboratory surveillance) and national (ICD-coded data from primary care physicians) level. We calculated absolute and relative frequencies and compared epidemic curves, age distribution and distribution of ICD-10-codes.

Results:

14,106 patients were hospitalized during the observed period. 535 cases of these (3.8%) were diagnosed with an ARI, on average 10 admissions per week due to an ARI respectively. The number of cases was rising at the beginning of 2015 and reached its peak in CW 10/2015, when 25 patients (9.5%) were hospitalized. Compared with reference data there was a graphical correlation of the epidemic curves. Mean age of ARI-cases was 71.7 years (SD ± 16.2; median 76). Most common diagnoses were J18 (pneumonia, 61.1%), J15 (bacterial pneumonia, 13.5%), J44.0 (COPD with acute lower respiratory infection, 12.3%) and J20 (acute bronchitis, 7.9%). Patients in our sample were older and distribution of diagnoses differed from reference data.

Discussion:

Our analysis shows that the course of the flu season 2014/2015 can also be depicted on the basis of ICD-10-Codes recorded in an emergency department. The current and well-established ARI surveillance is based on data from laboratories and primary care physicians. So far hospital data is not included in syndromic surveillance, even though data from EDs may provide additional information about the epidemiological situation of ARI regarding more severe cases. Part of the AKTIN-Project is the evaluation of routinely collected ED data for public health surveillance. This includes the investigation of presenting complaint und ICD-10-diagnoses as a steady information stream to public health authorities.

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#7566 : Hypothermic trauma patients: rewarming before trauma therapy?

Preferred format : Oral presentation

Authors:

Monika Brodmann Maeder (1), Balthasar Eberle (2), Alexander Kadner (3), Andreas Bloch (4), Aristomenis Exadaktylos (1)

1. Department of Emergency Medicine, Inselspital, Bern University Hospital, Bern, SWITZERLAND
2. Department of Anesthesia, Inselspital, Bern University Hospital, Bern, SWITZERLAND
3. Department of Cardiovascular Surgery, Inselspital, Bern University Hospital, Bern, SWITZERLAND
4. Department of Intensive Care, Inselspital, Bern University Hospital, Bern, SWITZERLAND

Keywords: accidental hypothermia, multiple trauma, lethal triad, coagulation, extracorporeal life support

Abstract :

Background: Accidental hypothermia is a typical low incidence – high impact disease in emergency medicine. The combination of hypothermia and multiple trauma is a dreaded situation mainly due to the impaired coagulation resulting in increased blood loss and intensified hemorrhagic shock, well-known under as the lethal triad of hypothermia, acidosis and coagulopathy.

Results: We present three hypothermic trauma patients who arrived under CPR and underwent invasive active rewarming with extracorporeal life support ECLS before detailed trauma assessment and interventions. All three patients survived with excellent outcome.

Discussion: Since 2010, the University Hospital in Bern works with an algorithm for assessment and therapy of patients suffering from accidental hypothermia and arriving under CPR. This Bernese Hypothermia Algorithm was developed by an interdisciplinary group of anesthesiologists, cardiovascular surgeons and intensivists under the lead of an emergency physician. Severely hypothermic patients in cardiac arrest undergo a very limited trauma assessment concurrent with preparations for an active invasive rewarming. Only after rewarming, regular trauma assessment takes place. With growing experience and bearing in mind international developments (avalanche checklist and updated ERC guidelines), the group adjusted the standard to the newest version which will be presented. With the help of this algorithm, which is known to all members of the trauma teams, it was possible to save the lives of three polytraumatized, severely hypothermic patients who reached our emergency department under CPR.

Future trends in clinical research will be discussed, and the need of a register in this low incidence – high impact disease is highlighted.

#7567 : Trauma simulation: creating pressure and realism

Preferred format : ePoster

Authors:

Sereena Ansari (1), Nathan Hudson-Peacock (1), Alexander Taylor (1), Matt Ellington (2)

1. , University of Cambridge, School of Clinical Medicine, Cambridge, UK
2. Maidstone and Tunbridge Wells NHS Trust, 254 Medical Regiment, Kent, UK

Keywords: Trauma, simulation, mannequin, high fidelity, medical education, emergency medicine, battlefield, pre-hospital, military

Abstract :

Background

Simulation-based learning is becoming increasingly recognised as a valuable education method. It allows practice of both technical and non-technical skills in a safe and controlled environment. It is unclear whether high fidelity mannequins, simple mannequins, or patient actors are the most effective way of delivering this teaching. The student-led Cambridge University Emergency Medicine Society (CUEMS), in collaboration with 254 Medical Regiment and Magpas Helimedix, designed and delivered a simulation-based training course on pre-hospital and battlefield trauma scenarios to 50 UK medical students.

Method

The course consisted of five civilian/military trauma scenarios and used a combination of patient actors and simple mannequins, to enable performance of skills such as intubation. Doctors from civilian and/or military backgrounds facilitated the scenarios. Delegates were then asked to complete two questionnaires.

Results

In the general questionnaire, delegates (n=42) rated the course 9.4/10 for usefulness with 100% of the delegates saying they felt more confident dealing with a trauma patient after the course. Additionally, 98% of delegates said they felt more confident assessing any acutely unwell patient, trauma or otherwise. Those who completed the second questionnaire (n=21) felt that using a patient actor was more effective than a high-fidelity mannequin at providing realism, and for developing non-technical skills. The respondents scored an average of 4.7/5.0 when asked to what extent they agree with the statement “Using a mannequin in combination with a live patient actor is the best way to provide realism as well as time pressure in having to perform practical skills”.

Conclusion

Trauma simulation-based learning is an effective way of developing transferable skills and confidence in dealing with acutely unwell patients. Using patient actors with simple mannequins is an effective way of delivering scenarios that maintain realism and develop non-technical skills, whilst enabling technical skills to be practised under pressured circumstances.

#7568 : Orbital emphysema which becomes apparent after blowing nose

Preferred format : ePoster

Authors:

Zerrin Defne Dundar (1), Hakan Guner (1), Basar Cander (1), Sedat Kocak (1), Mehmet Gul (1)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY

Keywords: emphysema, eyelid, ethmoid bone

Abstract :

Introduction: Orbital emphysema is generally seen secondary to paranasal sinus fractures within the first 24 hours after trauma. The orbital air is absorbed by body approximately in two weeks spontaneously and orbital emphysema usually heals without any complication. We are presenting two cases of orbital emphysema.

Case 1: A 25-year-old male presented to our emergency department with sudden orbital pain and swelling of the left eyelid after blowing his nose. He had head trauma a few hours before the swelling of eyelid. In his past medical history, there is no disease. His left eyelid was swelled. There was periorbital ecchymosis and crepitation on left eye in his physical examination. His sight was normal in both eyes. Orbital computed tomography imaging revealed intraorbital free air and ethmoid bone fracture. The patient was consulted with ophthalmology and otorhinolaryngology departments. He was discharged from emergency department with recommendations of medical treatment and control visit.

Case 2: A 26-year-old female presented to emergency department with swelling of left eyelid after blowing her nose. She had no trauma history except blowing her nose. In physical examination, she had pain with palpation on her nasal bone and crepitation on her left eye in. Her sight was normal in both eyes. Orbital computed tomography imaging revealed intraorbital free air and ethmoid bone fracture. Orbital computed tomography imaging revealed intraorbital free air and ethmoid bone fracture. The patient was consulted with ophthalmology and plastic surgery departments. She was also discharged from emergency department with recommendations of medical treatment and control visit.

Conclusion: Orbital emphysema is very frightening for patients and ethmoid bone fractures may develop with blowing nose. Fortunately, the clinical course of orbital emphysema is benign in nature.

#7569 : Salivary α-Amylase levels in vertigo: can it be an autonomic dysfunction?

Preferred format : Oral presentation

Authors:

TANZER KORKMAZ (1), Serap koybasi Sanal (2), Yusuf Ozgur Bicer (2), Erdinc Serin (3), Sinan Seyhan (2)

1. , Izmir university, IZMİR, TURKEY
2. , Bolu Abant Izzet Baysal University, IZMİR, TURKEY
3. , Ministry of Health, Istanbul Training and Research Hospital, , IZMİR, TURKEY

Keywords: Salivary α-Amylase levels in vertigo: can it be an autonomic dysfunction?

Abstract :

Salivary α-Amylase levels in vertigo: can it be an autonomic dysfunction?

Salivary α-Amylase levels in vertigo

ABSTRACT

OBJECTIVES: This study aims to demonstrate a possible autonomic dysfunction based on salivary alpha amylase measurements during and after the vertigo attacks of Meniere's Disease and Benign Paroxysmal Positional Vertigo.

Study Design: Cross-sectional controlled clinical study

MATERIALS and METHODS: Patients admitted to emergency room with a diagnosis of vertigo attacks of either Meniere's Disease (n=15) or Benign Paroxysmal Positional Vertigo (n=9) constituted the study groups. The control group (n=10) consisted of volunteer patients admitted to emergencies with minor soft tissue trauma.Following the diagnosis of vertigo, saliva samples were obtained immediately during the attacks from the patients. The second and third samples were obtained on the third and fifteenth days of the attack, respectively. For the control, the first sample was obtained following admission to the hospital, with the second sample on the third day. The control group consisted ofvolunteer, healthy subjects with normal hearing (n=43). Main outcome measures:Following an audiometric evaluation, a venous blood samp. The control group consisted ofvolunteer, healthy subjects with normal hearing (n=43). Main outcome measures:Following an audiometric evaluation, a venous blood samp.

RESULTS: The difference between sAA levels of the two diseaseswas insignificant. Amylase value measured early after the Benign Paroxysmal Positional Vertigo attack was significantly lower than the control (p=0.008) Though not significant, an undulation was observed concerning both disaeses.

CONCLUSION: An autonomic imbalance could be partly demonstrated with salivary alpha amylase early after the attack in Benign Paroxysmal Positional Vertigo. This study is the first one in using amylase in vertigo.

#7570 : Education in the shockroom – daydream or reality?

Preferred format : Oral presentation

Authors:

Monika Brodmann Maeder (1), Wolf Hautz (1), Uwe Meyer (1), Thomas Sauter (1), Aristomenis Exadaktylos (1)

1. Department of Emergency Medicine, Inselspital, Bern University Hospital, Bern, SWITZERLAND

Keywords: simulation, shockroom, CRM criteria, faculty development

Abstract :

Background; Medical education underwent significant changes in the last ten years. Today, interactive learning methods replace traditional lectures. Triggered by reports like the Institute of Medicine IOM´s publication “To Err Is Human”, team trainings and interprofessional education in combination with constructive feedback are highly recommended to improve patient safety. Simulation training has become widely accepted, and many hospitals built simulation centers for their trauma teams and other groups in highly dynamic sectors of health care.

Methods: Since 2009, the Emergency Department of the Inselspital, Bern University Hospital, disposes of a dedicated interprofessional trainer team with a focus on collaboration, coordination and communication. In 2012, the ED moved into a new building, and this was the start of regular interdisciplinary and interprofessional simulation trainings in our shockroom. Since then we offer simulation trainings for the introduction of new collaborators, have regular team trainings with our colleagues from the anesthesia department and make repetitions of a sedation course which we organize together with the anesthesia department.

Results

In 2012 we were able to test the new environment with simulations. With the help of the simulation training we were able to initiate several structural adaptations. Processes could be adapted, and the participants recognized the importance of team briefings and CRM criteria. Moreover they found the training beneficial for the support within their own and other professional groups, and for fostering a safety culture, respect and empathy.

Discussion: Education in a shockroom is possible, but it needs good methodology with a focus on interactivity. The success largely depends on a dedicated team of trainers, and they need regular faculty development. Support from top-down and bottom-up is crucial, meaning that for example clinical directors must be willing to invest money and to declare the training compulsory. Coordination for teams from different professions and disciplines is challenging, but possible. The feedback of the shockroom simulation is excellent, and in the special situation of testing a new environment, simulation training helped not only for the orientation in the new rooms but also to directly make structural adaptations.

#7571 : End-of-life Decisions in Patients Admitted through the Emergency Department

Preferred format : ePoster

Authors:

Victoria Siegrist (1), Rui Mata (2), Ralph Hertwig (3), Roland Bingisser (4)

1. , University Hospital Basel, University of Basel, Basel, SWITZERLAND
2. , University of Basel, Basel, SWITZERLAND
3. , Max Planck Institute for Human Development, Berlin, GERMANY
4. , University Hospital Basel, Basel, SWITZERLAND

Keywords: end-of-life, resuscitation, intensive care, decision making, emergency department

Abstract :

Background/Objective:

End-of-life decisions (EOLD) grew more important in recent years due to an increase in elderly and multi-morbid patients. Although life can be prolonged, the main questions from the patients' perspective tend to focus on quality of life. Previous studies, e.g. in oncological settings, found that several factors may influence EOLD. Little is known about the prevalence of EOLD and underlying factors in patients presenting to the Emergency Department (ED). Therefore, we conducted a study on EOLD in patients admitted through the ED of the University Hospital of Basel (UHBS), Switzerland.

Method:

A retrospective analysis of data from all admitted patients presenting to the ED between 2012 and 2016 was performed. Patients opposing research consent, less than 18 years of age, without electronic health records (EHR), and direct boarding to another department were excluded. EOLD were categorised stepwise: preference for / against resuscitation (RES), and preference for / against Intensive Care (IC). Three preferences were identified: (i) RES yes / IC yes; (ii) RES no / IC yes; (iii) RES no / IC no. We used an ordered logit model with the 10 most suitable variables including age, sex and measures of disease. Using this regression model, we computed significance and odds ratios (OR) of the variables.

Results:

A total of 48'219 patients were admitted through the ED. After excluding all patients meeting the exclusion criteria, 14'816 patients were analysed. EHR contained EOLD in 64.8%. Patients' choices were: 78.6% (i) RES yes / IC yes; (ii) 6.8% RES no / IC yes; and (iii) 14.6% RES no / ICU no. Older age, "non-surgical" patients, a lower triage level (ESI 4-5), a higher number of diagnoses, and a higher number of previous hospitalisations were significant for (ii) and (iii), i.e. forgoing life-prolonging interventions. The most important factors to forgo life-prolonging interventions were age (OR=3.7), and "non-surgical" (OR=2.7). Cancer, depression, dementia, sex and the Charlson Comorbidity Index (CCI) did not have a significant influence on forgoing life-prolonging interventions.

Conclusion:

The most important factor to forgo life-prolonging interventions is age. The influence of "non-surgical" increased the odds. This may be explained by the patients' decision to undergo surgery, obviously being a predictor for other life-prolonging interventions. Interestingly, diseases, such as cancer, depression, or dementia did not have an impact on EOLD. Further research is needed to understand reasons to forgo life-prolonging interventions.

#7572 : The diagnostic value of presepsin in sepsis and the prognostic value of the comparison with SOFA, APACHE II scores

Preferred format : Oral presentation

Authors:

Hasan Babadostu (1), Basar Cander (1), Mümüne Babadostu (2), Sadik Girisgin (1), Zerrin Defne Dundar (1)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY
2. Internal Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY

Keywords: presepsin, sepsis, lactate, mix venous oxygen saturation

Abstract :

Objective: Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection. Presepsin is released during infectious diseases and can be detected in the blood. Presepsin has shown promising results as sepsis marker. We examined the diagnostic and prognostic validity of presepsin in patients suspicious of sepsis on admission in the emergency department.

Methods: Prospective study was conducted in the Meram Medical Faculty of Necmettin Erbakan University between June 2014 – June 2015. Eighty two patients with signs of sepsis, severe sepsis and septic shock and sixty six control patient individuals were enrolled. The value of presepsin was determined on admission and presepsin levels compared with APACHE II and SOFA scores.

Results: In the presepsin patient and control groups, there was a significant difference between the groups in terms of admission presepsin levels ($p=0.006$). While the mean presepsin level was 3.16 ± 4.64 in the patient group, it was 1.92 ± 1.95 in the control group. C-reactive protein (CRP), SOFA, lactate and APACHE II scores were significantly different between the patient and control groups (for all, $p<0.001$). In this study presepsin can be used as an appropriate biomarker in the prognosis of sepsis.

Conclusions: As a result presepsin is a suitable diagnostic test in the diagnosis of sepsis. At the same time lactate and CRP levels can be used as biomarkers in the prognosis of sepsis. However, more studies are required to confirm these findings.

#7573 : Shock index predict mortality in geriatric trauma patients

Preferred format : Oral presentation

Authors:

Amina Jebali (1), SARRA JOUINI (1), Amel Maaref (1), Houssem Aouni (1), Dorra Chtourou (1), Ines Chermiti (2), Bechir Bouhajja (1)

1. Emergency Department, CHU Charles Nicolle, tunis, TUNISIA
2. Emergency Department, CHU Charles Nicolle, Tunis, TUNISIA

Keywords: Shock index, mortality, geriatric, trauma

Abstract :

Back ground:

Shock index (SI) (heart rate/systolic blood pressure) is a simple marker of worse outcomes after injury. Assessment of injury severity and hemodynamic instability in geriatric trauma patients is often difficult owing to their altered response to injury (1).

Purpose: The aim of this study was to assess the utility of SI in predicting mortality in geriatric trauma patients.

Participants and Methods:

We performed a prospective analysis on traumatic patients presented to the Emergency Department from March 2014 to December 2015. Patients 65 years or older were included.Transferred patients, patients dead on arrival, missing vitals on presentation, and patients with burns were excluded.A cut-off value of SI greater than or equal to 1 was used to define hemodynamic instability.

Results:

A total of 45 geriatric patients were included. The mean age was 74 ± 6 years,71% were males, median Glasgow Coma Scale (GCS) score was 11 (range, 3-15), median Injury Severity Score (ISS) was 25 (range, 4-75), and mean SI was 0.78 ± 0.4. The initial value of SI greater than or equal to 1 was noted in 10 geriatric trauma patients (22%). Mortality at one month was significantly elevated in patients with SI≥1 [70% (n=7) vs 37% (n=13)].

Conclusion:

SI is an accurate and specific predictor of morbidity and mortality in geriatric trauma patients. It allows accurate assessment of these patients and is an effective tool that can be implemented in a prehospital setting for the triage of geriatric trauma patients.

1. Viraj Pandit and al. J Trauma Acute Care Surg. 2014;76(4):1111-15

#7574 : Howlong We Must Follow Paroxysmal Atrial Dysrhythmia due to Electrical İnjury?

Preferred format : Oral presentation

Authors:

VOLKAN ÜLKER (1), HİLAL HOCAGİL (1), ABDULLAH CÜNEYT HOCAGİL (1)

1. EMERGENCY MEDİCİNE DEPARTMENT, BULENT ECEVİT UNİVERSİTY, FACULTY OF MEDİCİNE, ZONGULDAK, TURKEY

Keywords: elctrical injury, burns, atrial dysrhythmia, medical cardioversion

Abstract :

Background: Electrical injury should cause a wide spectrum of cardiac complications ranging from myocardial necrosis with ventricular fibrillation to less common atrial fibrillation. Atrial fibrillation is not a common arrhythmias. Recommendations on cardiac monitoring were published for certain risk factors, but indications for hospital observation are less clear especially for length of observation time. According to current guidelines, the risk of late arrhythmias is not known. We present a case of paroxysmal atrial fibrillation with rapid ventricular response resulting from a low voltage electrical injury.

Case Presentation: A 35 years old construction worker with no prior history of cardiovascular disease presented to the emergency department after an electrical shock from accidentally touch of his truck haulage to the electrical conduit. He experienced severe pain in both hands and foot. He denied to loss of his consciousness. He experienced to fall backwards and hit her back and head to the floor. On initial assessment he was found to be in atrial fibrillation with a moderate to rapid ventricular rate. Transient rise in markers of muscle damage were noted. After analgesia and wound care, monitorization was continued. Troponin T and renal function tests normal. His transthoracic echocardiography revealed no structural abnormality. After cardiology consultation with patient stable conditions 300 mg amiodarone infusion made with in 1 hour. And then 900 mg amiodarone was performed within 24 hours after anticoagulation was made for protect from embolization. As consideration of follow up as 24 hours, his dysrhythmia was resolved nearby foolowing 14 hours. After resolution of atrial arrhythmias his cutaneous wounds were bandaged and the patient was discharged with cardiology follow up.

Conclusion: Atrial fibrillation in the setting of electrical injury is rarely reported previously.The path of electrical conduction involving heart may herald cardiac dysrhythmia involving atrial and ventricular structures. In patients without loss of consciousness, cardiac arrest, rhabdomyolysis and history of cardiac structural abnormalities, medical cardioversion is a potential option for restoration of normal sinus rhythm and resolution of other symptoms after electrical cardiac injury like atrial fibrillation with rapid ventricular response within 24 hours.

#7575 : Written complaints for excessive waiting time in an emergency department 2010-2015.

Preferred format : Oral presentation

Authors:

CARLES GREOLES ROYO (1), JOSEP MONTESINOS COTS (1), GABRIELA MADALINA GRECU (1), CLAUDIA ROMERO RAMIREZ (1), JORGE ALCALA ANIENTO (1), ANA ESTEBAN VILLACAMPA (1), MARIA ARENAS PRATS (1)

1. EMERGENCY, FUNDACIO HOSPITAL SANT PAU I SANTA TECLA, EL VENDRELL, SPAIN

Keywords: complaints, health culture, emergency department, pacient satisfaction

Abstract :

Introduction

Introduction

The Spanish public health system is considered one of the most highly valued in developed countries. It is characterized by being universal, public funding, equal access and regionally managed . In spite of its free access, time factor is especially important in Accident and Emergency departments, even after triage. Patients increasingly attend hospital emergency departments and this increase does not need technically demanding explanations, basically because experts have a very simple reason, it is a quality service, free and available 24 hours a day, 365 days a year.

In all Western countries a gradual increase in demand for hospital emergency care and inappropriate use of this medical service has been identified. The study of complaints made by customers in A&E departments represents a parameter of quality of care that allows us to assess patient's satisfaction.

Objectives

Main objective

1-To analyse the user’s profile in the health system that makes a written complain regarding waiting time in the Accident and emergency department of the hospital del Vendrell.

Secondary objectives:

2-To analyse a possible relationship between the waiting time recommended at triage and written complaints

3-To analyse whether patients that leave the department before being seen by the medical team make a written complain as well

Material and method.

A descriptive,retrospective study of all the wroten complaints for excessive waiting time sent to Emergency Department of Vendrell Hospital over 5 consecutive years, .from January 1st 2010 to December 31st.The Vendrell Hospital is district general hospital in Catalonia and attends 75000 adult and pediatric emergency visits year.

Results

During the 5 years studied, the emergency department received a total of 878 written complaints, 490 were for waiting time, 55% were female, with an average age of 44 years.

The time slot, showed that higher claims were at the evening, 26% of the complaints were from pediatry. The 77% of the complaints were written by the reference population and 23% from outside the area.

The 100% of waiting time complaints were for emergency levels 4-5. 33% of users had made over 12 visits in primary care in the last year.

98 % of visits made by level 4-5 were in the recommended waiting time

Conclusion

The user profile for those who attended the emergency room service and filed a complaint is as follows:

Young patients (<45 years) who do not frequent the hospital service often, with isolated visits to the emergency room service (<5 /year). Patients come from the bordering sanitary region and they present minor pathology levels (level 4/5). They typically attend the service in the afternoon with 20% quitting the premises and less than 10% returning within the following 24 hours.

#7576 : Pilot implementation of structured triage system in emergencies: Qualitative assessment of perception of the health team to change

Preferred format : Oral presentation

Authors:

Valentina Duarte (1), Karen Soto (1), Gloria Valdes (1), Viviana Ampuero (1), Jonathan Bustos (2), Jorge Zenteno (2), Fabian Rodriguez (2), Veronica Del Fierro (3), Pedro Gallardo (4), Susana Fuentealba (3)

1. Emergency Department, Hospital Carlos Van Buren, Valparaiso, CHILE
2. IT Department, Hospital Carlos Van Buren, Valparaiso, CHILE
3. Subsecretaría de Redes Asistenciales, Ministerio de Salud, Santiago, CHILE
4. IT Department, Ministerio de Salud, Santiago, CHILE

Keywords: triage, emergency department, qualitative assesment

Abstract :

The concept of triage is defined as the process of preliminary clinical assessment ordering patients according to their urgency / severity before diagnostic and therapeutic assessment complete. The triage system ensures the categorization of patients with the aim that the most urgent priority patients are visited when the situation arises eventual service expected.
Adult Emergency Department of Hospital Carlos Van Buren has a triage system following the recommendations given by the Commission Report Urgent Care approved in 2013. The scale in our unit categorizes patients into five levels and establishes waiting times for medical evaluation; It is performed by a professional (nurse) accompanied by a technician.

Since December the Chilean Ministry of Health starts programming a pilot for the implementation of a new triage tool nationwide where 16 hospital centers for evaluation 2 triage system: Manchester Triage System (MTS) and Emergency Severity Index (ESI)

In our emergency department training with structured triage system was completed in December 2015 and trial run began on 1 March.
The specific initial and continuing training and professional experience triage in an emergency room is essential and unavoidable, inherent pillars staff must carry out this activity. Incorporating a triage system structured as a tool for prioritizing the demand for care in emergency units represents a change in the way they work on the selector Demand, as well as a change in the way users will attend.

The aim of the study was to evaluate the perception of the health team to the implementation of the pilot of a structured triage system in emergency department.

#7577 : Can single dose of duloxetine induce hyponatremia in a middle-aged male patient? A case report

Preferred format : Oral presentation

Authors:

TANZER KORKMAZ (1), Funda Karbek Akarca (2), Selen Urke Come (1), Cem Ertan (1)

1. , Izmir university, IZMİR, TURKEY
2. , Ege University, IZMİR, TURKEY

Keywords: Duluoxetine, hyponatremia, young male patient, somatic symptoms

Abstract :

Can single dose of duloxetine induce hyponatremia in a middle-aged male patient? A case report

Abstract

Introduction: Duloxetine is a serotonin/norepinephrine reuptake inhibitor, used for treating major depressive disorder, diabetic neuropathy, fibromyalgia, generalized anxiety disorder and chronic musculoskeletal pain.[1] The cases of hyponatremia induced by duloxetine have rarely been reported. We report a case of hyponatremia induced by duloxetine developed rapidly after a single dose medication in a middle-aged male with somatic symptoms.

Case: A 28 years old male patient presented to the Emergency Department (ED) with fatigue and dizziness. The patient declared that he had a single dose of duloxetine which was he was prescribed for somatic complaints. A routine laboratory work-up showed a significantly low sodium level (Na= 121 mg/dl). The patient had no known predisposing factors for hyponatremia. Vital signs and physical examination, including neurological evaluation, were normal. The patient's presentation complaints were completely resolved after duloxetine was ceased and normal saline treatment was given.

Discussion: When treating patients with depression and somatic symptoms, close monitoring for clinical and laboratory evidences of drug related adverse and side effects, such as hyponatremia, are essential.

Brugioni Lucio

#7578 : LAT gel efficacy in children’s procedural pain-related fear: an Italian observational study

Preferred format : Oral presentation

Authors:

Brugioni Lucio (1), Francesca Mori (2), marcello Baraldi (3), Daria Tosatti (2), Andrea Righetti (4), Chiara Pignatti (4)

1. Medicina Interna Area Critica, Azienda Ospedaliero Universitaria Policlinico Modena , Modena, ITALY
2. Medicina Interna Area Critica, Azienda ospedaliero Universitaria Policlinico di Modena, Modena, ITALY
3. Pronto Soccorso, Ospedale di Vignola, Modena, ITALY
4. Medicina Interna Area Critica, Azienda ospedaliero Universitaria Policlinico di Modena, modena, ITALY

Keywords: LAT gel, pediatric, analgesia, pain, suture

Abstract :

LAT gel efficacy in children’s procedural pain-related fear: an Italian observational study

Background:

Pain influences the structural development of brain, thus its treatment is fundamental in pediatric patients. Sedation and analgesia are widely applied strategies to manage acute procedural pain and anxiety in the emergency departments (EDs) but a standardized management’s protocol has been not still approved in children. Application of LAT (lidocaina 4%, adrenalina 0,05%, tetracaina 0,5%) gel, a topical anesthetic, on lacerations before painful procedures seems to be as effective as intradermal anesthetic infiltrations to reduce the procedural pain but a few studies were conducted on children in Italy. The aim of this study is to test the effectiveness on procedural pain and anxiety of LAT in a Italian pediatric population.

Materials and methods:

34 children (0 -14), who presented a superficial laceration to the ED of Pavullo’s Hospital (MO; Italy), have been assessed by the pain’s Numeric Rating Scale (NRS) at the Triage. Then LAT has been applied on the clean lacerations and covered by a plaster about 30-45 minutes before suturing. During the suture, the children’s pain has been revalued by different scales based on age (FLACC in patients <3 years old; Wong-Baker in patients 4-7 years old; VAS in patients >8 years old). We analyzed the localization of lacerations, the need of further analgesia, and side effects probably associated to LAC treatment. Mucosal laceration localized on nose and ears were excluded from the LAT’s treatment.

Results:

The superficial lacerations were localized on head (85%), on upper limbs (6%) and on inferior limbs (9%). Only two children needed further analgesia: one is treated with intranasal Midazolam, and the other one with subcutaneous injection of Lidocaine. Children didn’t present side effects to the drug.

Conclusions:

This study demonstrates that LAT treatment before suturing is useful to minimize pain-ralated fear during suture, to simplify the management of pediatric patients in ED and to improve the children’s compliance to therapeutic practices. These Italian findings are consistent with international literature about this topic, leading the way to extend the use of this drug in adults and elderly people.

#7579 : Effect of crowding on length of stay for common chief complaints in the ED.

Preferred format : ePoster

Authors:

Linnéa Wickman (1), Per Svensson (1), Therese Djärv (1)

1. , Karolinska UH, Stockholm, SWEDEN

Keywords: Crowding, LOS

Abstract :

Introduction: Increasing patient numbers is a growing problem in emergency departments (ED's) all around the world. In Stockholm, the capital of Sweden, the number of patients acquiring emergency care is increasing by 4.5 % annually. However, the resources of the ED's are not increasing at the same rate. The growing workload, further enhanced by difficulties in finding inhospital beds for patients in need of further medical attention, causes crowding to arise in the ED. Crowding is amongst other things associated with a long length of stay (LOS), as well as a prolonged time to administration of analgesics and antibiotics. It is not known whether the effect of crowding on length of stay is equal across different chief complaints.

Aim: To determine the effect of crowding on LOS in the 10 most common chief complaints in the ED.

Materials and methods: All adult visits (*n*=19,200) on weekdays between 8 a.m. and 9 p.m. to the ED at Karolinska University Hospital in Solna, Sweden, in 2012 were divided into groups based on chief complaint (the ten most common or others), priority given at triage (acute or non-acute) and occurrence of crowding at the time of arrival to the ED or at a later time during the visit (yes or no). Crowding was measured by the patient/bed-ratio. By calculations of the median LOS, comparisons were made between the different crowding subgroups for each chief complaint.

Results: The greatest increase of LOS was seen in the group with swelling/pain in extremity (145 % amongst high-acuity patients, 125 % amongst non-acute patients), non-acute patents where chief complaint had not been recorded (119 %) and patients with flank pain (87 % amongst high-acuity patients, 117 % amongst non-acute patients). The smallest increase of LOS was seen amongst the high-acuity patients with wounds (6,5 %), high-acuity patients with unspecified chief complaint (30 %) and patients with chest pain (32 % amongst high-acuity patients, 45 % amongst non-acute patients).

Conclusions: The effect of crowding on LOS is not equal across different chief complaints. Chest pain is associated with a smaller impact on LOS, while swelling/pain in extremity and flank pain is associated with the greatest increase of LOS. Non-acute patients are more greatly affected by crowding.

#7580 : Are parent-uploaded You-tube videos of unwell children a useful source of information for other parents?

Preferred format : Oral presentation

Authors:

Knight Katie (1), Dorothy M Van Leeuwen (2), Oostenbrink Rianne (2), Damian Roland (3), Moll Heneriette (2)

1. Children's Emergency Medicine , North Middlesex University Hospital, London, UK
2. Paediatrician, Erasmus MC, Rotterdam, THE NETHERLANDS
3. Children's Emergency Medicine , Leicester University, Leicester, UK

Keywords: Video, Social Media, You-tube, Croup, Dehydration, Parent, Information

Abstract :

BACKGROUND – YouTube, the third most popular website in the world, is a vast repository of user-uploaded video content and a potential source of freely accessible medical information. To our knowledge no study has identified or focused on parent uploaded videos which describe illness in their children.

OBJECTIVE – to be able to describe the quantity, quality and use of videos featuring unwell children posted on YouTube by their parents, and the implications for and use of these videos in educating parents.

METHODS – Croup and dehydration were the two medical conditions used for comparison. YouTube was searched for videos using the search terms 'croup' and 'dehydration' from servers based in the United Kingdom (UK) and the Netherlands on October 6, 2015. The first 400 videos were searched and videos which clearly had been uploaded by parents or caregivers selected for evaluation. Videos created by doctors or by educational institutions were excluded.
The included videos were analysed independently by two research students and two paediatricians for different characteristics (duration, likes/dislikes, number of views) and technical quality (using the validated VRS system with a total maximum score of 5 to rate light, sound, angle, resolution and duration).
Independently of this, each video was assessed for whether it represented a good clinical example of the condition or not.

RESULTS – for the condition croup there were 40 videos which met the criteria for inclusion after 400 videos had been screened. The 40 corresponding videos had a wide range number of views (142 – 121928). Out of 40 videos, 14 (35%) were judged to be a good clinical example. Only 7 of these 14 videos were also found to be of high technical quality, meaning that 7 of the videos judged by the study team to be a 'good clinical example' were of poor technical quality.

For the condition dehydration a total of 28 videos met the criteria for inclusion. 2 of 28 (7%) parent uploaded videos were judged to be a good clinical example. Both these videos had good technical quality (score 4-5).

In most videos of both conditions, the reason for upload was unclear.

CONCLUSION – Useful and high quality videos do exist for the condition croup (a clearly defined condition), but this was not the case for dehydration (a vaguer symptom). Some of the videos for croup could be used as educational material. However, these videos will not always be obvious to those searching and it can be hard to find these informative videos in the large amount of information available.
Conversely, parents could be confused by apparently high technical quality videos (which have good light, sound and picture quality), which are not in fact good clinical examples.
Further research into reason for uploading should be undertaken to understand why videos are uploaded which could be beneficial for understanding parents' health seeking needs. YouTube could be a useful information source for parents if clearly guided.

#7581 : Spontaneous Pneumomediastinum: Differentiation Diagnosis and Management

Preferred format : ePoster

Authors:

Chia-Hsi Chen (1), Yueh-Feng Tsai (2), Tak-Yee Wong (3), Yi-Chun Su (1), Jui-Fang Huang (4)

1. Department of Emergency Medicine, St. Martin De Porres Hospital, Chia-Yi, TAIWAN
2. Department of Thoracic Surgery, St. Martin De Porres Hospital, Chia-Yi, TAIWAN
3. Department of Radiology, St. Martin De Porres Hospital, Chia-Yi , TAIWAN
4. Department of Education and Research, St. Martin De Porres Hospital, Chia-Yi, TAIWAN

Keywords: chest pain, heavy weight loading, pneumomediastinum, subcutaneous emphysema

Abstract :

Background & Objectives:

The primary spontaneous pneumomediastinum is not frequent. In other studies this disease usually has one benign course and conservative treatment could be enough. The follow up procedure can be performed in outpatient service. On the other hand secondary spontaneous pneumomediastinum should need further management including some invasive procedure to find out the induced sources and make appropriate treatment. How can we make an appropriate differentiation diagnosis between primary and secondary spontaneous pneumomediastinum. We review our cases and try to find the key point of differentiated diagnosis and set up an appropriate management strategy.

Participants and Methods: We take a retrospective review of all spontaneous pneumomediastinum(SPM) cases between May 2011 and March 2016. 17 cases are included. We separate these patients into two groups. One is primary SPM and the other is secondary SPM. The clinical outcomes are recorded including past history, mechanism, present symptoms and signs, complications and demands for investigation studies or admission. The radiologic films are reexamined by the radiologic doctor.

Results

In this study the primary SPM group has 6 cases and secondary SPM group are 11 cases. The all patients have at least one symptom of Meckler's triad. There are 76.5 % of cases complaining of chest pain and are the most common symptom complained. 33 % cases of primary SPM and 27.3 % cases of secondary SPM have sore throat or hoarseness. The Mackline effect is noted on 29.4% of all SPM cases. Most patients of primary SPM belong to young age and there usually is one individual matter induced such as heavy physical straining. In the secondary SPM the disease sources are more complex such as cough induced by asthma or chronic lung disease, dental or auditory tract wound infection, trauma by fishbone or blunt contusion and mediastinitis. Unfortunately the blood examination can't be used for differentiation diagnosis.

Discussion and Conclusion: In this study we find primary SPM is combined with heavy physical straining and usually has one benign course. The organ injury rarely occurs but secondary SPM should take further managements. Additional investigation with esophagography or other invasive procedures should be performed to exclude the infection, trauma or organ perforation. The chest computer tomography (CT) can be used for diagnosis but the air leak site is usually not found on CT. When there are clinical conditions such as asthma, chronic lung disease, s/p head or neck operation, foreign body miss-wallowing or blunt trauma with any symptoms of Meckler's triad found, the secondary SPM should be highly suspected. The further treatments and managements will be necessary.

Reference:

1. Paulette I. A., Adesola C. A.,Michelle L. P., Mark V. M. Spontaneous pneumomediastinum in the pediatric patient The American Journal of Surgery 210, 1031-1036, 2015

#7582 : Development of a web-based tool to facilitate the admission process at Swedish emergency departments

Preferred format : ePoster

Authors:

Osvaldo Gonzalez Gonzalez Balladares (1), Lena Berg (1), Björn af Ugglas (1)

1. , Karolinska University Hospital, Stockholm, SWEDEN

Keywords: emergency department, bed management, crowding, in-hospital admission, waiting times, implementation, boarding, web-based tool, solution

Abstract :

Emergency department (ED) crowding is an internationally increasing problem that has negative effects on clinicians' workload, patient experiences of the quality of care provided and ultimately patient safety. Previous research concludes that there is need for new innovations in order to get an overview of ED crowding and find solutions to deal with it. One aspect contributing to ED crowding is long boarding times (the time interval from where a decision about admission to in-hospital care is taken until the patient physically leaves the ED). However, it is often difficult to easily overview the amount of ED boarders. In order to visualize ED patients boarding time and to facilitate the admission process of ED patients to in-hospital care a computerized web-based tool has been developed at the department of emergency medicine at Karolinska University Hospital in Stockholm, Sweden.

The web-based tool is easily reached from a computers web browser it visualizes and logs different activities during the patients' ED visit. For example the amount of patients that are currently registered at the ED, time to triage, time to physician, ready for admission and the boarding time that follows before physically leaving the ED. When a physician makes a decision that a patient shall be admitted to in-hospital care the physician creates an activity log in the electronic patient record that says "ready for admission". Since the tool is linked to the patient record, the patient will now show up in the tool along with information such as personal number (not accessible for all users, depends on their level of security), triage level, chief complaint, ED medical section, which in-hospital ward that is preferred, current boarding time, length of stay at the ED and name of responsible physician. This is a cue for the hospital-bed managers at the ED to start searching for an in-hospital bed. The web-based tool draws most of the previously mentioned data from the hospitals electronic patient record (EPR), therefore very little input is required by the physicians and hospital-bed managers to get information into the system.

The web-based tool has been implemented at the department of emergency medicine at Karolinska University Hospital and is primarily used by the hospital-bed managers at the ED. The tool has improved their working environment, workload, and communication with the admitting physician. The tool has also proven to be effective to departments that do not use hospital-bed managers since these departments easily can retrieve information about which patients that are waiting for a bed at their in-hospital wards. All information from the web-based tool is stored in a central data warehouse, outside the EPR, from which data is quick and easy to extract and analyze. This facilitates the possibility to make continuous organizational improvements based on real-time data in a cheap and easy way. The next step is to develop the tool so it can be used for distribution of all in-hospital beds and not only for beds allocated to patients admitted via the ED.

#7583 : Willingness to work of hospital staff in disasters, a national survey of the fight or flight study group

Preferred format : Oral presentation

Authors:

Luc Mortelmans (1), Christel Hendrickx (2), Marc Sabbe (3)

1. Dept Emergency Medicine, ZNA, Antwerp, BELGIUM
2. Hospital disaster management, AZ Jan Portaels, Vilvoorde, BELGIUM
3. Dept Emergency Medicine, UZ Gasthuisberg, Leuven, BELGIUM

Keywords: willingness to work, disaster, hospitals, Belgium

Abstract :

Objectives: To evaluate the willingness to work of hospital staff and factors promoting it in different mass casualty settings.

Background: When disaster strikes, getting care to the victims is at the top of everyone's attention. But who will provide that care? A part of the hospital personnel will be absent as they are inflicted in the incident whereas the management expects that the rest deploys a higher engagement to cope with the surge. However, care for inflicted family and fear of becoming a secondary victim could prevent people to go to work.

Material and methods:

4 groups (physicians, nurses, administration and supportive services) in Belgian hospitals were presented an online questionnaire checking for demographics, knowledge of and intention to work in 11 potential MCI disaster scenarios.

Results:

The Ebola outbreak, a train derailment with toxic release and the Paris / Brussels attacks raised national awareness which allowed us to score in 18 hospitals after the 7 hospital pilot. Ten more are ready to join giving a nationwide coverage.

Preliminary results reveal an overall highest response rate in the physician group where more than 1/3 works unconditionally. The supportive services score second best (27%) followed by the nurses (22%) and administration (21%). Highest response rate in all groups is found in seasonal influenza epidemics (54% works unconditionally). Ebola has the lowest rate of unconditional response (13%). Incidents where people will not respond to work, even with the risk of losing their job, are Ebola and nuclear incidents (9.5% and 8.8% respectively). Since the West African Ebola outbreak, there is a clear downwards trend in willingness to work in these circumstances.

The majority of personnel will work under conditions. Factors that convince people to respond are in order of importance: availability of appropriate personal protective equipment, free availability of preventive medication or antidotes, insurance that family is safe, regular feedback on the evolution of the incident, previous training and communication channels with the family.

Conclusion:

Hospital managers should be aware that just a part of their personnel would come to work unconditionally in case of a disaster. Local evaluation can help identifying promoting measures to maximize response.

#7584 : STAR: STrengthening high Altitude Research – reaching consensus using the Delphi technique

Preferred format : Oral presentation

Authors:

Monika Brodmann Maeder (1), Giacomo Strapazzon (1), Matiram Pun (1), Hermann Brugger (1)

1. Institute of Mountain Emergency Medicine, EURAC, Bolzano, ITALY

Keywords: high altitude medicine, Delphi technique, research, Utstein

Abstract :

Background: The number of clinical and basic research studies in high altitude medicine has increased in the last decade. Studies are heterogeneous and have limited impact on clinical practice. The aim of the STAR (Strengthening high Altitude Research) project is to use the approach of standard reporting systems like the Utstein style to create a list of parameters essential for clinical research in high altitude medicine.

Method: The project uses the Delphi process to collect expert input on essential parameters and definitions for high altitude research and will derive a final checklist via consensus of an expert group, renowned for their expertise in high altitude research.

Results: As per today, more than 30 renowned experts from all over the world accepted to participate in this Delphi process which will last from May until the end of 2016. In February 2017, the list of essential parameter for clinical research in high altitude will be presented at the Hypoxia Conference.

Discussion: The aim of the presentation is to show an ongoing process aiming for transparency and consensus finding for clinical research in high altitude.

#7585 : National pilot structured triage system: Experience in emergency department Hospital Carlos Van Buren

Preferred format : Oral presentation

Authors:

Valentina Duarte (1), Karen Soto (1), Gloria Valdes (1), Viviana Ampuero (2), Jonathan Bustos (3), Fabian Rodriguez (3), Jorge Zenteno (3), Pedro Gallardo (4), Veronica Del Fierro (5), Susana Fuentealba (5)

1. Emergency Department, Hospital Carlos Van Buren, Valparaiso, CHILE
2. Hospital Management Department, Servicio de Salud Valparaiso-San Antonio, Valparaiso, CHILE
3. IT Department, Hospital Carlos Van Buren, Valparaiso, CHILE
4. IT Department, Ministerio de Salud, Santiago, CHILE
5. Subsecretaría de Redes Asistenciales, Ministerio de Salud, Santiago, CHILE

Keywords: triage, emergency department, qualitative assesment

Abstract :

Emergency care in any health situation represents a permanent challenge in order to provide quality care within which the opportunity turns out to be decisive. From the health point of view the demand for emergency services depend directly of prevention and health promotion of the population and the response capacity of local health strategies devices.
Of the four stages that make up the process Emergency Care, the thread selection or Prioritization Demand Attention has been defined as the first clinical thread by which ensures the chance of patient care.
Adult Emergency Department of Hospital Carlos Van Buren has a triage system following the recommendations given by the Commission Report Urgent Care approved in 2013. The scale in our depertment categorizes patients into five levels and establishes waiting times for medical evaluation; It is performed by a professional (nurse) accompanied by a technician.
However, this system has been listed as subjective and currently poses implement a structured triage system. The goal of structured triage is to manage the influx of users, to be attended by urgency and not presented in order of arrival; a structured triage system has higher reliability and validity than the current system.
Currently there are several models of classification standard, universalized, structured and standardized 5 levels adapted to the emergency department: Australian Triage Scale (ATS); Canadian Emergency Department Triage and Acuity Scale (CTAS); Manchester Triage System (MTS); Emergency Severity Index (ESI) and Model Andorrà Triatge (MAT), which was adopted as the standard model for Spain with the name of Spanish Triage System (SET)

Since December the Chilean Ministry of Health starts programming a pilot for the implementation of a new triage tool nationwide where 16 hospital centers for evaluation 2 triage system: Manchester Triage System (MTS) and Emergency Severity Index (ESI). In our emergency department training with structured triage system was completed in December 2015 and trial run began on 1 March.

The aim of the study is to present the experience of working with a structured system of triage as a preliminary result of the national pilot at local level in the emergency department of Hospital Carlos Van Buren; the variation observed in categorizing compared to the same period in the last year was assessed.

#7586 : Can We Use High Sensitive Troponin T as a 30 Day Mortality Predictor in Pulmonary Embolus in Emergecnt Medicine Department?

Preferred format : Oral presentation

Authors:

VOLKAN ÜLKER (1), AHMET DEMİRCAN (2), HASAN KARABULUT (3), SELAHATTİN GÜRÜ (2), AYÇA ÖZEL (4), BAŞAK ALTINBAŞ (2), İSA KILIÇASLAN (2), AYFER KELEŞ (2), FİKRET BİLDİK (2)

1. EMERGENCY MEDİCİNE DEPARTMENT, BULENT ECEVİT UNİVERSİTY, FACULTY OF MEDİCİNE, ZONGULDAK, TURKEY
2. EMERGENCY MEDİCİNE DEPARTMENT, GAZİ UNİVERSİTY, FACULTY OF MEDİCİNE, ANKARA, TURKEY
3. EMERGENCY MEDİCİNE DEPARTMENT, DR ASKİM TUFEKCİ STATE HOSPİTAL, ADANA, TURKEY
4. EMERGENCY MEDİCİNE DEPARTMENT, DISKAPI YILDIRIM BAYEZİD EDUCATİON AND RESEARCH HOSPİTAL, ANKARA, TURKEY

Keywords: Pulmonary Embolism, High Sensitive Troponin T, Mortality Predictor, Emergency Medicine Department

Abstract :

Introduction: Pulmonary Thromboembolism, almost (%90) originated from deep femoral veins as a complication of separated thrombus or fragments from deep vein thrombosis**.** PTE is second common, sudden and unpredictable cause of mortality who come to outpatient clinics. We aimed to investigate the predictive power of hsTnT in 30 day prognosis of PTE diagnosed patients.

Material and Method: This prospective cross-sectional clinical study has been carried out between 01.04.2012 and 31.03.2013 in Gazi University, Faculty of Medicine, Department of Emergency Medicine. High Sensitive Troponin T test was performed in all patients in Pulmonary Thromboembolism.

Results: Patients which had high mortality in 30 days were significantly tachycardia, tachypnea, lower pulse saturation and malignancy history (Mann Whitney U test, respectively p:0,041, p:0,002, p:0,027 and p:0,011). Patients that high levels of hsTnT were good correlation about 30 days mortality prediction. (correlation coefficient: rho: + 0,567). HsTnT has 88% sensitivity and 28% specificity about prediction of 30 days of mortality.

Conclusion: HsTnT can be used in patients that diagnosed a PTE, which can predict right ventricle dysfunctioning. HsTnT is easy applicable, repeatable and short duration test. Given the advantages of hsTnT, it seems to be appropriate for use prediction of bad prognosis which patients diagnosed a PTE.

#7587 : Testing the performance of the modified confusion assessment method for the ED (mCAM-ED)

Preferred format : Oral presentation

Authors:

Florian Grossmann (1), Wolfgang Hasemann (2), Christian Nickel (1)

1. Emergency Department, University Hospital Basel, Basel, SWITZERLAND
2. Department for Practice Development, University Hospital Basel, Basel, SWITZERLAND

Keywords: delirium, geriatric, assessment, emergency medicine, emergency nursing

Abstract :

Background

Delirium is highly prevalent in older Emergency Department (ED) patients and is associated with unfavorable outcomes. If not detected in the ED, delirium is likely to be missed during the entire hospital stay. However, detection of delirium in the ED is challenging. When using an unstructured approach, 50-70% of the cases are missed. Therefore, we developed the mCAM-ED, an adaption of the original Confusion Assessment Method (Inouye SK, et al. 1990). The mCAM-ED is designed for use by ED clinicians (nurses, physicians) and meets the demands of the busy ED environment. Its feasibility was confirmed at the ED bedside in a previous study.

In this prospective study we aimed to test performance criteria of the mCAM-ED against a gold standard.

Method

In order to avoid selection bias, all ED patients aged ≥ 65 were included consecutively during a 10 day period. A mCAM-ED assessment was performed by trained nurses. Thereafter a geriatrician, blinded to the mCAM-ED results, assessed the patients using DSM criteria. Performance criteria were calculated.

Preliminary results

In total 401 patients were eligible (aged 65 or older), of which 298 patients were included into the analysis. Main reasons for exclusion were: decline to participate (27), immediate discharge (23), communication problems (19), treatment in the resuscitation room (13), other (21). Raw data are currently being processed. If accepted, final results will be presented at EUSEM 2016.

Discussion

Subject to the final analysis we hope to show - in addition to its already proven feasibility - that the mCAM-ED is a valid tool for use in older ED patients.

#7588 : Orderliness of rescue service in case of biological hazards realized by State Fire Department in Poland – example of Małopolska region.

Preferred format : ePoster

Authors:

Arkadiusz Trzos (1), Katarzyna Długosz (1), Jacek Nitecki (1), Karol Łyziński (1)

1. , Department of Disaster Medicine and Emergency Medicine, Kraków, POLAND

Keywords: biological hazards , Orderliness, rescue

Abstract :

Title: Orderliness of rescue service in case of biological hazards realized by State Fire Department in Poland – example of Małopolska region.

Introduction: In Republic of Poland several institutions are responsible for biological rescue. Chief Sanitary Inspectorate is the leading one. However most rescue operations are undertaken by State Fire Department.

Method. Analysis of current state of realizing legal requirements by Fire Department. Structure, equipment and procedures concerning biological rescue in Małopolska – taking into account current state and further development. Analysis of interventions undertaken so far.

Results: Development of biological rescue within State Fire Department was greatly stimulated by bioterrorism hazard after the year 2000 (Anthrax). Chief Sanitary Inspectorate is the leading institution in case of biological hazard. Fire Department units can be dispatched only after the Sanitary Inspectorate has assessed the situation as serious biological threat. State Fire Department acts under the supervision of Chief Sanitary Inspectorate and Ministry of Internal Affairs. Fire Service units are equipped mainly with gear to self-protect and decontaminate buildings, vehicles, etc. Decontamination of people, healthcare institutions and ambulances should be done by healthcare units. These are currently being equipped in order to be able to perform this task.

There are isolation rooms for patients presenting biological hazard in large airports.

Actions connected with biological hazard are realized by specialist chemical and ecological fire service rescue groups.

Conclusion: It is necessary to perfect procedures, so that it is clearly stated how particular services need to cooperate in case of biological hazard. Large number of such institutions makes it difficult to organize joint training.

#7589 : Should We Be Treating Hypotensive Pulmonary Embolism Patients With Fluids? – A Review Of The Literature

Preferred format : ePoster

Authors:

Laura Ashton (1), Matt Edwards (2)

1. Royal Free NHS Foundation Trust, Barnet Hospital Intensive Care Unit, London, UK
2. Kings College Hospital Foundation NHS Trust, Kings College London, London, UK

Keywords: pulmonary embolism, critical care, intravenous fluids, shock

Abstract :

Background

5-8% of patients presenting with Pulmonary Embolus (PE) meet the criteria for acute massive pulmonary embolism (AMPE), defined as PE causing hypotension (SBP<90mmHg) or with clinical evidence of shock. AMPE carries a considerable 90 day mortality of 52.4%.

Intravenous fluids are common practice in the Emergency Department (ED) to treat hypotension and shock. Published guidelines, however, offer little guidance on the best strategies for supportive treatment prior to definitive medical or surgical therapy. It is unclear whether liberal use of IV fluids is beneficial in this population.

Aims

To evaluate published literature for evidence of efficacy of intravenous fluids in improving cardiac output and/or mortality in acute massive pulmonary embolism, and summarise therapeutic physiological rationale.

Methods

A systematic review was conducted using multiple databases and search tools with keywords: Pulmonary embolism, massive pulmonary embolism, haemodynamic, shock, fluid. and excluding children and chronic pulmonary embolism. Citation searches were also performed from authoritative text books.

Results

Two reviewers selected 2 case reports, 3 crossover animal studies and 1 prospective crossover study from 433 results.

Discussion

There is good experimental data. Three separate studies in the 80s Molloy ’84 Ghignoue ‘84 and Belenkie ’89, demonstrated marked worsening in right ventricular dysfunction and/or death in hypotensive dogs with AMPE following treatment with volume and strongly recommended noradrenaline as the ‘drug of choice for acute resuscitation.’

However, in 1979 Hauser and Shoemaker demonstrated improvements in cardiac index and Qs/Qt shunt of a AMPE patient following 500ml boluses of colloid, hypothesising that IV fluid worked by redistribution of blood flow to underperfused lung. Similarly in crossover trial of 13 intensive care patients Mercat et al. 1999 observed an increase in cardiac index with volume loading but the patients were hypotensive or in the acute phase of the disease so difficult to apply to the acutely decompensating patient in the ED. Within the examined literature, the physiological rationale for treating acute right heart failure with IV fluids is inconsistent and difficult to apply or test within the ED without invasive cardiovascular monitoring.

One of the most recent reviews on management (Matthews and McLaughlin 2008) IV fluids are not advised at all in initial supportive measures, preferring that patients “should immediately receive vasopressor support.” Other reviews are more cautious reinforcing the view that these patients are preload dependent so intravascular volume should be optimised in conjunction with vasopressors. Hypotension in AMPE is clearly not due to hypovolaemia so liberal use of IV fluids is not recommended.

Conclusion

While published literature provides us with no good human RCTs to justify the use of fluid boluses in AMPE, there is similarly no good evidence for harm. This notwithstanding, the haemodynamic rationale for limited and restricted use of fluids based on experimental data is extremely compelling. A rationale based on clinical judgement of the patient’s volume status, followed by very early consideration of vasopressors and/or inotropes can be recommended.

#7590 : Orderliness of chemical rescue service In Poland – example of Małopolska region.

Preferred format : ePoster

Authors:

Karol Łyziński (1), Jacek Nitecki (1), Arkadiusz Trzos (1), Katarzyna Długosz (1)

1. , Department of Disaster Medicine and Emergency Medicine, Kraków, POLAND

Keywords: chemical rescue , State Fire Department , hazard, Małopolska region

Abstract :

Introduction: State Fire Department is responsible for chemical rescue operations in the Republic of Poland. Structure and functioning of chemical rescue has been presented using the example of Małopolska region.

Method: Analysis of current state of realizing legal requirements by Fire Department. Structure, equipment and procedures concerning chemical rescue in Małopolska. Analysis of interventions undertaken so far.

Results: Level of training, equipment and task assignment leads to the following division of chemical rescue:

Basic level – rescue actions undertaken by each Fire Department unit.

Specialist level – undertaken by specialist chemical and ecological rescue groups.

Two basic operation areas can be outlined:

Area of rescue action – ensuring rescuers' and scene safety, removal of dangerous agent, etc.

Area of chemical recon – action utilizing specialist analytical techniques

Tasks of chemical rescue services on specialist level are divided into three levels:

Level A – actions such as recognizing and identifying hazard, verifying danger zone, evacuation, etc.

Level B – level A actions along with combined rescue/evacuation of casualties, animals and saving the environment and property, evaluating danger scale and limiting its development.

Level C – level A and B actions along with complex chemical action, including mass decontamination of people and rescue operation during situations of considerable size.

Conclusion: Chemical rescue in Małopolska region is highly developed and does not diverge from current international standards. In the area of operations undertaken, there are fewer interventions considering dangerous goods transportation, while the number of interventions concerning environmental hazards is at constant level.

#7591 : Tuberculous meningitis with pulmonary miliary tuberculosis: case report

Preferred format : ePoster

Authors:

Houda Nasri (1), feten Amira (1), Asma Aloui (1), Salwa Amri (1), salwa Mansouri (1), Alaa Zammiti (1), Bechir Bouhajja (1)

1. Emergency department, Charles Nicolle Hospital, Tunis, TUNISIA

Keywords: Tuberculous meningitis , miliary tuberculosis

Abstract :

Introduction: Central Nervous System (CNS) Tuberculosis (TB) is the most dangerous form of extrapulmonary TB. It occurs in approximately 1% of all patients with active tuberculosis (1). It includes meningitis, intracranial tuberculomas and abscesses. The diagnosis and treatment of tuberculosis meningitis (TBM) is still a clinical challenge. We report a case of TBM with pulmonary miliary tuberculosis.

Case report: A 30 year-old male was admitted in the emergency department with complaints of high grade fever, weight loss, decreased appetite and generalised weakness for 1 month. On admission, the patient looked ill, he was confused, disoriented. Physical examination revealed: temperature 39°C, heart rate: 110 beats/min, blood pressure: 150/60 mmHg, respiratory rate: 18 inspirations /min. He had neck stiffness, the auscultation of the lungs was normal. The Investigations show: White blood cell count: 6360 element /L, with 79% neutrophils and 6,8% lymphocytes, Hb 13 g/dl, Platelets: 290000/mm3 , C-reactive protein: 103 mg/l, Na+ :121mmol/l , glycemia:7,5 mmol/l , creat :66 µmol/l. Computed tomography scan of the brain was normal. The cerebrospinal fluid test was clear, with leucocyte count at 10 10^3/ml, the glucose level was: 0.85 mmol/l (ratio 0,15) and the protein level was: 1,98 g/l. HIV and Hepatitis B and C serology were negative.

Chest X-Ray showed typical milliary pattern. Thus, the diagnosis of TBM was highly suspected and antituberculous chemotherapy, with isoniazid, rifampicin, ethambutol and pyrazinamide associated with dexamethasone was initiated. Clinical improvement was noted after the first week of therapy.

Conclusions: TB is still a major public health problem in the world, and there is a rising tendency of extra pulmonary TB incidences especially in immune suppressed adults. The specificity of our patient is that no predisposing or associated conditions have been documented.

1- Guy Thwaites, Martin Fisher , Cheryl Hemingway, Geoff Scott, Tom Solomon, John Innes. British Infection Society guidelines for the diagnosis and treatment of tuberculosis of the central nervous system in adults and children. Journal of Infection :2009: 59, 167-87.

#7592 : The experience at Rajavithi Hospital on August 17, 2015: Preparedness, response, and lessons learned

Preferred format : ePoster

Authors:

Nopmanee Tantivesruangdet (1), Nirutchara Kokuldilok (2), Lek Kanjanakomut (3), Teerachai Ukritmanoroat (4)

1. Emergency consultation, Department of Emergency,Rajavithi Hospital,College of Medicine, Bangkok, THAILAND
2. Trauma Nurse Coordinator, Rajavithi Hospital, Bangkok, THAILAND
3. plastic surgery Doctor, Rajavithi Hospital, Bangkok, THAILAND
4. surgery consultantation, Rajavithi Hospital, Bangkok, THAILAND

Keywords: Disaster;Response; mass casualty; Bangkok bombing2015;Rajavithi Hospital

Abstract :

Background:There was a 10fold increase in terrorist bombing around the world between 1968and 1980, with 5075 events document.Conventional explosive devices are typically categorized into broad categories:"ordinary explosives"and"high explosives".Trinitrotoluene(TNT) are high explosives designed to detonate very rapidly,typical with only a few microseconds.The magnitude of the shock wave at the blast front, know as positive phase impulse,is animportant factor determining the severity of blast-related injury.Overpressure is the major force generating primary blastinjury(PBI), under pressure force are the principlemechanism involved in producing secondary and tertiary blast injury.The distance fromRachaprasong intersection to Rajavithi hospital were 4 kilometers.RajavithiHospital has 1,200 bed hospital located on VictoryMonoment,Rachatheve district,Bangkok.There are totallyof 42 intensive care unit beds,4 Burn unit beds,120 ventilator equipments.We have pre-hospital resources teams compose of onedispatch center,3 ambulances(ALS level team). OnAugust17,2015,within minutes of the major terrorist event.This explosion involved the detonationof ammonium-nitrate material(300 kilograms TNT-equivalent) inside the Erawan Shrine at the Rajprasong intersection in Pathumwan district at 6.55PM.The event involved 19 hospitals in Bangkok for 163 injuried patients,20 death, coverd about40 square meter.

Objectives:To study the effective clinical response to patients from a bombing event will require coordination and cooperation amoung multiple medical specialties.

To identify available hospital beds, discharging patients,caring for patients,and providing addition support during the response.

Methodes:Rajavithi hospital received totally 8 patients factual information from events on August 17, 2015, were collectd from public media.Also materials for the hospital preparedness plan were derived from the hospital's emergency department(ED), plan for disaster, drafted by the Rajavithi administration.The data on August 17,2015, was collected retrospectively from departmental logbook individual chart review andRajavithi trauma registry Database.

Results:The ED saw the 6 patients(75%)arrived at Rajavithi Hospital with in first hour after explosion.The5 patients(62.5%)of patients triaged in EDwho required hospital admission.The5 patients(62.5%) transport to hospital by ambulances 1 ALS;3BLSand 1FR but only 3 patients(37.5%) could you discharge. Length Of Stay(LOS) 4-62 days(median6).Their median age of ED patients assessed was 18-38(median25) years old. All of them were female(100%).TheGlasgow Coma Scale(GCS)ranged from 11-15(median15).The 2 patients(25%) presented to the ED had an injury Severrity Score (ISS)>15. No death detected in Rajavithi Hospital.

Conclusion:The information should help emergency physician,specialist surgery doctor,nurses,ICU directors and disaster committee plan for mobilization of resources in response to Terrrorist Mass Casualty Event caused by explosives.

#7593 : Effective knowledge translation in the paediatric emergency department

Preferred format : Oral presentation

Authors:

Michael McCarron (1), Adrian Bonsall (1), Mary McCaskill (1)

1. Emergency Department, The Children's Hospital at Westmead, Sydney, AUSTRALIA

Keywords: knowledge translation, paediatric, emergency, sepsis

Abstract :

There is often a gap between knowledge and clinical practice. Knowledge translation seeks to bridge that gap through recognition of the barriers faced by clinicians and identifying strategies to overcome them, thereby facilitating the implementation of evidence-based practice. We explored the effectiveness of a number of knowledge translation techniques in revising the care given to patients requiring peripheral intravenous cannula (PIVC) insertion in the Emergency Department.

PIVC insertion is an invasive procedure causing significant distress in children. NSW Health guidelines aimed at monitoring the procedure require that the details of PIVC insertion are documented in the patient record. Prior to this study, there was no standardised procedure for recording PIVC insertion on the electronic patient health record in the emergency department at The Children’s Hospital at Westmead.

The aim of this observational study in the Emergency Department at The Children’s Hospital at Westmead is to determine the effectiveness of strategies to influence the practice of clinicians in relation to recording details of PIVC insertion. A template for recording details of the placement of an intravenous cannula was introduced into the medical record. The use of the template was quantified every week over a 6 week period. Approval for the study was given by the Sydney Children's Hospital Network Ethics Review Committee.

Data was collected prospectively on patients who were cannulated whilst in the emergency department and then analysed looking for completion of the template. The interventions were introduced every two weeks over a 6 week period. Interventions were employed in a staggered fashion to facilitate assessment of the effectiveness of each individual component as well as the effectiveness of the overall multi-faceted approach. The interventions included the placement of laminated notice in key clinical areas where venous access procedures are carried out; an education session aimed at medical and nursing staff alongside a brief education tool at medical and nursing handovers; notification of the template use in the departmental newsletter; and audit performance report provided by email.

A total of 1477 patients were included over the 8 week study, of which 705 (48%) had completed PIVC insertion templates. Staff education resulted in a 43% increased use of the template in week 1 which was sustained in week 2. The placement of laminated notices in key clinical areas saw a further 10% increase in template use in weeks 3 and 4. There was an overall decline in template use in subsequent weeks of the study despite the audit performance report.

The interventions used aim to address common barriers to knowledge translation such as lack of staff awareness, no engagement of staff, lack of relevance to individual practice and fading of initial enthusiasm. Staff education is a successful tool for implementing change in clinical practice. However, there exist difficulties in maintaining staff engagement and enthusiasm for the change in practice. Scope for further research should include identifying the causes of this decline. Innovative tools for addressing this loss of engagement and enthusiasm are required.

#7594 : Acute cardiogenic pulmonary edema: the efficacy of prehospital treatment

Preferred format : ePoster

Authors:

Paul Slavu (1), Ciprian Juravle (1), Claudia Ciora (1), Corina Sintea (1), Ioana Radu (1), Sorina Podariu (1), Diana Harambas (2), Iris Muresan (3)

1. PARAMEDIC, SMURD SIBIU, Sibiu, ROMANIA
2. ANESTHESIOLOGIST RESIDENT, COUNTY HOSPITAL, Timisoara, ROMANIA
3. LECTURER, "Lucian Blaga" University of Sibiu, Romania, Sibiu, ROMANIA

Keywords: prehospital, acute pulmonary edema, treatment

Abstract :

BACKGROUND

SMURD (Mobile Emergency Service for Resuscitation and Extrication) Sibiu MICU was sent in the last 4 years to a significant number of emergency cases (reported as shortness of breath, chest pain and unconsciousness) diagnosed as acute cardiogenic pulmonary edema.

Although shortness of breath, chest pain and unconsciousness can be associated with several acute or chronic illnesses, one life threatening condition is acute pulmonary edema. Without proper and prompt medical care, mortality rate is increased, therefore preventing the cardiovascular collapse and the acute respiratory failure is vital.

The aim of this study is to asses the proper path of treatment by relying on internationally guidelines for acute pulmonary edema in different clinical presentations and blood pressure groups. We analysed the effect of age on response to treatment, correlating the systolic blood pressure (SBP), oxygen saturation (SpO2) on admission with the dosages of nitrates, diuretics and opiates.

MATERIAL AND METHODS

Data was obtained from SMURD Sibiu medical database, for a period of 4 years, between 01.01.2012 and 31.12.2015. From the total number of alerts dispatched to MICU were selected 138 cases of acute pulmonary edema.

RESULTS

From a total number of 138 patients with acute pulmonary edema, 7 patients had aged below 40 years (Group A), 76 with ages between 40-75 years old (Group B) and 55 patients with ages over 75 years old(Group C).

While following the results of the administrated treatment:

1. From Group A:

- 2 patient with *SBP<140 mmHg and SpO2<85%, 1 had an improved medical condition when nitrates, diuretics and opiates were used, and 1 deceased on the way to hospital , although CPR was performed.*
- 2 patients with *SBP>140 mmHg* and SpO2<85% have improved their condition when using higher doses of nitrates and diuretics.

2.From Group B :

- 7 pacients with *SBP<140 mmHg and SpO2<85%,* 3 of them improved their condition when associating opiates with nitrates and diuretics,4 had persisting symptoms when using lower doses of only nitrates and diuretics.
- from the total number of patients with *SBP>140 mmHg* and *SpO2<85%, 26 patients improved their medical condition when using higher doses of nitrates, diuretics and opiates, 4 of them had persisted symptoms, after the usage of lower doses, 2 of them deceased on the way to hospital*

3.From Group C:

- 10 patients with *SBP<140 mmHg and SpO2<85%,* 7 improved their condition, 2 had persisting symptoms and 1 had his condition aggravated after using lower doses of nitrates and diuretics.
- 22 patients with *SBP>140 mmHg* and *SpO2<85%,* 15 improved their condition and 7 had persisting symptoms on higher doses of nitrates, diuretics and opiates.

CONCLUSIONS

Higher doses of nitrates and diuretics were associated with better improvement to patient condition, than the use of lower doses to patients from Groups B and C. Also our data suggested that opiates administration enhances even more the chances of recovery.

Response to treatment was significant for patients from Group A comparing to other groups, when using only nitrates and diuretics comparing to other groups.

#7595 : Analysis of Prehospital Emergency Medical Service missions in Croatia for 2015

Preferred format : ePoster

Authors:

Branka Tomljanovic (1), Maja Grba-Bujevic (2), Ingrid Bosan - Kilibarda (3)

1. Emergency medicine, Croatian Institute of Emergency Medicine, Zagreb, CROATIA
2. Emergency medicine, Croatian Institute of Emergency Medicine, Karlovac, CROATIA
3. emergency medicine, Croatian Institute of Emergency Medicine, Zagreb, CROATIA

Keywords: non urgent patients, Prehospital Emergency Medical Care, Emergency Medical Service

Abstract :

At the end of 2012 new organisation model for Prehospital Emergency Medical care(PEMC) in Croatia has been finished. Instead of four models which existed by then, one unique model has been established for whole country. Today, PEMC is being provided by County Institutes of Emergency Medicine (21 in total) whish consists of two types of medical field providers (medical doctor units and medical technician units). Likewise, the Institutes employ medical dispatch units staffed with medical techniciansor, in case of four largest counties, medical technicians and physicians. Location of field teams and their distribution is defined by Emergency Medicine Network, as well as location of medical dispatch centers in each county (Official Gazette 71/2012). According to Emergency Medicine Network, currently there are 595 physicians teams on 99 locations and 229 medical technicians teams on 49 locations. On 44 locations PEMC is being provided by general practitioner on duty and on 22 locations by general practitioners on call.

In 2015 Prehospital Emergency Medical Service took care for 1.363.970 patients. Out of total number of interventions, 853.212 (40.14%) were field missions and 510.758 (59.86%) were walk in patients which have been examined in resuscitation rooms on team locations. Out of total inmterventions, 97.225 (11.40%) patients were prioritized as priority A (most urgent), 299.557 (35.11%) as priority H (urgent) and 456.430 (53.50%) as priority V (no need for PEMC). Out of total of 456.430 interventions dealing with priority V, 78.522 (17.20%) were field missions and 377.908 (82.80%) were walk in patients.

Since Emergency Medicine Network is designed to cover field missions and there are no teams designated to provide stationary medical care in County Institutes of Emergency Medicine for walk in patients, large number of non-urgent patients that utilize EMS can in future jeopardize EMS team response time and delay help for emergency medical patients.

#7596 : “My head feels like it’s going to Explode!”: Massive Bilateral Temple Swelling and cellulitis resulting from a Scalp Laceration.

Preferred format : ePoster

Authors:

Gareth Fitzpatrick (1)

1. Emergency department, Galway University Hospital, Dublin, IRELAND

Keywords: Delayed, Bitemporal, scalp, swelling

Abstract :

Case History:

On St Stephen’s Day 2015, a 46-year-old male presented with an occipital laceration resulting from a fall having consumed alcohol. Due to loss of consciousness and vomiting, a CT brain was ordered. This study was normal. Simple interrupted 4-0 nylon sutures were applied to a deep, 8cm linear occipital laceration. There was minimal initial swelling. The patient was discharged with head injury and suture care advice. He represented five days later, complaining of bilateral temporal swelling, and redness and swelling to his neck.

On examination, there was significant bilateral temporal swelling, including the periorbital region bilaterally. He had developed cellulitis of the neck. Repeat CT brain revealed an extensive cresentic subcutaneous collection, overlying the posterior calvarium and extending to both temples. He was admitted for intravenous antibiotics by the maxillofacial surgery team. His scalp swelling and neck cellulitis settled gradually and he was discharged home well after five days.

Discussion:

Scalp lacerations are a common Emergency Department presentation. The best way to control initial haemorrhage is controversial. The bleeding mainly comes from vessels which retract into the loose areolar tissue in the connective tissue layer, and are therefore notoriously difficult to ligate. Solutions to control initial bleeding include Raney scalp clips[1], and diathermy. Oftentimes, quick closure of the wound, following debridement and irrigation, can be the best way to halt bleeding from a scalp wound[2]. This can be combined with direct pressure with gauze and a pressure dressing wrapped around the chin.

Despite apparent initial control of haemostasis, massive subgaleal swelling after simple scalp lacerations has been described. In the rare cases when this massive swelling presents to the Emergency Department, it can be bilateral, as the haematoma does not follow suture lines. It often presents in an insidious manner, in the days after the initial presentation. If left unchecked, such a haematoma can result in acute anaemia necessitating blood transfusion[3], hypovolaemic shock, and even death[4]. Any associated infection, such as cellulitis, must be treated aggressively, to reduce the likelihood of subdural spread.

Learning Points:

- Head Trauma sometimes leads to massive delayed swelling
- Counsel patients on this
- Prophylactically apply a pressure dressing to all deep scalp wounds

References:

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3. A missed scalp laceration causing avoidable sequelae. Basyuni S. Int J Surg Case Rep. 2016 Apr 11; 23: 61-4.
4. Fatal massive edema of the head and neck secondary to sclap laceration: repost of case. Limongelli WA. J Oral Surg 1977 Mar; 35(3): 215-18

#7597 : Spontaneous intramural small-bowel hematoma due to anticoagulants use: a case report

Preferred format : Oral presentation

Authors:

Brugioni Lucio (1), Maurizio Tognetti (2), Valentino Santori (2), Lucia Amidei (2), Francesca Mori (2), Gabriele Calderone (2), Sabrina Lupacciolu (2)

1. Medicina Interna Area Critica, Azienda Ospedaliero Universitaria Policlinico Modena , Modena, ITALY
2. Medicina Interna Area Critica, Azienda ospedaliero Universitaria Policlinico di Modena, Modena, ITALY

Keywords: small-bowel hematoma, acute abdomen, intramural hematoma, anticoagulants, hemoperitoneum, intestinal ischemia, bowel obstruction,

Abstract :

Background: Spontaneous intramural hematoma of the small intestine is a rare clinical condition that must be considered in the differential diagnosis of acute abdomen in patients taking oral anticoagulants.

Case report: We report a spontaneous intramural jejunal hematoma presenting with abdominal pain, distension, vomiting and radiological signs of small bowel obstruction. At the beginning no peritoneal irritation was detected. CT performed without contrast demonstrated intramural wall thickening involving the jejunum. Surgical intervention was later required due to the onset of signs of peritonitis and active bleeding.

Conclusion: The history of anticoagulant use in patients presenting with abdominal pain should alert the ED physician. Small bowel obstruction may be the onset, signs of peritoneal irritation may appaear due to wall ischemic necrosis and hemoperitoneum. Non-contrast CT scan is the first-line diagnostic tool, ultrasounds can be an alternative in experts hands. Early diagnosis, prompt medical treatment and close monitoring should be undertaken in the early stages in order to avoid unnecessary surgicals interventions otherwise allows to detect cases in which surgery comes to represent the therapeutic measure.

#7598 : The first emergency physician driven diagnostic algorithm for acute vertigo showed very high negative predictive value for acute brain injury: the STANDING prospective study.

Preferred format : Oral presentation

Authors:

Simone Vanni (1), Claudia Casula (2), Bigiarini Sofia (2), Peiman Nazerian (3), Cosimo Caviglioli (3), Pecci Rudi (4), Andrea Pavellini (2), Paolo Vannucchi (4), Stefano Grifoni (3)

1. Emergency Department, Azienda Ospedaliero Universitaria Careggi, firenze, ITALY
2. Emergency Department, Azienda Ospedaliero Universitaria Careggi, Florence, ITALY
3. Emergency Department, Azienda Ospedaliero Universitaria Careggi, Firenze, ITALY
4. Vestibology Unit, Azienda Ospedaliero Universitaria Careggi, Florence, ITALY

Keywords: Vertigo, unbalance, stroke, acute brain injury, emergency physician

Abstract :

Background

Vertigo and unbalance are frequent complaints in emergency department (ED), often due to a benign disease. However, the possibility of an acute brain disease is not remote and vertigo assessment is usually time and resource consuming. We aimed to investigate the diagnostic accuracy of an ED driven diagnostic algorithm.

Methods

Consecutive adult patients presenting with vertigo/unbalance to a third level university hospital in Florence, from October 2015 to March 2016, were considered for the study. The STANDING is a four steps algorithm, which includes the discrimination between **S**pon**TA**neous and positional **N** ystagmus, the evaluation of the **D**irection of the nystagmus, of the head **I**mpulse test (HIT) and of the standin**G** position. Reliability of each step was analysed in a subset of patients by Cohen's k calculation. The reference standard (central vertigo) was a composite of acute brain injury at initial head imaging or a diagnosis of stroke, demyelinating disease, neoplasm or other new-onset brain disease during 3 months follow-up, adjudicated by an independent panel of experts in vestibular disease and neuroimaging.

Results

Three hundred and fifty one patients were included with a mean age of 57.6±18 years, with a slight prevalence (59.5%) of females. We found an incidence of acute brain disease of 11.7% (95% CI 8.5%-15.5%). The leading cause was ischemic stroke (68.3%) followed by neoplastic disease (24.4%). Each step of the STANDING algorithm showed e good reliability; the second step, the analysis of the direction of nystagmus, showing the highest (0.95) and the HIT test the lowest (0.83) agreement. The overall accuracy of the test was good (87%, 95% CI 84-88%) showing good specificity (86%, 95% CI 84-86%), high sensitivity (95%, 95% CI 83-99%) and very high negative predictive value (99%, 95% CI 97-100%) for acute brain disease.

Conclusion

The STANDING diagnostic algorithm showed good reliability and high accuracy in excluding acute brain disease in the emergency setting.

#7599 : Epidemiology of Clinically Significant Playground Injuries To Children In Korea

Preferred format : ePoster

Authors:

Suh Dongbum (1), Kwak Young Ho (1), Kim Do Kyun (1)

1. , Seoul National University Hospital, Seoul, KOREA, REPUBLIC OF

Keywords: epidemiology, playground, korea

Abstract :

Backgrounds : Most of epidemiologic study of playground equipment-related injuries are primarily conducted with data from the United States and Canada. This study used local data rather than from the United States or Canada to evaluate injuries within the playground.

Aim : This study used the Korean Center for Disease Control(KCDC) data set investigates the factors of clinically important playground injuries that required inpatient treatment.

Methods : We identified and retrospectively reviewed patients aged 0-18 years old with playground injury, as evaluated in the emergency room of 6 hospitals participated in KCDC injury surveillance system in 2011. We conducted descriptive statistics and the Pearson's chi-squared test, and multinomial logistic regressions with several injury factors.

Results : There were 1,458 cases that presented in the emergency room of study hospitals with injuries in playground and injuries unrelated to playground equipment are 842 cases (57.8%). The most common injury mechanism was impact (37.0%), followed by fall (29.8%). The most common injury was laceration of the head/face/neck (24.4%), followed by contusion of the head/face/neck (14.8%) and upper extremity fracture (14.3%). Among 119 hospitalized patients (8.2%), the leading mechanism of injuries was fall (63.0%), impact (16.8%), and trip (14.3%) and the majority of the injuries affected upper extremities as the primary site of injury (70.6%). The injury that required the most number of hospitalizations was upper extremity fractures (68.1%), followed by lower extremity fracture (5.9%). Among upper extremity fractures which comprised the majority of chief complaints for hospitalization, ages 6-11 (OR 5.7; CI 1.3-25.0) and playgrounds situated in public places (OR 2.4; CI 1.1-5.3) were identified as significant risk factors.

Conclusion : The playground safety education should be emphasized for ages 6-11 group and a policy change is necessary to decrease the number of accidents within public playgrounds in South Korea.

#7600 : Quality of Danish CPR courses

Preferred format : Oral presentation

Authors:

Thea Palsgaard Møller (1), Søren Vierick (1), Thomas Egesborg Pedersen (2), Fredrik Folke (1), Freddy Lippert (1), Jens Flenstd Lassen (3), Theo Walther Jensen (1), Doris Østergaard (4)

1. EMS, EMS Copenhagen, Copenhagen, DENMARK
2. First Aid, Danish First Aid Council, Copenhagen, DENMARK
3. Chair, Danish Rescuscitation Council, Copenhagen, DENMARK
4. Head of Institute, Copenhagen Academy for Medical Education and Simulation (CAMES), Copenhagen, DENMARK

Keywords: CPR, BLS, Quality

Abstract :

Quality of Danish CPR courses for laypersons

Background

Bystander cardiopulmonary resuscitation (CPR) is important for survival from out-of-hospital cardiac arrest. Increase in bystander CPR is associated with increased survival (1). The quality of bystander CPR is likely affected by the quality of Basic Life Support (BLS) courses(2, 3). The purpose of this study was to investigate the quality and adherence to international guidelines in Danish BLS courses.

Method

Based on previous models and elements important for survival, a course evaluation sheet was developed. It included 23 elements on a five point Likert scale incorporating theoretical, technical- and non-technical skills. Six experienced BLS instructors from various organizations where trained in the use of the evaluation sheet.

Results

A total of 59 course observations where conducted with the ten of the largest national BLS providers. The results of the observations showed variation between courses in most elements. All examined courses had an announced length of three to four hours. Of the observed courses 36% had less than one hour of practical training. Most noticeable were the variation within recoil, agonal breathing, check for consciousness, telephone assisted CPR, and AED use. The preliminary results indicate an association between variation in course elements and number of participants per instructor and the length of practical training.

Conclusion

Preliminary variation in adherence to international guidelines, content, and quality has been documented in Danish BLS courses and can be used to improve future BLS courses.

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2. Wagner P, Lingemann C, Arntz HR, Breckwoldt J. Official lay basic life support courses in Germany: is delivered content up to date with the guidelines? An observational study. Emergency medicine journal : EMJ. 2014.

3. Parnell MM, Larsen PD. Poor quality teaching in lay person CPR courses. Resuscitation. 2007;73(2):271-8.

#7601 : Staff perceptions of paediatric resuscitation decisions following out-of-hospital cardiac arrest

Preferred format : Oral presentation

Authors:

Michael McCarron (1), Rachael Friery (1), Jason Hort (1)

1. Emergency Department, The Children's Hospital at Westmead, Sydney, AUSTRALIA

Keywords: paediatric, resuscitation, emergency, CPR

Abstract :

Resuscitation is unsuccessful in 70-98% of cases and survival in children is worse than in adults. A review of patients presenting to the emergency department at a tertiary paediatric hospital in Western Sydney over a 13 year period found that 100% of children died following out of hospital cardiac arrest when CPR was ongoing at time of presentation to the emergency department. Despite such poor outcomes, paediatric resuscitation attempts tend to continue for longer than in adults due, at least in part, to emotional reasons. However, there is no single predictor for when to cease efforts in the case of an unsuccessful resuscitation.

In adult practice there exists a prospectively validated set of rules for the termination of cardio-pulmonary resuscitation (CPR) in the pre-hospital setting following out-of-hospital cardiac arrest (OHCA). Currently, no rules exist for the paediatric population.

Our emergency department seeks to develop a decision-making tool which will support and guide clinical staff in reaching the decision of when to stop resuscitation in patients who present to the emergency department following OHCA who are receiving CPR on arrival. Understanding staff perceptions in relation to current practice and involving staff in the development of the decision-making tool will help ensure local staff engagement, which in turn will aid in its successful implementation.

Our survey aims to gather the perceptions of staff in relation to our current practice when deciding to cease resuscitation efforts. It also aims to describe their views on the decision process for ceasing resuscitation attempts and identify their opinion on the need for a decision-making tool within our department.

We conducted a web-based, qualitative staff survey in the emergency department of The Children’s Hospital at Westmead, a tertiary paediatric hospital and paediatric trauma centre in Western Sydney. The two-part survey assessed staff views and perceptions of paediatric resuscitation following cardio-respiratory arrest in relation to the last case in which they were involved as well as their general views and perceptions. The survey also assessed staff opinion on the usefulness of a tool to guide and support decision making in relation to ceasing resuscitation efforts.

The results of the survey will help inform the development of our decision-making tool to address the needs of clinical staff and identify potential barriers to the implementation of the tool within the paediatric emergency department.

#7602 : Implementation of principles of palliative care in Emergency Medicine in Croatia

Preferred format : ePoster

Authors:

Maja Grba-Bujevic (1), Milena Car (2), Branka Tomljanovic (3)

1. Emergency medicine, Croatian Institute of Emergency Medicine, Karlovac, CROATIA
2. emergency medicine, Croatian Institute of Emergency Medicine, Zagreb, CROATIA
3. Emergency medicine, Croatian Institute of Emergency Medicine, Zagreb, CROATIA

Keywords: palliative care, Emergency Medical Service, emergency department

Abstract :

Patients with end stage disease or at the end-of life stage (palliative patient) often present to the emergency department or ask for prehospital emergency medical service intervention because they need pain or symptoms relief. providers of emergency medical care in booth hospital and prehospital settings need to be familiarized with specific approaches to palliative patients.

Following the Strategy for development of palliative care in Croatia 2014 -2016, Croatian Ministry of Health stressed the importance of improvement of care for palliative patients in prehospital and hospital emergency medicine settings. For this purpose Croatian Institute of Emergency Medicine together with national experts for palliative care organized four regional workshops and initiated devolpment of Prehospital and hospital emergency medical service guidelines for care of palliative patients. Workshops were orginezed for prehospital and hospital emergency workers and county policy makers with aim to exchange expierence, collect suggestions and personal perspectives of their roles in the delivery of palliative care in emergency medical settings. Topics of the workshops covered improvement of palliative care knowledge, awereness of available hospital and prehospital resources and of in-house palliative care teams and their hours of availability in their local surroundings. Guidelines provide the initial information about paliative care in emergency medical settings, including symptom and pain recognition and management;describe how to conduct discussion with families and how to make critical decisions.

Next step in improvement of palliative care in emergency medicine settings is to prepare and organize training courses for emergency medical workers dealing with acute palliative patients, based on framework defined in guidelines.

#7603 : A blended team based learning initiative for a paediatric emergency medicine orientation programme

Preferred format : Oral presentation

Authors:

Arif Tyebally (1)

1. Paediatric Emergency Medicine, KK Women's And Children's Hospital, Singapore, SINGAPORE

Keywords: paediatric emergency medicine, blended learning, team based learning, education

Abstract :

Background/ Introduction

Both Blended Learning and Team Based Learning (TBL) have roots in the constructivist theory, which emphasizes learners taking initiatives in learning. Individually, Blended Learning and TBL have been shown to be useful instructional methods but there has been little research done on the combination of the two. An orientation programme in paediatric emergency medicine was developed using a combination of the two (Blended TBL). This combination, allows collaborative work on real-life clinical problems, repetition, accountability, independent learning and indirect coaching by faculty, and is likely to play an important role in preparing doctors for actual work on the ground.

Participation and Methods

The programme is compulsory for all junior doctors who rotate through Emergency Medicine at KK Women's and Children's Hospital. The Blended TBL programme comprises e-learning modules that have to be completed over a period of 3 weeks and three, weekly, face to face TBL sessions with faculty. The online modules include patient vignettes and clinical scenarios, quizzes, real time feedback to questions, web-links, self-assessment and multimedia such as videos and audio recordings to improve learner engagement. The TBL component comprises pre-class preparation via the online modules, readiness assurance tests and application exercises based on real life clinical scenarios. At the end of the programme, learner perceptions are assessed using the ETELM-LP (Evaluation of Technology Enhanced Learning Materials: Learner Perception) instrument that collects both qualitative and quantitative data.

Results

67 learners underwent the programme from November 2015 to April 2016. 94% of learners agreed or strongly agreed that the course was excellent, prepared them for work on the ground and promoted achievement of the course objectives. 91% found that the course would change their practice. The qualitative feedback revealed that the components that learners appreciated most were the multiple levels of interaction (21.3%), questions and clinical scenarios (20.4%), the relevance to real work (13.9%) and the collaborative group work (13.9%). Learners felt that the programme gave them the confidence to start work.

Conclusion

Blended Team Based learning may be a useful instructional method that combines the benefits of Blended Learning and TBL. The collaborative learning that takes place amongst peers, when real life problems are discussed and opportunities are given for reflection, may enhance learning and prepare doctors for clinical work.

#7604 : Diagnostic accuracy of emergency echocardiography and venous compression ultrasonography in patients with suspected pulmonary embolism presenting with shock or cardiac arrest.

Preferred format : Oral presentation

Authors:

Simone Vanni (1), Gabriele Viviani (1), Peiman Nazerian (2), Michele Baioni (2), Chiara Gigli (2), Cosimo Caviglioli (2), Valerio Stefanone (3), Gabriele Cerini (3), Giuseppe Pepe (2), Stefano Grifoni (2)

1. Emergency Department, Azienda Ospedaliero Universitaria Careggi, firenze, ITALY
2. Emergency Department, Azienda Ospedaliero Universitaria Careggi, Firenze, ITALY
3. Emergency Department, Azienda Ospedaliero Universitaria Careggi, Florence, ITALY

Keywords: Cardiac arrest, echocardiography, pulmonary embolism, shock, vein compression ultrasound.

Abstract :

Background. To evaluate diagnostic performance of emergency echocardiography (EEC) and of venous compression ultrasonography (CUS) in patients with suspected PE presenting with shock or cardiac arrest.

Methods. Consecutive adult patients suspected of PE, presenting with shock or cardiac arrest to four different Italian Emergency Departments, were included. All patients underwent EEC and CUS in the Emergency Department before final diagnosis. Emergency physicians expert in EEC and CUS performed the tests. PE diagnosis was established by multi-detector CT pulmonary angiography or by autopsy.

Results. We included 94 patients, with a mean age of 74±12 years. Forty (43%) patients showed RVD, 20 (21%) showed deep vein thrombosis at CUS and 35 (37%) had a final diagnosis of PE. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of EEC were 86% (CI 95% 73-94), 83% (CI 95% 76-98), 75% (CI 95% 64-82) and 91% (CI 95% 82-96), respectively. CUS showed a lower sensitivity (51%, 95% CI 40-56%) and higher specificity (97%, 95% CI 90-99%) and PPV (90%, 95% CI 70-98%) than EEC ($p<0.05$ for all). When both EEC and CUS were positive (16 out of 94 patients, 17%) the PPV rose to 100%, whereas when both EEC and CUS were negative (50 out of 94 patients, 53%) the NPV increased to 94% (95% CI 87-98%).

Conclusion. Emergency echocardiography showed high but not optimal sensitivity and specificity for PE in patients presenting with shock or cardiac arrest. The addition of CUS significantly increased specificity, so that the diagnosis of PE can be certain only when both tests are positive.

#7605 : What could be behind a pleural effusion?

Preferred format : ePoster

Authors:

Carmen Hernández Martínez (1), Daniela Rosillo Castro (1), Rocío López Valcarcel (1), Maria del Mar de la Torre Olivares (1), Estefanía Carreño Aroca (1), Paula Rodriguez Lavado (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: Hemothorax, Trauma, Dyspnoea

Abstract :

CLINICAL CASE:
Male, 78, hypertension, diabetes and dyslipidemia; with peripheral arterial disease, bipolar disorder and ischemic heart disease with inferior AMI 2002 with angioplasty and stent 2; angioplasty restenosis in 2003 and 2005. In March 2015, required ICU admission, by occlusive restenosis right coronary bypass needs (FEV1 40-45% postoperative). Also, chronic anemia with colonoscopy in December 2015 without findings.
High catarrhal consultation clinic 5 days and asthenia. Afebrile. On auscultation stands hypoventilation in left base. Chest radiography where pleural effusion evidence to half left hemithorax is performed. normal laboratory tests. Reviewing his record two months earlier and had left costophrenic breast pinching, and a month before thoracic TAC which reported massive left with passive atelectasis of the left lower lobe pleural effusion was performed. This TAC had not been seen by any physician.
Before the discovery of a pleural effusion of 2 months evolution without infectious clinical heart failure or normal analytical diagnostic thoracentesis scheduled plan proposed since no hemodynamic instability, or dyspnea. Rehistoriando left posterior rib injury concerns over a month ago. new TAC is done with contrast reports and multiple rib fractures. Thoracentesis compatible with hemothorax. Radiologically drainpipe taking more than one liter of content and instills Urokinase is placed; the tube to 72h with a resolution of the spill was removed. Diagnosis: traumatic hemothorax with multiple rib fractures.
CONCLUSIONS:
According to all current clinical guidelines pleural effusion, once discarded cardiac etiology, diagnosis is suggestive of thoracentesis and sometimes part of the treatment itself as in our case. It is recommended that the ultrasound-guided technique and if there is no clinical or hemodynamic instability can be performed on the ground.
We suspect hemothorax all closed, especially in those with chest trauma rib fractures. Initially, if the spill is low it can go unnoticed, so X control the first few hours are recommended. The treatment consists of chest drainage and instillation of urokinase cleaning helps clots in the cavity.

#7606 : High paracetamol intoxication in a young boy: the role of a toxicological approach

Preferred format : Oral presentation

Authors:

Massimo ZANNONI (1), Gianni TURCATO (2), Alberto RIGATELLI (3), Giorgio RICCI (4), Valentina SIVERO (2), Francesco BUONOCORE (3)

1. Emergency and Accident Department, Azienda Ospedaliera Universitaria Integrata, Verona (VR), Italy, VERONA, ITALY
2. Postrgraduate Emergency School, University of Verona, VERONA, ITALY
3. Emergency and Accident Department, Ospedaliera Universitaria Integrata, Verona, VERONA, ITALY
4. Emergency and Accident Department, Azienda Ospedaliera Universitaria Integrata, Verona (VR), Italy, Verona, ITALY

Keywords: paracetamol, N-acetylcysteine, intoxication, toxicloogy, emergency department, children

Abstract :

Paracetamol, belonging to the OTC group (over the counter drugs) is easily available and widely used as analgesics and antipyretic. It is used in children for its well known safety profile. On the other hand overdose and poisoning with this drug always brings about the risk of progressive hepatic necrosis and acute hepatic failure. Antidotal treatment with N-acetylcysteine (NAC), restoring intracellular glutathione, is effective in preventing hepatic injury. A previously healthy 12 years old boy, weight 65.5 Kg, was conducted to our Emergency Department (ED) for an intentional ingestion of 25.5 gr of paracetamol one hour before admission. In the ED gastric lavage followed by activated charcoal was performed at first. Antidotal treatment with N-acetylcysteine was then started at 150 mg/kg body weight followed by 50 mg/kg every 4 hours; supportive therapy was associated too. Paracetamol level was 291.6 mg/l at 4 hours from ingestion with concentration decreasing during antiodotal treatment (180.2 at 12 hours, 18.2 at 24 hours, negative after 36 hours). Laboratory tests showed coagolopathy: PT 1.31 at admission, 1.58 after 12 hours; aPTT: 0.88 (admission), 1.43 (12 hours). No other laboratory test alterations were noted. The boy was discharged home after72 hours without clinical and laboratory sequelae: PT 1.17; aPTT: 1.01.

Paracetamol overdose of 7.5-10 g leads to hepatic necrosis in adults and doses of 25 g are considered lethal to the patient. Paracetamol levels from 150/Kg body weight are tagged as potentially hepatotoxic in children. We describe a case of intentional ingestion of paracetamol at lethal dose in a young boy treated with decontamination and antidotal therapy that rapidly recovered without hepatic or renal damage. Literacy data report that paracetamol levels over 300 mg/L at 4 hours from ingestion cause severe hepatic damage in 90% of patients. Liver damage is present with parecatmol concentration of 120 mg/l, too. An early adoption of the appropriate of toxicological treatment (decontamination, reduce adsorption, supportive therapy and antidotes) avoids damages from the toxic substance. Antidote therapy is not always available for poisoning: NAC has been demonstrated to be a specific therapy and is highly effective in paracetamol intoxication. Without the antidote this young boy would not have the favourable course he had but the risk of a liver transplantation.

#7607 : Implementing coded presenting complaints to be used for symptom-based analyses of emergency department data

Preferred format : ePoster

Authors:

Felix Greiner (1), Dominik Brammen (1), Martin Kulla (2), Felix Walcher (1), Bernadett Erdmann (3)

1. Department of Trauma Surgery, Otto-von-Guericke University Magdeburg, Magdeburg, GERMANY
2. Department of Anaesthesiology and Intensive Care Medicine, Bundeswehr Hospital Ulm, Ulm, GERMANY
3. Emergency Department, Klinikum Wolfsburg, Wolfsburg, GERMANY

Keywords: Presenting complaint, chief complaint, initial assessment, documentation

Abstract :

Background:

Generally speaking, in health care research the coded diagnosis according to ICD serves as the main classification variable. However, a diagnosis is the result of anamnesis, examination and diagnostic; but the way of a patient in an acute care setting begins with a symptom or a symptom complex. For symptom-based analyses the collection of standardized presenting complaints is essential. Since there wasn't a German classification system available, the presenting complaint list of the Canadian Emergency Department Information System (CEDIS) [1] was translated into German and included into the dataset "emergency department". This dataset is the basis for data collection in the joint research project for establishing a German emergency department data registry (AKTIN) [2]. We evaluate the implementation of presenting complaints in one pilot hospital and report first results.

Methods:

All 171 presenting complaints were integrated in the electronic medical record system of a tertiary care hospital's emergency department serving 36,000 patients per annum. Additional to recording a narrative reason for visit, one coded presenting complaint was assigned during administrative admission. The medical administrative staff didn't receive specific training regarding coding of ambiguous cases. After three months, an explorative analysis was performed. Descriptive analysis comprised the calculation of frequencies and association with triage category (Manchester Triage System, MTS) and hospitalization of the patients.

Results:

8,755 patients treated in the given time period were included in the analysis. After excluding those cases coded as "unknown" the top 5 presenting complaints were: *upper extremity pain* (11.5%), *lower extremity pain* (11.5%), *abdominal pain* (7.6%), *upper extremity injury* (6.3%) and *chest pain-cardiac features* (5.6%). Extremity pain and injuries were mainly triaged as standard or non-urgent (89.1% in MTS acuity scale green or blue). *Extremity weakness/symptoms of CVA or TIA*, *chest pain-cardiac features* and *palpitations/irregular heart beat* predominated as cardiologic and neurologic complaints. They tended to be triaged as very urgent or urgent (>65% MTS category orange or yellow) and were associated with a high hospitalization rate in critical care units. *Shortness of breath* was assigned to diverse triage categories and led in 17.4% to ICU-hospitalization. The ratio of cases coded as "unknown" decreased from initial 22.0% to 13.8% in the third month.

Discussion:

The adaptation of the CEDIS presenting complaint list enables symptom-based analysis of health care provided in German emergency departments. Once integrated into the electronic medical record system, the assignment of a coded presenting complaint during patient admission requires little extra effort. So far, for grouping and further analyses a narrative reason for visit had to be coded ex post manually. Containing 171 presenting complaints, this classification system could be implemented without providing extensive training for the staff. However, e.g. due to overlapping categories, basic instruction for use should be offered to reduce the rate of cases coded as unknown. Additional to quality management, benchmarking and science, a coded presenting complaint may be used for standardization of care processes, such as clinical pathways.

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1. http://caep.ca/resources/ctas/cedis#presentingcomplaintlist

2. http://www.aktin.org/

Acknowledgements: AKTIN, funded by Federal Ministry of Education and Research: 01KX1319A

#7608 : Troponin only Manchester Acute Coronary Syndromes (TMACS) decision aid: single biomarker re-derivation and external validation in three cohorts

Preferred format : Oral presentation

Authors:

Richard Body (1), Edward Carlton (2), Matthew Sperrin (3), Philip S Lewis (4), Gillian Burrows (5), Simon D Carley (1), Garry McDowell (6), Iain Buchan (3), Kim Greaves (7), Kevin Mackway-Jones (1)

1. Emergency Department, Central Manchester University Hospitals NHS Foundation Trust, Manchester, UK
2. Emergency Department, Poole NHS Foundation Trust, Bristol, UK
3. Health eResearch Centre (HERC), University of Manchester, Manchester, UK
4. Department of Cardiology, Stockport NHS Foundation Trust, Stockport, UK
5. Biochemistry Department, Stockport NHS Foundation Trust, Stockport, UK
6. School of Healthcare Science, Manchester Metropolitan University, Manchester, UK
7. Department of Cardiology, Sunshine Coast Hospital and Health Services, Sunshine Coast, AUSTRALIA

Keywords: Acute Coronary Syndromes; Biomarkers; Clinical Decision Rules

Abstract :

Background

The original Manchester Acute Coronary Syndromes decision aid (MACS) is a computer-based model that ‘rules in’ and ‘out’ acute coronary syndromes (ACS) using high sensitivity cardiac troponin T (hs-cTnT) and heart-type fatty acid binding protein (H-FABP) measured at admission. The latter is not always available. We aimed to refine and validate MACS as T-MACS, cutting down the biomarkers to just hs-cTnT. Our primary objective was therefore to return to the derivation of the original MACS model but using hs-cTnT as the only biomarker (T-MACS), and then to evaluate the model in three separate external cohort studies. A secondary objective was to compare the predictive characteristics of TMACS to MACS and to the alternative ‘LoD strategy’, by which ACS is excluded in patients with a hs-cTnT concentration below the limit of detection (LoD) of the assay and no ECG ischaemia.

Methods

We present secondary analyses from four prospective diagnostic cohort studies including patients presenting to the Emergency Department (ED) with suspected ACS. Data were collected and hs-cTnT measured on arrival. The primary outcome was ACS, defined as prevalent acute myocardial infarction (AMI) or incident death, AMI or coronary revascularization within 30 days. AMI was adjudicated based on reference standard troponin testing (12h after symptom onset or 6h after arrival) with reference to the third universal definition of myocardial infarction. T-MACS was built by logistic regression in one cohort (derivation set) and validated in three external cohorts (validation set).

Results

In the derivation set (n=703), T-MACS could ‘rule out’ 37.7% patients with 99.3% (95% CI 97.3– 99.9%) negative predictive value (NPV) and 98.7% (95.3–99.8%) sensitivity for ACS. In the validation set (n=1,459), T-MACS could ‘rule out’ 40.4% (n=590) patients with 99.3% (98.3–99.8%) NPV and 98.1% (95.2–99.5%) sensitivity. T-MACS would ‘rule in’ 10.1% and 4.7% patients in the respective sets, of which 100.0% and 91.3% had ACS. C-statistics for the original and refined rules were similar (T-MACS 0.91 vs. MACS 0.90 on validation).

In the validation set, original MACS had 100.0% sensitivity, which was not significantly different to T-MACS (absolute difference 1.6%, 95% CI -0.7 to 1.6%, p=0.25) but T-MACS had greater specificity (absolute difference 25.9%, 95% CI 35.3 - 25.9%, p<0.0001) meaning that T-MACS would avoid more hospital admissions. T-MACS had identical sensitivity to the 'LoD strategy' (absolute difference 0.0%, 95% CI -2.2 to 2.2%, p=1.00) but T-MACS had greater specificity (absolute difference 9.8%, 95% CI 6.7 to 12.7%, p<0.0001). Thus, T-MACS would have 'ruled out' ACS in 40.4% patients (n=590) compared to 32.1% (n=468) for the LoD strategy.

Conclusions

T-MACS could ‘rule out’ ACS in 40% of patients while ‘ruling in’ 5% at highest risk using a single hscTnT measurement on arrival. It has similar sensitivity to the original MACS decision aid and the LoD strategy but greater specificity than both. As a clinical decision aid, T-MACS could therefore help to conserve healthcare resources.

#7609 : Care with fever in the psychiatric patient!

Preferred format : ePoster

Authors:

Daniela Rosillo Castro (1), Maria Dolores Pascual Muñoz (1), María de la Paz Egea Campoy (1), Carmen Hernández Martínez (1), Rocío López Valcarcel (1), David Fernandez Garrido (1), Alessandro Guaschi Caglieri (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: Neuroleptic malignant syndrome, Fever, Psychiatric

Abstract :

CASE REPORT Reason Query: 38 Patient brought to the ER for attempted suicide Personal history:

Mental and behavioral disorder opiate (methadone), with dependence criteria , use of benzodiazepines , cannabis and cocaine dependence criteria . Personality Disorder Dissocial Chronic Treatment : Bupropion , Lormetazepam , Lorazepam , Olanzapine , pregabalin, Agomelatine . He went to the emergency room the last week, referred by his family doctor, by autolytic ideas. Rated by resetting Psychiatric treatment increases the dose of olanzapine and discharged .

Present Illness : Males 38 referring the family that has been missing 2 days and they find it in your hectic home , with 4 empty blister Olanzapine 5 mg , 4 of pregabalin 150 mg, one of bupropion and , lorazepam. Brought by the emergency outpatient service sedated with midazolam and chlorpromazine and mechanical restraint
Upon arrival to emergencies: Presure blood: 99/71 Temperature 35.4 ºC. Well hydrated skin and mucous membranes, well perfused. Neurological Exploration: impossible to do on arrival at the emergency room for be the mechanical containment and patient sedated.
Complementary tests: Glucose 114, Urea 30, Creatinine 1.2, 25700 leukocytes (neutrophils 91%), hemoglobin 18.2 . . Platelets 310000 venous blood gases . 7.4 pH , pCO2 42.7 Toxic Urine positive for methadone and benzodiazepines
The patient was sedated and mechanical restraints, so passing observation area.
6:00 a.m. (5 hours after arrival to the emergency room) Call from observation area for important psychomotor agitation and fever of 39 º. Come to assess the patient, further objectifying rigidity, diaphoresis , tachycardia 13o and disorientation . Analytical requested in CPK and Procalcitonina. We started of intravenous midazolam perfusion and administration of paracetamol and saline Cranial CT is requested . We suspected neuroleptic malignant syndrome versus infectious process , are advised to intensive care unit, which decides admission to its Service
Physical exploration : Glasgow 13 Neurological examination : No nuchal rigidity, no meningeal signs Analytics : CPK 16627 , Procalcitonin 0.37 Cranial CT : No significant alterations lumbar puncture: clear liquid Leukocytes 2/mm3 , Glu 69, 34.8 Proteins
EVOLUTION: In intensive care unit te patient is stable, maintaining normal renal function despite frank rhabdomyolysis. Hyperthermia with physical measures and antipyretics, not objectified infected focus possession. Gradually infusion of sedatives with appropriate adaptation to the environment is suspended, so it is discharged with the diagnosis of neuroleptic malignant syndrome.
Conclusion: Thee is a serious complication of the use of neuroleptics, should be suspected. in a patient who uses such drugs (olanzapine in our patient was the cause), to present: hyperthermia, rigidity and impaired consciousness (all present in our case). They may be associated with rhabdomyolysis secondary leukocytosis and elevated CK . The differential diagnosis must be made with: lethal infectious process nervous system, lethal catatonia , heat stroke and malignant hyperthermia. Although rare , it is very severe with high mortality in untreated cases early, so early diagnosis is important and appropriate treatment in mild cases: maintaining hemodynamic stability, hydration and monitoring may be sufficient.

#7610 : Development of a proforma for patients presenting to the emergency department following overdose

Preferred format : ePoster

Authors:

Mohammed Irbash (1), Wendy Duarri (1)

1. Emergency Department, Mid Yorkshire Hospitals, Wakefield, UK

Keywords: Proforma, overdose, salicylate

Abstract :

Introduction

An audit was undertaken in a District Hospital Emergency Department on all patients presenting with an overdose to evaluate if paracetamol and salicylate levels are required on all patients. The conclusions drawn from the audit suggested that given both the potential lethality of paracetamol and the high incidence of ingestion in overdoses, levels should still be taken. In the case of salicylate, however, due to the relatively low rates of salicylate poisoning and the overt signs and symptoms in the case of poisoning, the authors questioned whether they should continue to routinely take salicylate levels on all overdoses. Indeed, it has been suggested that there is no need to take salicylate levels in conscious patients who deny taking salicylates and have no clinical features of toxicity (Watson et al 2002). However, due to the wide variations in practice in recording clinical manifestations it has been suggested that a preformatted admission chart is utilised on all overdoses (Buckley et al 1999).

Method

The authors have developed a proforma to be introduced for all patients presenting with overdose. The proforma includes a section on presenting history with time of ingestion of substances. In addition the authors have included a detailed list of signs and symptoms of salicylate poisoning including sweating, nausea, vomiting, bounding pulse, tinnitus, agitation, fitting and reduced GCS (Wood et al 2009). The proforma recommends if any of these signs are present bloods should be taken for salicylate levels. In addition, a blood gas is also recommended as salicylate poisoning initially produces a respiratory alkalosis leading to a metabolic acidosis in severe poisoning (Wood et al 2009).

The authors have also included other prompts on the proforma that are necessary in patients presenting with an overdose. These include gaining information from Toxbase, Mental Health Risk assessment and referral to Pyschiatric Liaison.

Discussion and implications for practice.

It is anticipated that the use of this chart should standardise documentation within the department. Indeed during the audit one of the findings was that documentation in the department was poor for patients presenting with overdose.

Conclusion

The profoma will be rolled out into practice and it is anticipated that further audit work will be carried out to determine its effectiveness in terms of cost of laboratory work and documentation.

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#7611 : Unresolved lower abdominal pain resulted from mycotic aneurysm at the distal abdominal aorta and left common iliac artery- a rare case report

Preferred format : ePoster

Authors:

Pei-Shan Wu (1), Po-Liang Cheng (2), Yi-Kung Lee (3)

1. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, □□□, TAIWAN
2. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, Chiayi, TAIWAN
3. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, Chiayi County, TAIWAN

Keywords: mycotic aneurysm; CT; abdominal pain

Abstract :

Introduction:

Mycotic aneurysm, an infectious break in an abnormal focal arterial dilation arterial lumen, is uncommon but can affect any artery. It may be due to bacteremia or septic embolization. Timely treatment increases the likelihood of a favorable outcome, rather than leading to fulminant sepsis, spontaneous rupture, or death. We report a rare case of mycotic aneurysm at the distal abdominal aorta and left common iliac artery

Case report:

This 76-year-old man presented to the emergency department (ED) because of lower abdominal pain for 5 days. He had the past history of vertebrobasilar artery syndrome, hypertension and severe AR s/p AVR procine valve on 2014/1/16. There was also poor intake. He has ever visited other hospital, however, there was no improvement at all. So, he was brought to our ER for help. Throughtout the whole course, there was no nausea, no diarrhea or dysuria. Physical examination revealed lower abdominal tenderness without rebound pain. Initial bedside ultrasound (US) showed an disrupted arterial calcification with indistinct irregular arterial wall, and a perianeurysmal soft-tissue mass. Laboratory profiles were as follows: white blood cell count 12510/μL (3590 to 9640/μL), neutrophilic differential 73.8% (41.2 to 74.7%) and creatinine 1.14 mg/dl (0.7 to 1.3 mg/dl). Abdominal contrasted-CT demonstrated aneurysm with maximal diameter around 30.0 mm, partial thrombosis and periaortic fat strandings at the distal abdominal aorta to left common iliac artery (Fig. 1a and 1b). He was admitted to cardiosurgeon's service and received antibiotics treatment. After 3 days later, the blood culture reported Salmonella group D non Typhi.

Discussion:

According to the literature review, the clinical presentations of mycotic aneurysms are diverse, dependending on the involved artery. Most patients are febrile or septic. However, some may be silent. In our patient, it involved in the distal abdominal aorta and left common iliac artery, which resulted in lower abdominal pain. Without medical or surgical management, mycotic aneurysms carry a very high mortality. Emergency physicians have to keep a high index of suspicion to prevent the life threatening condition. Sonographic evaluation of the aorta could help us to make the definite diagnosis. CT is considered the gold standard for diagnosis.

#7612 : Rehospitalization decrease with intravenous isosorbide dinitrate in acute decompensated heart failure

Preferred format : ePoster

Authors:

Jérémy Chambord (1), David Attivi (2), Véronique Thuus (3), Claire Zeghmouli (1), Stéphane Gibaud (1)

1. Department of Pharmacy, Centre hospitalier de Neufchâteau, Neufchâteau, FRANCE
2. Department of Pharmacy, Centre hospitalier de Neufchâteau, Neufchateau, FRANCE
3. Department of Cardiology, Centre hospitalier de Neufchâteau, Neufchâteau, FRANCE

Keywords: acute decompensated heart failure, isosorbide dinitrate, vasodilator, readmission, rehospitalization

Abstract :

Rehospitalization decrease with intravenous isosorbide dinitrate in acute decompensated heart failure

Background and aims:

According to new recommendations on management of acute decompensated heart failure (ADHF) in 2015, intravenous vasodilator therapy might be given as an early therapy when systolic blood pressure is normal to high (≥110 mmHg). It was reported that only 29% of patients with ADHF are treated with vasodilators without medical contraindication. In our hospital, the only intravenous vasodilator used is the isosorbide dinitrate (IDN). Study data were analyzed to investigate the effects of IDN on 180-day hospital readmission for ADHF or acute coronary syndrome (ACS), in-hospital mortality, length of stay, intensive care unit (ICU) admission, and ICU length of stay.

Methods:
This is an observational study. CHOV (Centre Hospitalier de l'Ouest vosgien, Lorraine, France) registry data-base was analyzed for this study. All AHF episodes with hospitalization in cardiology or ICU between 01/11/2013 and 01/12/2015 were included. Patients with both ADHF and ACS (troponin I > 0.05 µg/L), low systolic blood pressure (<110mmHg) or patient without admission in emergency department were excluded. Finally, 199 hospitalizations were included in this analysis. Eligible patients were categorized into 2 groups depending on the administration of IDN: IDN group and Without IDN group. Clinical characteristics, medications, and outcomes were obtained from patient-records.

Results:
37 patients were included in the IDN group (18.6%) and 162 patients in the Without IDN group (81.4%). In the IDN group, median time to IDN initiation was 2.1 hours. The IDN group was associated with higher systolic blood pressure (P: 0,0004) and higher proportion of acute pulmonary edema (P<0.0001). There were no statistically significant difference between the both groups for medications. 180-day hospital readmission was lower for patients who were receiving IDN (8.1% vs 22.8%, p: 0,04). Patients who received IDN required more ICU admission than the other patients (54.1% vs 33.3%, p: 0,02). There were no statistically significant difference between both groups for mortality, length of stay and ICU length of stay.

Conclusions:
The administration of IDN was associated with fewer 180-day readmission events for ADHF or ACS. These observational data could be explained by subendomyocardial ischemia caused by elevated ventricular filling pressure and increased systemic vascular resistance. IDN may minimize or prevent the consequences of altered hemodynamics.
Higher ICU admission rate for IDN group could be related to institutional policies requiring vasodilator-treated patients to be admitted to the ICU.
Low guidelines adherence reported and lower rehospitalization rate with DNI observed in this study, call for a change in our current practice.

#7613 : The role of immigrant background on presenting complaints, patient outcomes and resources in the emergency department

Preferred format : ePoster

Authors:

Leandra Kim Schultze (1), Christian Nickel (1), Roland Bingisser (1)

1. , Emergency Department, University of Basel , Basel, SWITZERLAND

Keywords: emergency department, emergency medicine chief complaints, triage, health care disparities, immigrants, immigrant background, nationality, Switzerland

Abstract :

Background/Objective:

The influence of immigrant background on presenting complaints and the health care setting in Emergency Departments (ED) has not been investigated so far in Switzerland. It is known from other countries that immigrants present to ED more frequently and with more irrelevant presenting complaints than the host-population. Furthermore, there is evidence of inequitable treatments during the ED process depending on immigrant background regarding longer waiting times, lower triage levels and less access to opioids. This study focused on the disparities of the outcomes, which to our knowledge has not been described yet.

Methods:

Prospective observational study performed at a tertiary hospital, including all patients who presented to the emergency department over a period of 6 weeks. The questionnaire included demographics, measurements of presenting complaints and diagnostic resources. Outcomes were categorised in terms of serious-outcome, hospitalisation, ICU-use and in-hospital-mortality. Serious-outcome was defined as an acute morbidity requiring early intervention (e.g. use of antibiotics) to avoid deterioration of health status, disability or death. Patients were counted as host-population (HP) if the country of origin was Middle or North Europe (e.g. Switzerland, Germany, Austria etc.). Patients were categorized as immigrants (I) if the country of origin was not part of Middle or North Europe (e.g. Mediterranean countries, South Eastern Europe, East Europe, Turkey, Africa, Asia, North America/Australia or South America). Patients were triaged by the Emergency Severity Index (ESI).

Results:

A total of 5634 patients presented to the ED, of which 4654 were included to the study and 4638 patients giving full information about their country of origin. Among the latter, 67.8% were inhabitants of Middle or North-Europe (HP) and 32.3% were categorized as Immigrants (IM). Immigrants presented at younger age (IM = median 39 years (range 14–97); HP = median 60 years (range 15-106)), were more often male (IM = 54.8% male, HP = 50% male) and were assigned a lower triage level (ESI-score). IM and HP matched in 4 of the 5 most commonly presented complaints (accident, stomach ache, wounds and chest pain) but differed in oral and maxillofacial surgery and otolaryngology ENT/OMS problems (IM) and fall (HP). IM were less likely to have a serious-outcome, to get hospitalized, to need intensive care or to die in hospital. Both groups were given equal diagnostic resources according to their level of triage (ESI-score).

Conclusion:

Immigrants presenting to a Swiss tertiary hospital Emergency Department were at younger age and more often male. Immigrants and Host-population presented with comparable symptom distribution but differed in the level of triage. Immigrants were less likely to develop severe outcomes.

#7614 : Development of a nurse led pathway for patients presenting to the emergency department with renal colic

Preferred format : ePoster

Authors:

Mohammed Irbash (1), Wendy Duarri (1)

1. Emergency Department, Mid Yorkshire Hospitals, Wakefield, UK

Keywords: pathway, nurse, renal colic

Abstract :

Introduction

Following the successful introduction of a nurse led PV bleed pathway into a District Hospital Emergency Department the authors decided to examine other conditions whereby the patient can be safely discharged by a nurse following a strict inclusion/exclusion criteria and discharge plan. Having been successfully implemented elsewhere in the UK (Cherry 2005) the authors decided to develop a pathway for Renal Colic.

Method

In establishing exclusion criteria the authors agreed on the following presentations; evidence of hypovolaemia or shock, urinalysis positive to leucocytes or nitrites, positive pregnancy test, pyrexia, testicular pain, pre existing aortic aneurysm or over 50 years age. This criteria was established as a safety net to ensure other potential causes of the pain are not overlooked, some of which could be life threatening. This follows a similar criteria used by Cherry (2005) who found their approach to be safe and effective. Kartal et al (2006) suggests using major symptoms in a renal colic algorithm so the inclusion criteria was established as unilateral abdominal/back/flank pain with a urinalysis positive to blood.

The pathway then moves on to a plan of care including pain management based on recommendations in the literature (Kastner & Tagg 2003) to give 100mg diclofenac PR and cocodamol 30/500 x2 PO or alternatively tramadol and paracetamol for those sensitive to the previous.

The pathway also includes taking routine bloods which if found to be abnormal the patient should be referred to ED physician. The end of the nurse led protocol is to book a CT KUB or ultrasound KUB (females of child bearing age). These investigations will provide a definitive diagnosis of renal colic.

Discussion and implications for practice.

The protocol will be rolled out in a district hospital emergency department where renal colic is a common presentation. Prior to implementation the list of medications nurses can prescribe on a Patient Group Directive will need to be addressed and liaison with radiology to accept nurse led referrals based strictly on this protocol.

Conclusion

It is anticipated the use of the protocol will be audited to ensure its safety and efficacy.

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#7615 : Efficacy of apneic oxygenation with nasal cannula during emergency department tracheal intubation

Preferred format : Oral presentation

Authors:

HANA HEDHLI (1), Houssem Aouni (1), Rym Hamed (2), wided Bahria (3), Ines chermiti (4), khaled saidi (3), Béchir Bouhajja (1)

1. emergency department, EPS Charles Nicolle, Tunis, TUNISIA
2. , Charles Nicolle hospital, Tunis, TUNISIA
3. Emergency departement, Charles Nicolle hospital, Tunis, TUNISIA
4. Emergency departement, Charles Nicolle hospital, tunis, TUNISIA

Keywords: apneic oxygenation, aiway management, desaturation, emergency departement

Abstract :

Introduction:

Endotracheal intubation in critically ill patients admitted in emergency department(ED) is associated with severe life-threatening complications in about 20%, mainly due to hypoxemia (dysrhythmia, hemodynamic instability , hypoxic brain injury and death) [1]. It has been established that apneic oxygenation can extend the duration of safe apnea when used after the administration of sedatives and muscles relaxants [2].

Purpose: We evaluate the association between the introduction of apneic oxygenation and incidence of desaturation during rapid sequence intubation.

METHODS: A prospective randomized trial conducted in ED over Six months [July-December 2015]. Consecutive patients who underwent endotracheal intubation were included for analysis. In randomized order each patient received either oxygen through nasal cannula at 10 L/min (apneic oxygenation (+)) or no oxygen(apneic oxygenation (-)) until the airway is secured. Pulse oximeter (SpO2) was measured and desaturation was defined as a SpO2 below 90 % at any time during intubation regardless of any preexisting hypoxemia. We compared the incidence of desaturation between the two groups.

RESULTS: We enrolled eighty patients: forty patients in each group. Mean age =44 ± 19 years, 64% were male. Patients history (%): Hypertension (19); diabetes mellitus (1); chronic obstructive lung disease (8%). The main indication for rapid sequence intubation was trauma, which accounted for 59%. Sixty five patients (82%) were intubated in the first attempt. The apneic oxygenation group had significant decrease in desaturation rates (20%) than those with no apneic oxygenation (45%)[P value = 0.017, Hazards ratio (HR) =0.3, 95% confidence interval (CI) =0.11 – 0.82].

CONCLUSION: Apneic oxygenation during apnea at an intubation procedure markedly decreased the incidence of desaturation, suggesting that this technique might be useful when intubating critically ill patients in the emergency room.

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#7616 : Manchester Acute Coronary Syndromes (MACS) decision rule successfully reduces unnecessary hospital admissions: a pilot randomized controlled trial

Preferred format : Oral presentation

Authors:

Richard Body (1), Charles Boachie (2), Alex McConnachie (2), Simon D Carley (1), Patricia Van Den Berg (3), Fiona Lecky (4)

1. Emergency Department, Central Manchester University Hospitals NHS Foundation Trust, Manchester, UK
2. Robertson Centre for Biostatistics, University of Glasgow, Glasgow, UK
3. Medical School, Maastricht University, Maastricht, THE NETHERLANDS
4. School of Health and Related Research (ScHARR), University of Sheffield, Sheffield, UK

Keywords: Acute Coronary Syndromes; Clinical Decision Rules; Sensitivity and Specificity

Abstract :

Background

Observational research, including two external validation studies, shows that the Manchester Acute Coronary Syndromes (MACS) decision rule can effectively ‘rule out’ and ‘rule in’ acute coronary syndromes following a single blood test in the Emergency Department (ED). MACS is a computer model that uses a combination of clinical features and two biomarkers (high sensitivity cardiac troponin T and heart-type fatty acid binding protein) to estimate the probability that a patient has an acute coronary syndrome (ACS) and stratify patients into four groups. Patients in the 'very low risk' group could be immediately discharged from hospital in the appropriate clinical circumstances.

We aimed to evaluate the impact of using the MACS rule in practice. Anticipating a modest effect size that would require a large trial, our objectives were two-fold: (a) to evaluate the feasibility of running a multi-centre randomised controlled trial (RCT) to compare use of the MACS rule to standard practice; and (b) to assess, in patients presenting to the ED with possible acute coronary syndromes, whether use of the MACS rule can increase the proportion of patients safely discharged within 4 hours, compared with contemporary clinical pathways.

Methods

In a pragmatic pilot RCT, consenting patients presenting to two EDs with suspected cardiac chest pain were randomised, stratified by trial centre and MACS risk group in a 1:1 ratio, to receive care guided by the MACS decision rule (intervention group) or standard care according to contemporary guidelines (controls). The primary efficacy outcome was successful discharge from the ED, defined as a decision to discharge within 4h of arrival providing that the patient did not have a missed AMI or develop a major adverse cardiac event (MACE: death, acute myocardial infarction or coronary revascularization) within 30 days. Feasibility outcomes included recruitment and attrition rates, patient satisfaction and acceptability of the MACS decision rule to clinicians.

Results

In total 138 patients were included across 22 weeks, of whom 131 (95%) were randomised (66 in the intervention group and 65 controls). All 131 patients completed 30-day follow up and were included in the final analysis. Seventeen (26%) patients in the intervention group were successfully discharged within 4h compared to 5 (8%) controls (odds ratio 5.5, 95% CI 1.7-17.1, p=0.004). No patients in either group who were discharged within 4h developed MACE. There were no significant differences in patient satisfaction between groups. Clinicians gave a median acceptability score of 5.1/6 indicating high overall acceptability.

Conclusions

In this pilot trial, the MACS rule led to a significant reduction in safe discharges from the ED when used in practice. We have demonstrated the feasibility of a larger trial, which would provide greater statistical power for safety outcomes.

#7617 : JAUNDAICE AND DISCOMFORT: A CASE-REPORT

Preferred format : ePoster

Authors:

María Jose Jimenez (1), Mercedes Fernández-Escribano (1), Sergio Sanchez (1), Eduardo Fernandez (1), Pilar Lozano (1), Félix Manuel Domingo (1), Sergio Aznar (2)

1. Emergencies Department, Hospital General de Guadalajara, Guadalajara, SPAIN
2. Emergencies Department, Hospital Principe de Asturias, Alcalá de Henares, SPAIN

Keywords: jaundice, hemolysis, favism

Abstract :

Jaundice often is a reason for consulting in an Emergencies Department (ED). Jaundice may be due to an excess of direct bilirubin (DB) or indirect. A correct anamnesis and physical examination with complementary tests are important for reaching the etiologic diagnosis.

We present the case of a 35-year-old male without a medical history of interest that goes to the emergency room by dark urine, headache, general discomfort and dysthermia 24 hours ago.

Physical examination

Blood Pressure 123/94 mmHg, 88 bpm, oxygen saturation 97%, temperature 36.6°C, dryness of mucous membranes, icteric dye, jaundice subconjunctival. Normal cardiopulmonary auscultation, soft abdomen, it had no masses or organomegaly.

Complementary tests

Blood Test: hematies 3.610.000, hemoglobin 11.5 g/dl, hematocrit 34.3%, 11200 leukocytes, platelets 238,000. **Total bilirubin 7.2 mg/dl (DB: 0.5 mg/dl)**, ALT 12 u/l, AST 22 u/l, GGT 17 u/l, FAL 61 u/l, **LDH 376u/l,**

Urine Test: 1043 density, pH 6, negative glucose, negative bilirubin, urobilinogen 2 EU/L, erythrocytes, leukocytes and nitrite are negative.

After observing the analytics results where there was a hyperbilirubinaemia by increase in indirect bilirubin and elevated LDH that suggest hemolysis. We returned to question the patient about the possibility of having consumption of medicines or foods the days before, and he reported have consumed broad beans two days earlier.

Direct Coombs Test was negative direct and this ruled out active hemolysis in that time. The study of peripheral blood under the microscope showed the presence of spurs cells and isolated Heinz bodies (they were suggesting glucose 6 fosfatodeshidrogenasa (G6PD) deficiency). We sent the patient at home with high suspicion of favism and the next day he returned to emergency because he presented general deterioration with fever (38.8ºC) and then in blood test presented hematies 2.020.000, hemoglobin 6.6 gr/dl, LDH 407 u/l, total bilirubin 2 mg/dl (bilirubin direct 0.7). In the new study of Blood smear showed polychromatophilia, spurs cells, spherocytes and a few schistocytes. Admission to the service of Hematology is decided. During their income remains stable disappearing data from hemolysis at 48 hours.

Discussion

G6PD is a eritroenzimopatia, linked to the X chromosome, more common worldwide, affecting more than 400 million people, distributed in Africa, Mediterranean regions, Middle East and China. The enzyme deficiency causes irreversible oxidative damage of erythrocyte causing his death. We have identified more than 400 variants of G6PD, among the best known are the G6PDH-A and G6PDH Mediterranean. This last variant is the most common found in the Caucasian race, particularly in the Mediterranean area. In Spain, it is especially prevalent in the South of the Peninsula and Balearic Islands. The majority of people who have this deficit remain asymptomatic until they come into contact with drugs or foods such as broad beans, then this disease named favism occurs. It comes with an intense hemolysis to 24-48 hours after ingestion. There is not specific treatment being the best treatment the prevention.

#7618 : The exploitation of big data to predict patient fow: a new way to manage emergency

Preferred format : Oral presentation

Authors:

Mohamed Afilal (1), Farouk Yalaoui (2), Lionel Amodeo (2), Fréderic Dugardin (3), David Laplanche (1), Stéphane Sanchez (4), Philippe Blua (4)

1. Département d'information médicale, Centre hospitalier de Troyes, Troyes, FRANCE
2. Institut Charles Delaunay, LOSI, Université de Technologie de Troyes, Troyes, FRANCE
3. , Institut Charles Delaunay, LOSI, Universitée de Technologie de Troyes UMR 6281, CNRS, Troyes, FRANCE
4. Département d'information médicale, Centre hospitalier de Troyes, Troyes, FRANCE

Keywords: Forecasting, Patient classification, Time series

Abstract :

Introduction: Emergency department (ED) have become the patient's main point of entrance in modern hospitals causing a frequent overcrowding in the ED, in fact the “Observatoire Regionale des Urgences Champagne- Ardennes” announced that the number of visits to the emergency departments in the Champagne-Ardennes state of France has increased by 6.43% per year from 2008 to 2013, thus hospital managers are increasingly giving attention to the ED in order to provide better quality service for patients. One of the key elements for a good management strategy is demand forecasting. In this case, forecasting patients flow, which will help decision makers plan their strategic actions like expanding the locals and optimize their tactical operations like human (doctors, nurses. . .) and material (beds, boxs. . .) resources allocation. The main interest of this research is forecasting daily attendance at an emergency department.

Materials and Methods: We conducted a cross design study on the Emergency Department of the Hospital of Troyes city, France, in which we propose a new practical ED patients classification that consolidate the CCMU (classifies patients according to their severity) and GEMSA (classifies patients according to their affiliation after being treated in the ED) categories into one category. We collected the summary attendance to emergencies (Resumé de Passage aux Urgences: RPU) of every patient at the ED of Troyes city Hospital Center from the first January 2010 to the 31st December 2014 which counted 252 438 entry, this data was collected from the database used by the information system “ResUrgences” used by the ED's staff. Statistical tools like correspondence analysis and principal component analysis and experimental knowledge were exploited to introduce a new practical patient classification that we called EP (patient status). A time-series forecasting models based on statistical approach: adapted additive model, ARMA and signal processing approach: hybrid Fourier series were then developed and used to predict the long and short term daily attendance at the ED.

Results: The models we developed for this case study have a performance of 90.17% for the long-term forecast and 91.24% for the short-term forecast of the total patients flow. The models also show a robustness to epidemic periods with a correlation of 0.055 (resp. 0.05) between the flu (resp. acute diarrhea) patients count and the residuals of the short-term models.

Conclusion and discussions: Using the forecasting models developed to predict the daily patients flow, decision makers can plan the ED's activity in order to reduce the risk of overcrowding, this will lead to a better quality service, decrease in waiting time and a better patient experience in the ED. These models are now being used to predict daily patient’s attendance at the ED of Troyes city Hospital Center, these latter can be adapted to other similar facilities in order to predict their daily flow.

#7619 : Case report: a rare cause of acute abdomen polyarteritis nodosa

Preferred format : ePoster

Authors:

Pei-Shan Wu (1), Po-Liang Cheng (2), Yi-Kung Lee (3)

1. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, □□□, TAIWAN
2. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, Chiayi, TAIWAN
3. emergency department, Dalin Tzu Chi Hospital,The Buddhist Tzu Chi Medical Foundation, Chiayi County, TAIWAN

Keywords: Polyarteritis nodosa; image; acute abdomen

Abstract :

Introduction:

Polyarteritis nodosa (PAN) is a systemic necrotizing vasculitis involving the small and medium arteries, that resulted in decreased the blood supply and ischemic damage. Middle-aged men are more frequently affected. Clinical manifestations of PAN resulted from involved systemic and affected organs, for example, skin, kidneys, abdominal organs, nervous systems and heart. The level of disease severity is from mild to severe. There is no diagnostic laboratory test for PAN. The American College of Rheumatology(ACR) has established 10 criteria for the classification of PAN in a patient with a vasculitis. The sensitivity and the specificity for the diagnosis of polyarteritis is 82% and 87%, respectively. Arteriography and cross-sectional imaging, such as computed tomography (CT) and magnetic resonance (MR), can be used as alternatives to tissue biopsy for the diagnosis. The optimal therapy of PAN remains uncertain. We report a case of PAN presenting with abdominal pain.

Case report:

This 56-year-old woman with the past history of hypertension presented to our emergency department(ED) because of acute onset periumbilical and right flank pain for 1 day. The visual analog scale of pain was 9/10. Vital signs are as follows: blood pressure 159/104 mmHg, pulse rate 85/minute, respiratory rate 16/minute and body temperature 36.9 ℃. There was no fever, nausea, vomiting, diarrhea or abdominal operation history. Physical examination revealed soft abdomen without definite tender point and peritoneal sign. A hemogram and biochemical test results were as follows: white blood cell count $10.09\times10^3/\mu L$ (3.04 to $8.54\times10^3/\mu L$), neutrophilic differential 64.4%, creatinine 0.77mg/dL(0.6 to 1.0mg/dL), total bilirubin 0.6mg/dL(0.2 to 1.0 IU/L), aspartate transaminase 17 IU/L (15 to 37 IU/L), and lipase 117 IU/L (73 to 393 IU/L). Because of the pain out of proportion to examination, implying the possibility of mesenteric ischemia, abdominal contrasted CT was done. It showed wall thickening with adjacent fat stranding along the superior mesenteric artery, which was indicated to vasculitis (Figure 1,2). Subsequently, she was admitted to our rheumatology ward for treatment.

Discussion:

Polyarteritis nodosa is a rare, but potentially life threatening, inflammation of the blood vessels. The emergency physician should keep this in mind. A high index of suspicion and prompt management should avoid catastrophic outcomes.

#7620 : Broken or not? nuchal ligament ossification: case report

Preferred format : ePoster

Authors:

Ilker Akbas (1), Abdullah Osman Kocak (1), Esra Kadioglu (1), Mustafa Uzkeser (1)

1. Department of Emergency Medicine, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: anatomical variations,nuchal ligament ossification, radiography

Abstract :

Introduction: The nuchal ligament extends from the external occipital protuberance on the skull and median nuchal line to the spinous process of the seventh cervical vertebra in the lower part of the neck. It is responsible for providing the stabilizing of the head and maintaining the lordotic alignment of the cervical spine during the movement of the neck. The pathogenesis of this condition is not clear, as a result of mechanical factors and repetitive trauma, calcifications occurs at the nuchal ligament. This calcification often round or ovoid structure, uniformly bounded. They are seen as parallel to longitudinat axis. They are seen usually in a single bone. The most frequent localizations are C5-6 and C6-7. They occur in almost 7.5% of the population, with a male predominance of 3:1.

Case Report: A-66-year-old male patient was admitted to head and neck pain after hitting his head and fall down. The patient had no systemic diseases known. Vital signs were normal. On physical examination, there was dermabrasion head in the frontal region and nasal dorsum. Neck movements were normal. There was no neurological deficit, other system examinations were normal. Because of trauma, skull and neck radiographs was performed. Lateral radiographs of the cervical spine was shown two opaque lesions which was present at the level of C5 between spinous proces, in bone density, had longitudinal elongation. CT was performed to exclude avulsion fracture. CT was shown well-defined, ovoid, longitudinally extending parallel parts, in different sizes, 2 bony structures. These structures were considered as the nuchal ligament ossification. The patient was discharged with analgesics.

Conclusion: Age-related changes and the anatomical variations can be easily confused with pathological conditions, particularly at direct graphics. When clinicians have knowledge of such anatomical variations, that will help in patient assessment.

#7621 : Disaster preparedness effort in south-tama, Tokyo region

Preferred format : ePoster

Authors:

Masamune Kuno (1), Arai Takao (2), Suzuki Kensuke (3), Harikae Ken (4)

1. emergency and critical care medicine, Nippon Medical School Tama Nagayama hospital, Tama, JAPAN
2. , Tokyo Medical University Hchioji Medical Center, Hachioji, JAPAN
3. , Nippon Sport Science University, Yokohama, JAPAN
4. , Hino Municipal Hospital, Hino, JAPAN

Keywords: disaster medicine, training, chronology

Abstract :

In Tokyo the occurrence of countermeasures against Tokyo inland earthquake has been a concern. In Japan’s disaster medical system, Disaster medical assistance team (DMAT) has been trained for the responsibility for the acute phase of disaster medicine. Disaster medical coordinator has been appointed in most of the municipalities. At the level of the Tokyo Metropolitan Government, 3-disaster medical coordinator has been appointed. Disaster medical coordinator has been also appointed to every 12 region and each municipality under the lever of Tokyo Metropolitan Government. This time, we introduce effort of preparedness for disaster medical measures of south-tama region, one of above 12 regions. In Minami-Tama region launched a voluntary group called Disaster Medical Working Group, which was representative of the disaster medical coordinator in the region. Major objective of this group is to make a database of disaster training carried out in each hospital and it can be shared with other organizations. Expected effects is that, it is possible to search according to the purpose of disaster drills, so can perform disaster training easily in other medical institutions. It will ultimately be able to prepare for the disaster in the entire south-tama region. By the effect of the working group, great deal of progress in this region is that each other's cooperation can be taken. Thanks to that, systems that can share information using a common chronological recording via web in the region, during extensive training was built. I would like to report on the progress of the database and use experience of chronological record of an information sharing system.

#7622 : SOFA score trend in septic patients: which is the most appropriate time interval to improve prognostic stratification?

Preferred format : Oral presentation

Authors:

Chiara Donnini (1), Simona Gualtieri (1), Camilla Tozzi (1), Federico Meo (2), Francesca Innocenti (1), Riccardo Pini (1)

1. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY
2. Emergency Department High Dependency Observation Unit, Careggi University Hospital, Florence, ITALY

Keywords: Sepsis; Prognostic scores; SOFA score

Abstract :

Introduction: New criteria for diagnosis of sepsis and septic shock give a crucial role to Sequential Organ Failure Assessment (SOFA) score evaluation at the moment of presentation, but it is well known that sepsis is a rapidly evolving disease. The aim of this study was to compare the prognostic value of SOFA score trend at 6 and at 24 hours after admission, in order to identify the most appropriate timing to evaluate score's evolution.

Methods: This is a preliminary analysis of patients enrolled in a prospective research aiming to find reliable biomarkers for an early sepsis diagnosis. We performed an interim analysis on 191 patients admitted from November 2011 to December 2015 to the Emergency Department High-Dependency Unit (ED-HDU) of the University Hospital of Careggi with a diagnosis of severe sepsis or septic shock. At ED-admission (T0), after 6 hours (T6) and 24 hours (T24) from the initial diagnosis, we evaluated SOFA score; score differences over 6-hour (ΔSOFA-6H) and 24-hour time interval (ΔSOFA-24H)were calculated. The primary end-point was in-hospital mortality.

Results: Main comorbidities among our study population (60% male gender, mean age 74±15 years) were hypertension (59%), diabetes mellitus (32%), chronic obstructive pulmonary disease (23%), coronary artery disease (21%). An hematologic malignancy was present in 16 patients (9%) and a solid tumors in 26 (14%). The source of infection was the respiratory tract in 81 (44%) patients, abdomen in 25 (14%), the urinary tract in 29 (16%), while it remained unknown in 31 (17%) patients. Seventy-nine patients developed a septic shock (41%). In-hospital mortality rate was 27%.

T0 SOFA score was comparable between survivors and non-survivors (4.9±2.7 vs 5.8±2.9, p =NS), while it became significantly higher in non-survivors compared with survivors at T6 (8±3.3 vs 6.2±2.9, p =0.003) and at T24 (8.4±3.9 vs 5.2±2.4, p <0.001). Discriminative analysis by ROC curves confirmed a poor prognostic stratification ability for T0 SOFA (area under curve, AUC, 0.605, 95%CI 0.497-0.712, p=0.060), a fair performance for T6 SOFA (AUC 0.665, 95%CI 0.559-0.770, p=0.005) and a moderate discriminating ability for T24 SOFA (AUC 0.767, 95%CI 0.670-0.865, p<0.001). ΔSOFA-T6 only tended to be higher in non-survivors than in survivors (2.1± 2.5 vs 1.2± 2.0, p=0.05), while ΔSOFA-24H was significantly higher in non-survivors (2.3±3.4 vs 0.3±1.6, p=0.006). Repeated measures analysis of variance showed a significant score increase within subjects (p=0.001) and a significant higher increase in non-survivors compared with survivors (p=0.006).

Conclusions: Prognostic value of SOFA score was poor at the moment of sepsis diagnosis; at a 6-hour interval, discrimination ability was persistently fair. Both the absolute value after 24 hours and the trend in the first 24-hour period showed a moderate prognostic ability. A six-hour interval, although appealing for an Emergency Medicine setting, appears a too short time interval to improve prognostic stratification of septic patients.

#7623 : Outcomes in emergency department patients with multiple symptoms

Preferred format : ePoster

Authors:

Karin Weigel (1), Christian Nickel (1), Roland Bingisser (1)

1. , University Hospital Basel, Emergency Department, Basel, SWITZERLAND

Keywords: number of symptoms, multiple symptoms, emergency department, triage, morbidity

Abstract :

Background/Objective:

The nature and number of symptoms in emergency patients differ widely. E.g. women report more symptoms than men, but outcome may not differ. Furthermore, the number of symptoms has a linear relationship with the number of consultations, and multiple symptoms are associated with anxiety and depression. However, the outcome in patients presenting with multiple symptoms to EDs is unknown.

Methods:

The prospective observational study was run at the Emergency Department of Basel University Hospital over a period of 6 weeks, 24hours/7days. Every patient presenting to the ED was eligible. Exclusion criteria were: unable to answer questions, unwilling to participate. Systematic history taking (35 predefined symptoms) and registration of chief complaints was performed by a member of the study team, using a questionnaire. The number of symptoms was recorded. Multiple symptoms were defined as more than 2 out of 35 symptoms. Demographics, triage categories (ESI 1-5), and the use of resources were also recorded. Physicians` first clinical impressions were recorded at presentation using a numeric rating scale of 0 (not looking ill) to 10 (looking severely ill) by the study team. Resources were defined as an investigation ordered by an emergency physician, such as x-ray, lab exam, or consultation by a specialist. Outcomes were categorised in terms of hospitalisation, serious outcome, and intensive care. Serious outcome was defined as an acute morbidity requiring early intervention (e.g. use of antibiotics) in order to avoid deterioration of health status, disability or death.

Results:

Of 5634 patients presenting to the ED, 4006 were included. The mean number of the reported symptoms was 2.4 (range 0-25). 1392 patients had 3 or more symptoms. These patients showed a higher rate of hospitalisation (39.7% vs. 26.7% in all other patients), a higher rate of serious outcomes (38.1% vs. 36.5%), and a higher use of intensive care (6.3% vs.5.1%). Patients with 3 or more symptoms were older (median 53.5 years vs 49 years) and had a higher use of resources (2.38 vs. 2.10). They were judged to look sicker in terms of the first clinical impression (4.2 vs 3.5), and they had a longer length of stay in the ED (262 minutes vs. 212 minutes).

Conclusion:

Patients with multiple symptoms, i.e. 3 or more, may be a vulnerable group, as their outcomes are worse as compared to all other patients presenting to the ED. They used more resources and had slower throughput times as compared to patients with 2 or less symptoms. Further research is necessary in order to find the reasons for this finding.

#7624 : A different view to appendicitis with artificial intelligence

Preferred format : Oral presentation

Authors:

GOKSU BOZDERELI BERIKOL (1), GURKAN BERIKOL (2), OKTAY YILDIZ (3), MEHMET SERKAN YURDAKUL (1), ATTILA BESTEMIR (1)

1. EMERGENCY MEDICINE, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
2. NEUROSURGERY DEPARTMENT, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY
3. COMPUTER ENGINEERING, GAZI UNIVERSITY, ANKARA, TURKEY

Keywords: Machine learning, artificial intelligence, appendicitis

Abstract :

Introduction: Acute appendicitis, a etiology of acute abdomen, is a clinical concern for emergency physicians and general surgeons. With clinical scores risk calculations helps physicians to decide consultation and operation. Most of the patient have negative laparotomy though having a high risk scores. Lymphoid hyperplasia is very common in appendicitis etiology as well as obstruction by other causes. Mostly viral infection results lymphoid hyperplasia and may lead to recurrent or chronic right lower quadrant pain. Most of the emergency services have face diagnosing problems with insufficient stuff and equipment. Thus studies with diagnosing methods via machine learning techniques are recently popular and helpful.

Materials and Methods: One hundred thirty three patients with high risk scores and diagnosed as appendicitis are studied. Laboratory and pathological findings are reported, trained and tested.

Results: Success of machine learning techniques as K nearest neighbour, classification tree, Naive Bayes are all found higher in identifying appendicitis as lymphoid hyperplasia or other causes. Knn method is the successful among machine learning techniques with a accuracy of over 80%.

Conclusions: Patients with right lower quadrant pain and high risk of appendicitis can be classified as urgent or recurrent with the help of artificial intelligence methods. Thus may lower the waiting time to operation of the high risk patients.

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Acknowledgments: There is no conflict of interest in this study.

#7625 : Management of dizzy patients in Emergency Departement: a retrospective study

Preferred format : Oral presentation

Authors:

Pauline Deswarte (1), Jennifer Truchot (2), Anthony Chauvin (2), Rafaelle Cardi (1), Anne-Sophie Voarick (1), Patrick Plaisance (3)

1. Emergency Department Lariboisière Hospital, APHP, Paris, FRANCE
2. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, Paris, FRANCE
3. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, PARIS, FRANCE

Keywords: dizziness, emergency departement , vertebrobasilar insufficiency, vestibular-ocular reflex, diagnosis, posterior circulation stroke, neuroimaging.

Abstract :

Introduction: The number of patients consulting in the ED for dizziness has increased of 37 % in 10 years. The concept of vertebrobasilar insufficiency challenges the conventional peripheral and central vestibular disorders. The interest of neuroimaging in the diagnostic process of dizzy patient is controversial. Our emergency department (ED) welcomes the Ear Nose Throat (ENT) physicians during the night shift. No studies have compared the differences in management of ENT practitioners, emergency physicians and neurologists. For this reason, the management of dizzy patients was evaluated in our structure.

Methods:A mono-centric, retrospective, descriptive and observational study was conducted from January to June 2013. Every patient presenting for dizziness to the ED during night shifts and weekends were included. The data included pre-hospital care, the patient's personal data, anamnestic and clinical data of dizziness, and patient's outcome. Quantitative data are expressed as mean and extreme values. Categorical data are expressed in number or percentage. The independence of our series of qualitative data was assessed by the chi 2 test and the Pearson Fischer test. Quantitative data were compared using a Student T-test. A p-value <0.05 was considered statistically significant

Results: 197 patients were enrolled, 126 were examined by an ENT physician and 71 by an emergency physician. Being managed by an emergency physician multiplied by 3.5 the probability of having neuroimaging compared to an ENT physician ($p <0.01$). The mean length of stay was significantly higher when the patient was seen by an ED physician ($p<0.01$). Nystagmus was 2 times more frequently sought by the ENT physician than by the emergency physician ($p <0.01$). Patients examined by an ENT physician had more ENT diagnoses, as they had more alternative diagnoses if they were evaluated by emergency physicians. An exploration of the vestibular-ocular reflex and eye movement was performed for none of the patients.

Discussion: The difference in management of vertigo between emergency physician and ENT physician reflects the lack of consensus guidelines. The bedside examination with the HINTS (horinzontal-Head-Impulse-Nystagmus Test of Skew) test could be a key element of the diagnosis of dizzy patient and question the necessity of imaging. The HINTS test appears to be more sensitive than brain MRI in the diagnosis of vascular injuries of the posterior circulation and should be integrated with the clinical examination of the dizzy patient.

Conclusion: The implementation of exploring the h-HINTS test in the ED could improve the management of vertigo.A prospective study with the use of this bedside examination (h-HINTS test) is needed to confirm these results. The implementation of exploring the h-HINTS test in the ED could improve the management of vertigo.

#7626 : A REFUGEE CAMP IN THE CENTER OF EUROPE: CLINICAL CHARACTERISTICS OF ASYLUM SEEKERS IN BRUSSELS IN SEPTEMBER 2015

Preferred format : Oral presentation

Authors:

Gerlant van Berlaer (1), Francisca Bohle Carbonell (2), Sofie Manantsoa (2), Xavier de Béthune (2), Ronald Buyl (3), Michel Debacker (4), Ives Hubloue (1)

1. Department of Emergency and Disaster Medicine, Universitair Ziekenhuis Brussel, Brussels, BELGIUM
2. Medical Department, Operations Department, Médecins du Monde / Doctors of the World Belgium, Brussels, BELGIUM
3. Department of Public Health, Biostatistics and Medical Informatics Research Group, Vrije Universiteit Brussel, Brussels, BELGIUM
4. Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Brussels, BELGIUM

Keywords: Syria, refugee, diagnoses, infections, complex humanitarian emergency

Abstract :

Background and purpose

In the summer of 2015, the exodus of Syrian war refugees and saturation of refugee camps in neighbouring countries led to the influx of many asylum-seekers in some European countries, including Belgium.

This study aims to document demographics of asylum-seekers arriving in a refugee camp in Brussels in September 2015 and to describe diagnoses and comorbidities of patients presenting to a Field Hospital.

The study hypothesis is that among asylum-seekers in a huddled refugee camp – even in a well-developed country with all medical facilities – respiratory, digestive and other medical problems typical of refugee camps wherever in the world, will emerge soon.

Patients and methods

Using a cross-sectional observational study design, physicians of Médecins du Monde prospectively registered age, gender, origin, medical complaints and diagnoses of all patients presenting to an erected Field Hospital in Brussels in September 2015. Diagnoses were post-hoc categorised according to the International Classification of Diseases. Of 4037 patients examined, 3907 were included and analysed for this study: 86% were male, median age was 28 years (range 0-93;IQR 12), and patients came from 63 different countries, mostly from Iraq (52%), Syria (20%), Morocco (10%), Afghanistan (3%), and Palestine (3%). Some 1% were stateless.

Results

The most common primary diagnoses were upper respiratory tract infections (31%), dental caries (8%), skin infections (8%), gastroenteritis (7%), skin wounds and burns (6%), musculoskeletal disorders (6%), and accidental trauma (6%). Mental disorders were present in 2%. One per cent was victim of intentional violence in the country of origin, or during the journey to Brussels. Two women had just delivered and five new-born babies attended, of which one had to be hospitalised for bronchiolitis with severe dyspnoea.

When classified, the most frequent diagnosis categories were respiratory disorders (36%), far ahead of injury (12%), dental (10%), skin (9%), digestive (8%), and musculoskeletal diagnoses (6%).

Comorbidities consisted mainly of arterial hypertension and diabetes. Referrals were organised for 11% patients to dentists (5%), to Emergency Departments (3%), to psychotherapists (2%), and to new-born care (1%).

Features of infection were found in 49% of patients, with an even higher proportion (63%) in children younger than 5. A multiple logistic regression analysis indicates that the risk of being infected is significantly higher for asylum-seekers from Syria and Iraq, and for children.

Conclusions

Asylum seekers arriving in a refugee camp in Brussels after a long and hazardous journey suffer mostly from respiratory, dental, skin and digestive diseases, and one of seven is injured. Half of this population shows features of infection; with asylum-seekers from Syria and Iraq, and children being most vulnerable, urging even developed countries to take measures to prevent the spread of infections. Early shelter, overcrowding reduction, adequate sanitary facilities, and accessible healthcare may avoid short and long term complications, leading to higher healthcare expenditure for the hosting population.

These findings should be anticipated when composing Emergency Medical Teams and Interagency Emergency Health Kits to be used in a Field Hospital, even in a Western European country.

#7627 : A Prospective Evaluation of Meritas Point-Of-Care Troponin I Assay

Preferred format : ePoster

Authors:

Keivan Hosseinnejad (1), Shahab Ghafghazi (1), Stanislava Prather (1), Saeed A. Jortani (1)

1. , Kentucky Clinical Trial Laboratory, Louisville, USA

Keywords: Troponin I, MI, POC, Emergency Department

Abstract :

Background: Troponin (cTnI) is of great interest to emergency and cardiology departments for rapid rule out of acute myocardial infarct (AMI) in chest pain patients. Since turn-around-time is of paramount importance in ruling out AMI, point-of-care platforms makes it possible to provide the results rapidly to the clinical team. The cTnI assay on the Meritas POC analyzer (Trinity Biotech) is an example of a point of care device offering the latest advancement in troponin testing. Here we present our in-house data for the precision and feasibility of using this system in emergency department (ED) to rule out AMI in chest pain patients.

Methods: The precision of the test was assessed by analyses of 3 levels of quality control material (QC) by one operator on a single analyzer 5 times over 5 days. In addition, two operators analyzed 6 AMI patient's blood and plasma samples on two different analyzers 9 times each. To assess whether the test was able to rule out AMIs, 149 subjects presenting to the ED were consented. Their blood samples were collected in EDTA tubes for analysis of cTnI in both whole blood and in plasma. Sequential samples were collected 2-4, 6-9 and 12-24 hours after presentation. All test devices were made available by the manufacturer for this evaluation.

Results: Out of the 149 chest pain patients consented in this study, 7 had confirmed AMI according to local diagnosis and 144 were ruled out. The mean cTnI concentration at baseline and the second blood draw for whole blood in the ruled out AMI patients was 15.0 ng/L (SD=15.6) and 15.6 ng/L (SD=14.4), respectively. The mean cTnI in the AMI subjects was 32.5 ng/L (SD=25.5) for the baseline and 110.5 ng/L (SD=130) for the second draw sample.

As described above, we assessed the precision in two ways. Analysis of the low QC by a single operator 5 times over 5 days resulted in %CV of 10.0, a mean of 63.7 ng/L (SD=6.4). The mid QC had a %CV of 7.1%, a mean of 174.2 ng/L (SD=12.4). The high QC had a %CV of 8.9%, a mean of 893.3 ng/L (SD=79.4). The precision using the six AMI patients by two operators resulted in total CVs ranging from 5.3% to 13.5%.

Conclusions: The cTnI measured using a point of care format exhibited acceptable precision and performance for ruling out chest pain patients without AMI who presented to the ED. The rise of cTnI from the baseline to the second blood draw 2 to 4 hours later in the clinical course is important for ruling in chest pain patients with myocardial infarction.

#7628 : The quality of work life of young emergency physicians

Preferred format : Oral presentation

Authors:

Jennifer Truchot (1), Anthony Chauvin (1), Alice Hutin (2), Thomas LEREDU (3), Patrick Plaisance (4), Youri Yordanov (5)

1. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, Paris, FRANCE
2. SAMU DE PARIS, APHP, Paris, FRANCE
3. Emergency Departement, Centre Hospitalier Andre Mignot, CHI Andre Mignot, Le Chesnay, FRANCE
4. Service d'Accueil des Urgences , Centre Hospitalier Universitaire Lariboisière, AP-HP, 2 rue Ambroise Paré, Paris, Université Paris VII René Diderot, Paris, FRANCE, APHP, PARIS, FRANCE
5. Emergency Department, Saint Antoine Hospital, APHP, Paris, FRANCE

Keywords: Quality of life, work life balance, burn out, young emergency physician

Abstract :

Introduction: Although the practice of emergency medicine can be meaningful and personally fulfilling, it can also be demanding and exhausting. Emergency departments (EDs) are a particularly stressful work environment. This can be explained by difficult work conditions including significant workload and psychological demand, a default of resources, and lack of support. It is probable that these characteristics impact young emergency physicians' perceived quality of life and work life balance. Our aim, in this study, was to evaluate quality of life and work life balance of French young emergency physicians.

Methods: We conducted a cross-sectional, anonymous, online survey of quality of life satisfaction among young emergency medicine physicians in France. The survey, containing 32 items, was distributed by email via the AJMU network (Association of young emergency medicine physicians). Burnout symptoms were measured using validated instruments. Because other burnout studies have focused on the presence of high levels of emotional exhaustion or depersonalization as the foundation of burnout in physicians, we considered physicians with a high score on the depersonalization or emotional exhaustion as having at least 1 manifestation of professional burnout. Satisfaction level with work-life balance was explored as well. Descriptive statistics of percentage, mean and standard deviation and odds ratio calculation were used to analyse the data.

Results: 475 physicians completed the questionnaire (response rate of 33,6%). The median age was 31.5 years old (SD=2.7), among those 55.4% were women. The median duration of practice in the ED was 3.2 years. On a scale of 1 to 10, the level of satisfaction with their work was 6.6 (SD=1.8). The level of satisfaction with their life outside the ED was 7.2 (SD=2), and with their work life balance was 5.7 (SD=2.1). Overcrowding was considered stressful for 72% of responders. The mean level of perceived consideration by others specialists was 4.1 (SD=1.74). Only 7% of the physicians considered working in the ED until their retirement. 52.6% considered transferring to general medicine if they stopped working in the ED. Working more than 48 hours per week and being a woman were associated with a higher risk of presenting symptoms of burnout with a respective OR of 1.8 [1.1; 2.9] and 1.9 [1.1; 3.2].

Discussion: Our study has several strengths. The large physician sample was drawn from a young emergency physician registry, and included physicians from across our country in all type of practices, settings, and environments. However, our study is subject to several limitations among which the response rate of 33,6% among physicians who received an invitation to participate in the study is lower than expected. It is however similar to those seen in this type of questionnaire studies.

Conclusion: These results show that the young ED physicians in our study have an overall good quality of life and a satisfying work life balance. The results of a larger study would yield a greater understanding of the factors associated with work-related quality of life and burnout in the ED.

#7629 : Serum lactate level and 7-day mortality in patients in the emergency department: a prospective observational cohort study

Preferred format : Oral presentation

Authors:

wided bahria (1), Hanen Ghazali (2), imen boukhalfa (1), Anware Yahmadi (3), Ahmed Souyah (4), Mohamed Mguidich (4), Ahlem Azouzi (2), Sami Souissi (3)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
3. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
4. service des urgences -SMUR , hôpital régional ben arous, ben arous, TUNISIA

Keywords: lactate, mortality, emergency department

Abstract :

Introduction:

Lactate measurements are routinely carried out in emergency departments and are associated with increased mortality in septic and traumatic patients. Until now, no definitive research has been carried out into whether lactate measurements can be used as a prognostic marker in a clinically unwell population in the emergency department (ED).

Objective: The aim of this study was to describe the relation between initial serum lactate level and 7-day mortality in patients presenting in the ED with different etiology.

Methods:

We carried out a prospective observational cohort study in consecutive patients whose arterial lactate concentration was measured in the ED and was above 2 mmol/L over six months. The initial arterial lactate level was categorized as intermediate (2-3.9 mmol/L), or high (> or = 4 mmo/L). The main outcome measure was 7-day mortality. The categorization of suspected etiology was based on discharge diagnoses.

Results:

Inclusion of 110 patients. Mean age was 59 +/- 20 years. Sex ratio = 1, 82. Median serum lactate was 3, 45 mmol/L. Sixty six patients (60%) had intermediate lactate and 44 patients (40%) had high lactate. Seven-day mortality was 21%. Intermediate (odds ratio [OR] = 1, 76, p = 0.014) and high serum lactate levels (OR = 2, 95, p = 0.02) were associated with mortality. The association between lactate level and mortality varied across different diagnostic groups. Based on Area Under the Curve in receiver operating characteristic analysis, lactate level showed to be useful in patients with infection (0.74, 95% CI 0,31 to 0,58), cardiac diseases (0,67, 95% CI 0,45 to 0,70), respiratory diseases (0.64, 95% CI 0,41 to 0,67) and gastrointestinal diseases (0,61, 95% CI 0,38 to 0,64). Lactate level was not useful in neurological (0, 48, 95% CI 0, 35 to 0, 62) and endocrine disease (0,43, 95% CI 0,29 to 0,57).

Conclusion: Increased lactate level is a mortality prognosis factor in most patient’s categories. However, this association differs from diagnoses to another.

#7630 : Does mechanical ventilation affect quality of chest compressions during resuscitation? A simulation study.

Preferred format : ePoster

Authors:

Tillmann Speer (1), Wolfgang Dersch (2), Björn Kleine (2), Christian Neuhaus (3), Clemens Kill (2)

1. Departement of Emergency Medicine, Philipps-University, Marburg, GERMANY
2. Departement of Emergency Medicine, Philipps-University Marburg, Marburg, GERMANY
3. WEINMANN Emergency Medical Technology GmbH + Co. KG, WEINMANN Emergency Medical Technology GmbH + Co. KG, Hamburg, GERMANY

Keywords: Cardiopulmonary resuscitation, quality of chest compressions, ventilation, simulation model

Abstract :

Objective

Quality of chest compressions critically influences outcome following resuscitation in cardiac arrest. Although ventilation during resuscitation is recommended, the number of studies evaluating the interactions between ventilation and chest compression is still very limited.

The goal of this study was to determine if there is a difference in the influence of the three different ventilation patterns Intermittent Positive Pressure Ventilation (IPPV), Bilevel Positive Airway Pressure Ventilation (BiLevel) and the novel ventilation mode Chest Compression Synchronised Ventilation (CCSV) [2] on depth and compression rate of manual chest compressions during cardiopulmonary resuscitation (CPR) using a simulation model. CCSV was explicitly developed for the use in cardiac arrest. CCSV is triggered by manual chest compressions, which lead to a short pressure controlled insufflation synchronised with each compression phase.

Participants and methods

After approval by ethics committee informed consent was obtained. 90 paramedics were included in this study. Participants performed uninterrupted, manual chest compressions for two minutes in a modified ALS mannequin with a realistic lung model. IPPV, BiLevel and CCSV were applied in a randomised order for 30s using the ventilator Medumat transport in a cross-over design. Ventilator presets were (F_iO_2=1.0): IPPV: V_t =450ml, PEEP=0mbar, f=10/min, T_{insp}=2.4s, T_{exsp}=3.6s; BiLevel P_{insp}=19mbar, PEEP=5mbar, f=10/min, T_{insp}=2.4s, T_{exsp}=3.6s; CCSV: P_{insp}=60mbar, PEEP=0 mbar, f=chest compression rate, T_{insp}=0.2s. Control phases (no ventilation) of 10s each were set up at the beginning and between two modes of ventilation. Depth and compression rate were compared to ILCOR-Guidelines (depth>50mm, compression rate=100-120/min) [3], results as median (25/75% percentiles). Relative frequencies (RF) of matching were tested for significance using Chi-squared test (chi) and Friedman (Friedm) test.

Results

Depth (mm): IPPV 56(48/63), BiLevel 57(48/63), CCSV 60(52/67); RF (match) IPPV 1.0 (0.23/1.0) vs. CCSV 1.0 (0.9/1.0), $p < 0.0001$ (chi), $p = 0.0036$ (Friedm); BiLevel 1.0 (0.28/1.0) vs. IPPV, $p = 0.59$ (chi), $p = 0.73$ (Friedm) and BiLevel vs. CCSV $p < 0.0001$ (chi), $p < 0.001$ (Friedm).

Compression rates (1/min): IPPV 117(105/124), BiLevel 116(107/123), CCSV 117(107/125). RF (match) IPPV 0.5 vs. BiLevel 0.49, $p = 1.0$ (Friedm) and vs. CCSV 0.47, $p = 1.0$ (Friedm). BiLevel vs. CCSV $p = 1.0$ (Friedm).

Conclusion

Chest compression rates did not differ between the three mechanical ventilation patterns IPPV, BiLevel and CCSV during cardiopulmonary resuscitation with manual chest compressions in a simulation model. Mechanical ventilation with CCSV lead to improved compression depth compared to IPPV and BiLevel ventilation.

Literature

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#7631 : Attitudes and knowledge of emergency medicine health care professionals toward elder abuse and neglect

Preferred format : Oral presentation

Authors:

aysegul Guven Cebeci (1), Isa Kilicaslan (1), Fikret Bildik (1), Sezer Esfer (1), Reyhan Sahnaoglu (1)

1. Department of Emergency Medicine, Gazi University School of Medicine, Ankara, TURKEY

Keywords: elder abuse, elder neglect, emergency medical service, attitudes

Abstract :

Introduction: Elder abuse is a significant public health problem. The population of elder people is increasing steadily. According to World Health Organization (WHO), by the year 2050, it is expected that the number of elder people would have come up to 20 percent of world population. Although the elder abuse and neglect prevalence is higher than supposed, it is much lower to identify and report these cases, especially in emergency medicine departments. The aim of this study is to assess the knowledge and attitudes of emergency medicine health care professionals toward the identification and management of elder abuse and neglect cases.

Methods: This cross-sectional descriptive study was performed in two universities and two training and research hospitals' emergency departments in Ankara. The research tool was a 26-item questionnaire that was applied on 184 emergency medicine health care professionals including doctors, nurses, emergency medicine technicians. Analysis was completed with SPSS 15.0. In addition to descriptive statistics, chi square analysis were used to determine differences between groups.

Results: Although 78% of participants had identified an abuse elder person before, 64% of them have never reported about elder abuse. The main reasons of not reporting are not to feel proficient (41%) and not know how to do that (27%). Significant percent of responders answered that they haven't had any education about elder abuse and neglect in undergraduate education (73%) and post-graduate education (87%).

Conclusion: This study indicates that emergency medicine health care professionals confronts with abused elder frequently but they abstain from reporting these cases because they feel lack of knowledge about elder abuse and neglect especially.

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#7632 : COMORBIDITIES AND DIAGNOSES IN NORTHERN SYRIAN CHILDREN AFTER FOUR YEARS OF CIVIL WAR.

Preferred format : Oral presentation

Authors:

Gerlant van Berlaer (1), Abdallah Mohamed Elsafti (2), Mohamed Al-Safadi (3), Michel Debacker (4), Ronald Buyl (5), Atef Redwan (6), Ives Hubloue (1)

1. Department of Emergency and Disaster Medicine, Universitair Ziekenhuis Brussel, Brussels, BELGIUM
2. Department of Emergency Medicine, Hamad Medical Corporation, Doha, QATAR
3. Turkey Mission in Syria, Qatar Red Crescent, Gaziantep, TURKEY
4. Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Brussels, BELGIUM
5. Department of Public Health, Biostatistics and Medical Informatics Research Group, Vrije Universiteit Brussel, Brussels, BELGIUM
6. Department of Anaesthesia and Critical Care, Faculty of Medicine, Zagazig University , Zagazig, EGYPT

Keywords: Syria, children, violence, health, internally displaced persons, complex humanitarian emergency

Abstract :

Background and purpose

The civil war that started in Syria since 2011, led to one of the most complex humanitarian emergencies in history. This ongoing disaster, in which warring parties deliberately target healthcare infrastructure and services, has detrimental consequences affecting the health of children as one of the most vulnerable populations.

The purpose of this study is to document the medical threats, comorbidities, diagnoses and disease categories in Syrian children after four years of conflict, and estimate the need for relief efforts needed to provide efficient medical care to Syrian children.

Patients and Methods

A cross sectional observational sample study was conducted in May 2015. By means of a prospectively designed medical registry, Qatar Red Crescent healthcare workers especially trained for this study, collected demographic information, comorbidities, and diagnoses in children visited home by home and in internally displaced persons camps in four Syrian governorates. Diagnoses were post-hoc categorised according to the ICD-10 classification.

Of 1080 filled-out records, 1001 were complete and included in this study. Children originated from Aleppo (41%), Idleb (36%), Hamah (15%) and Lattakia (8%). Median age was 6 years (0-15;IQR 3-11), 61% were boys.

Results

Most primary acute diagnoses in examined children were upper respiratory tract infections (14%), lower respiratory tract infections (9%), gastroenteritis (8%), suspected meningitis (7%), asthma (6%), convulsions (6%), eye infection (5%), clinical anaemia (5%), and skin infection (5%). Four per cent showed signs of malnutrition, some children had been victim of injury (3%) or violence (1%), and 2% of children suffered from a mental disorder.

When categorised according to ICD-10, most children suffered from respiratory (29%), neurological (19%), digestive (17%), eye (5%) or skin (5%) diseases, 4% was injured, and 2% suffered from a mental disorder. Overall, 55% of patients had features of infectious diseases.

Most common chronical illnesses were mental health diseases (25%), epilepsy (11%), malnutrition related conditions (5%), and flaccid paralysis (4%).

Statistical analysis indicates that the risk for children to suffer from infectious diseases is significantly higher when they reside in Aleppo or Idleb. The risk of being injured is significantly higher in Aleppo, while intentional violence is most occurring in Lattakia. Mental problems are more prominent in Hamah. These problems are not linked to gender or age, except for infectious risks: younger children are more at risk to have an incomplete vaccination state, and suffer more from preventable dangerous infections.

Conclusions

After years of civil war, more than half the children in Northern Syria suffer from infections, mostly from respiratory, neurological and digestive origin, while 4% is injured or victim of dirty weapons.

Substandard paediatric healthcare circumstances and worsening vaccination state put Syrian children at risk for serious infections, outbreaks and morbidity, and should be urgently addressed by humanitarian relief efforts.

An immediate coordinated and global action is needed to deal with this complex humanitarian emergency, and to prevent worsening of health threats for children in Syria.

#7633 : A NEW CATHETER FOR LARGE VEINS: A NEW WAY

Preferred format : Oral presentation

Authors:

Brugioni Lucio (1), Elisabetta Bertellini (2), MARCO BARCHETTI (3), Pietro Martella (1), Vivoli Daniela (1), Serena Scarabottini (4), Francesca Mori (4), Davide Maria Francesco Lucchesi (4), Francesco Luppi (4), Francesco Borrelli (4), Mirco Ravazzini (4), Elena Carella (4), Sergio Campanale (4), Angelo Tricoli (4), Antonella Lanotte (4)

1. Medicina Interna Area Critica, Azienda Ospedaliero Universitaria Policlinico Modena , Modena, ITALY
2. Anestesia e Rianimazione, Azienda ospedaliero Universitaria Policlinico di Modena, Modena, ITALY
3. Medicina d'Urgenza, Ospedale Civile di Sassuolo, Sassuolo, ITALY
4. Medicina Interna Area Critica, Azienda ospedaliero Universitaria Policlinico di Modena, Modena, ITALY

Keywords: peripheral venous catheter, internal jugular vein, difficult venous access, venous depletion, dehydration, eco-guided bedside technique

Abstract :

Background Availability of venous access for administering drugs and fluids in critically ill patients is a cornerstone of modern Emergency Medicine. In patients with difficult peripheral venous access, alternative techniques, such as the placement of a central venous catheter, require expertise and are invasive, expensive, time-consuming and prone to serious adverse events. The attempt to obtain vascular access placing a peripheral venous catheter under ultrasonographic guide has been sometimes performed in clinical practice, but only a few case reports are presented in literature. Despite an easy placement and absence of complications, insufficient length of the classical PVC (45mm) led to frequent early displacement. For these reasons, we plotted a new venous catheter (JLB®, Deltamed Inc.) to cannulate large bore veins and lead an observational convenience sampling study to test the security of device and eco-guided bedside technique of insertion, the cheapness of the catheter, the handiness of learning and use of it.

Study We led a multi-center observational convenience sampling study to evaluate safety and effectiveness of JLB®. Patients were enrolled in 3 EM units, 2 ICU, 1 Internal Medicine ward. Data were collected from July 1st 2015 to April 15th 2016. Inclusion criteria were: age≥18, impossibility to obtain peripheral access, need for inotropes/TPN or patient's preference. The procedure was performed by attending physicians or EM residents under US guidance. We enrolled 250 patients; at present data were analyzed in 158 patient: 91 women, mean age 74,5 years ± 16,2 SD. 130 patients (82,3 %) had not any other peripheral access, 33 (20,9 %) need inotropes/TPN infusion, 6 (3,8 %) express preference. Mean procedure time (from disinfection to securing) was 207,7 s ± 12,4 SD. Early complications (<24h) occurred in 2 (1,3 %) patients, consisting in 1 soft-tissue hematoma and 1 atrial tachyarrhythmia. No major complications (such as PNX, major arrhythmia, infection) were reported. Mean duration time was 132,1 h ± 67,6 SD, occlusion/dislocation occurred in 11 cases (6,9 %).

Conclusion Our bedside device revealed to be fast to place. This new catheter is also safe since no major complication or clinical device-associated infection occured. Moreover, placement of this device doesn't need CXR to confirm placement and exclude PNX because is unlikely, but this task can be easily performed using US. Our device can represent an ideal technique for DIVA not needing advanced vital monitoring and in emergency settings.

#7634 : Prognostic utility of quantifying ST-segment depression in patients with non- ST- segment elevationacute coronary syndromes (NSTEMI -ACS)

Preferred format : Oral presentation

Authors:

HANA HEDHLI (1), Salwa Mansouri (2), Sarra Jouini (1), Hela Mannai (2), Houssem Aouni (1), Béchir Bouhajja (1), Ines chermiti (3)

1. emergency department, EPS Charles Nicolle, Tunis, TUNISIA
2. Emergency departement, Charles Nicolle hospital, Tunis, TUNISIA
3. Emergency departement, Charles Nicolle hospital, tunis, TUNISIA

Keywords: acute coronary syndrome, ST-segment depression, progostic

Abstract :

Background: The presence of ST- segment depression (STD) on the admission electrocardiogram (ECG) has been well recognized to be a powerful adverse prognosticator [1].Several clinical trial investigations have further suggested that more extensive STD on admission predicts a greater risk of adverse cardiovascular events [2].

Purpose: The aim of this study was to examine the relationship between the magnitude of STD and adverse events: angina recurrence, myocardial infarction (MI) and death at 30 days.

Methods: A prospective observational study conducted in the emergency department (ED). We enrolled patients aged more than 18 years, presenting to the hospital alive with presumptive diagnosis of ACS and STD on the admission ECG.STD was considered to be present if ≥ 1leads exhibited STD ≥ 0, 05 mV. Three groups were defined according to quantitative ST depression : GP1 < 1 mm, GP2 = 1 - 2 mm , GP3 ≥ 2 mm. Patients with incomplete ECG, left bundle branch block, right bundle branch block, ventricular pacemakers were excluded from the analysis.

Results: Eighty one patients were included, mean age= 61± 11 years, 60%were male. Patients history (%): Smoker (47), hypertension (49), diabetes mellitus (59), hyperlipidemia(10), previous MI(35), heart failure (8%), Previous coronary intervention (18), previous coronary bypass surgery (6). The troponin I was positive in 52 patients. Among patients exhibiting STD on admission we individualized: GP1 (N=37), GP2 (N=33), GP3 (N=11).The magnitude of STD has a significant interaction for all outcomes (P-values for interaction): angina recurrence (0,012), MI (0,002), 30 days mortality (0,003).

Conclusion: Although the presence of STD has been incorporated as an independent dichotomous prognosticator into several trials, the magnitude of STD confers adverse prognosis in patients with NSTEMI-ACS and should be employed to assist medical decision making.

References:

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#7635 : CHILDREN IN THE SYRIAN CIVIL WAR: IMPACT OF ON-GOING VIOLENCE ON THEIR SOCIAL, EDUCATIONAL AND PUBLIC HEALTH STATE.

Preferred format : Oral presentation

Authors:

Abdallah Elsafti Elsaeidy, M.D., M.Sc (1), Garlant Gerlant van Berlaer, M.D., M.Sc (2), Mohammad Al Safadi, M.D. (3), Michel Debacker, M.D. (4), Ronald Buyl, Ph.D. (5), Atef Redwan, M.D., Ph.D. (6), Ives Hubloue, M.D., Ph.D. (4)

1. Department of Emergency Medicine, Hamad General Hospital, Hamad Medical Corporation, Doha, QATAR
2. Consultant Emergency Medicine, Department of Emergency Medicine, Universitair Ziekenhuis Brussel, Brussels, Belgium, Brussels, BELGIUM
3. Chief Medical Officer in Syria, Turkey Mission, Gaziantep, Turkey., Qatar Red Crescent, Gaziantep, TURKEY
4. Vrije Universiteit Brussel, Brussels, Belgium, Research Group on Emergency and Disaster Medicine, department of emergency medicine, Brussels, BELGIUM
5. Vrije Universiteit Brussel, Brussels, Belgium., Department of Public Health, Biostatistics and Medical Informatics Research Group, Brussels, BELGIUM
6. Department of Anaesthesia and Critical Care, Faculty of Medicine, Zagazig University, Zagazig, Egypt., Zagazig, EGYPT

Keywords: Syria; children; public health; education; social state

Abstract :

BACKGROUND AND PURPOSE

The Syrian civil war since 2011 led to one of the most complex humanitarian emergencies in history. This protracted disaster has but negative aspects, especially on children.

Purpose of this study is to document the impact on the social, educational and public health state of Syrian children.

PATIENTS AND METHODS

A cross sectional observational sample study was conducted in May 2015. Healthcare workers, especially trained for this study, visited families home by home with a prospectively designed questionnaire in four Northern Syrian governorates.

Of 1080 filled-out questionnaires, 1001 were complete and included in this study. Children originated from Aleppo (41%), Idleb (36%), Hamah (15%) and Lattakia (8%). Median age was 6 years (0-15;IQR 3-11), 61% were boys.

RESULTS

Almost 20% of children were Internally Displaced Persons. The father was deceased or missing in respectively 5% and 4%, and similarly for the mother in 2% and 3% of the children. Almost 15% had no access to safe drinking water, and 23% could not access appropriate sanitation. About 16% had insufficient access to nutrition, and almost 27% suffered from malnutrition. Access to specific mother and child healthcare providers was disturbed in 64%, and vaccination state was inadequate in 72%. More than half of all school-aged children had no access to education at the time of the study.

Statistical analysis indicates that the risk for children to have unmet depends mainly on the governorate in which they reside. Most affected governorates are Idleb and Lattakia for water, sanitation, education, and healthcare; and Aleppo for missing vaccines. These problems are not linked to gender or age, except for the vaccination state: the smaller the children, the more they are at risk to have an incomplete vaccination state.

CONCLUSIONS

After four years of civil war in Syria, many children have lost their parents, are being displaced, and live in substandard life quality circumstances. Most children miss education, undermining their own future and that of the country. Limited access to water, sanitation, and to regular and healthy food, together with increasing malnutrition rates, worsening of the immunisation state and accessibility to specific healthcare facilities add up to the factors that put Syrian children at risk for increased morbidity and mortality.

Urgent coordinated and global action is needed to deal with this complex humanitarian emergency, and to prevent worsening of social, educational and public health threats for children in Syria.

#7636 : Road Traffic Accident related Fatalities in Addis Ababa City, Addis Ababa, Ethiopia: A one year Analysis of Police Report

Preferred format : Oral presentation

Authors:

Anteneh Kebede (1), aklilu Azazh (2), aklilu Azazh (2), Haimanot Geremew (2)

1. , Gonder University, Gonder, ETHIOPIA
2. , Addis Ababa University, Addis Ababa, ETHIOPIA

Keywords: Road Traffic Accident , Fatalities , Addis Ababa, Ethiopia

Abstract :

Abstract

Introduction: Road transportation provides benefits both to nations and to individuals by facilitating the movement of goods and people. It enables increased access for daily living and programs on the country at large. But these increased in access and number of transportation pose a great challenge in the individuals daily activity ranging from minor injury to death and the nation also suffers from lose of productive citizens and economic shift to preventable health activities

Objectives The general objective of the study is to assess the magnitude of and factors contributing to the Mortality related to Road Traffic Accidents in `Addis Ababa, Ethiopia from September 2013 to August 2014.

Methodology Data from the Addis Ababa Police Commission,Traffic Police Department was collected from the checklist used to collect information by the police officer at the scene and the logbook and entered to SPSS version 16.00 and description was performed.

Result Overall, there were 2372 recorded road traffic accidents (excluding accidents with only property damage) in Addis Ababa during 2013/14. Of these, 382(16.1%) were fatal. Among all fatalities majority were male 279(73.03%), Male/Female- 3:1 and pedestrians 321(84.0%). Fatal accidents were more prevalent on isled roads 262(60.7%) and involved especially commercial cars. More than half of fatalities 205(53.8%) occurred due to failure to give a way for pedestrians.

Conclusion Majority of affected were vulnerable road users among which pedestrians were predominant and affected while crossing the road outside the zebra cross and responsible parties were driving commercial cars and vast majority of victims died at the scene instantaneously which needs policy on pedestrian safety and education on behavioral change. These findings can serve as a basis for health care professionals and policymakers to create preventive measures for traffic accidents.

Key words: Road traffic Accident, Mortality, Addis Ababa, Ethiopia

#7637 : Predictors of stroke outcome in the emergency department

Preferred format : Oral presentation

Authors:

wifek Ben Hmida (1), Hanen Ghazali (2), Syrine Keskes (2), Anware Yahmadi (3), Manel Bayar (2), Mouna Gammoudi (2), Sawsen Chiboub (2), Sami Souissi (3)

1. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben AROUS, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
3. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA

Keywords: stroke, outcome, emergency department

Abstract :

BACKGROUND AND PURPOSE: Stroke is a public health priority with a high mortality and disability. The purpose of this study was to elucidate the factors that correlate with unfavorable outcomes and to develop a simple validated model for assessing its risk in patients with cerebrovascular events.

METHODS: Prospective, monocentric, observational study conducted over 3 years. The study included a community-based cohort of acute stroke patients (age≥18 years). We examined the clinical data and scanner criteria of patients who admitted for acute stroke. Stroke severity was evaluated with the National Institutes of Health Stroke Scale (NIHSS).Unfavorable outcome was defined as modified Rankin Scale (mRS) >3 considered as severe disability) or death (mRS=6) at 90 days. Multivariate regression analysis was performed to identify factors predictive of unfavorable outcome.

RESULTS: Inclusion of 187 patients. Mean age was 67 ±13 years. Sex ratio = 1, 49. The risk factors for stroke were dominated by n (%): hypertension 118 (63), diabetes 62 (33), history of valvular heart disease 16 (9) and previous stroke 53 (28). Ischemic stroke accounted for 79%. Unfavorable outcome was found in 84 patients (45%) The mortality rate was 30%, a mRS>3 were found in 15% of patients.

In adjusted multiple regression models, age >70 years (adjusted OR = 2, 95% CI [1.25- 2,92]), pre-existing disability (adjusted OR = 3,64, 95% CI [1.51-8,78]), haemorrhagic stroke (adjusted OR= 1,79, 95% CI [1.82-4.28]), NIHSS≥ 13 (adjusted OR= 4,28, 95% CI[2,36-7,76]), and Glascow coma scale(GCS) ≤11 (adjusted OR= 1,96, 95% CI[1,2- 3,19]) were independently associated with unfavorable outcome .

CONCLUSION: In this study, onset stroke severity, pre-existing disability, hemorrhagic lesion and old age were predictors for poor prognosis after stroke. These factors should be taken into consideration when planning treatment and rehabilitation after stroke.

#7638 : Prognostic value of plasma lactate levels in normotensive patients with pulmonary embolism

Preferred format : Oral presentation

Authors:

Chtourou Dorra (1), Hamed Rym (1), Bellili Sarra (2), Bahria Wided (1), Maaref Amel (1), Jebali Amina (1), Bouhajja Béchir (1)

1. Emergency Department Charles Nicolle Hospital , tunisia, tunis, TUNISIA
2. Emergency Department Regional Hospital Béja , tunisia, Béja, TUNISIA

Keywords: lactate, prognosis, pulmonary, embolism , normotensive, emergency

Abstract :

Pulmonary embolism (PE) is a common disease with high mortality and morbidity rates. The evaluation of the prognosis is a hallmark in such situation and some tools were developed in this context *(1).* Plasma lactate has shown it's superiority as a prognostic biomarker in many life-threatening diseases but might also increase in PE before overt haemodynamic impairment *(2).* The aim of this study was to assess the prognostic value of arterial lactate in normotensive patients with PE.

Patients and methods :

This was a prospective study over 3 years (January 2013- December 2015). Inclusion of normotensive patients with documented PE. The arterial lactate level was determined on arterial blood gas samples immediately after admission to the emergency ward. A lactate level >=2 mmol/l was considered to be abnormal.

Results:

Forty patients were enrolled. Mean age = 63 +/- 14 years. Sex-ratio= 1,85. Medical history n (%) : Atrial fibrillation: 1(2,5); Deep venous thromboembolism 5 (12,5). Severity markers of PE n(%): Troponin-I > 0,5 ng/ml : 6(15); Right ventricular diameter/ Left ventricular diameter ratio >1 (Chest computed tomography): 11 (27,5). Arterial lactate >=2mmol/l : 12(30). The 30-Day mortality rate = 32,5%. Median baseline arterial lactate level was significantly higher in nonsurvivors than in survivors: median; IQ(25,75) (mmol/l): Nonsurvivors =2,5 (1,6-3,75) vs survivors= 1,2 (1-2,5) : p-value = 0,027.Abnormal lactate level as defined below was associated to respective odds ratio in Univariate and multivariate analysis (Odds ratio [confidence interval 95%]) = 4,57 [1,11-18,7]; p 0,029 ; and 2,1 [1,05-4,32]; p 0,035. Characteristics of Curve Roc of lactate >=2 : Area under the curve: 0,718; p= 0,027; Sensitivity: 62% ; Specificty : 74% ; positive predictive value: 54 % : negative predictive value : 80%.

Conclusion :

Arterial Lactate level at admission should be proposed as a prognostic biomarker in normotensive patients with diagnosed PE.

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2- S.vanni et al. Ann Emerg Med 2013Mar ;61(3) :330-8.

#7639 : Percutaneous coronary intervention with ongoing cardiopulmonary resuscitation in refractory out of hospital cardiac arrest.

Preferred format : Oral presentation

Authors:

Guillermo Cañardo (1), Aitana Pérez (2), Mar Solano (2), Gil Bonet (3), Alfredo Bardaji (4), Alfonso López (5), Isaac Lucas (6), Christer Axelsson (7), María Jiménez (8)

1. Emergency medicine physician, Sistema d'Emergències Mèdiques (SEM), Tarragona, SPAIN
2. Emergency medicine nurse, Sistema d'Emergències Mèdiques (SEM), Tarragona, SPAIN
3. Cardiologist physician, Departament of Cardiology. University Hospital Joan XXIII. , Tarragona, SPAIN
4. Departament of Cardiology Director, University Hospital Joan XXIII. , Tarragona, SPAIN
5. Territorial Director, Sistema d'Emergències Mèdiques (SEM), Tarragona, SPAIN
6. Co-Territorial Director, Sistema d'Emergències Mèdiques (SEM), Tarragona, SPAIN
7. Associate Professor, University of Boras, Götemburg, SWEDEN
8. Departament of Nursing Director, Rovira i Virgili University., Tarragona, SPAIN

Keywords: refractory out of hospital cardiac arrest, mechanical chest compressions, percutaneous coronary intervention, resuscitation

Abstract :

Purpose of the study:

Acute Myocardial Infarction (AMI) is one of the most common causes of cardiac arrest (CA). Resuscitation after refractory in-hospital CA in the catheterization laboratory using mechanical chest compressions (MCC), during simultaneous percutaneous coronary intervention (PCI), have an 78.2% of PCI success rate, with a 46.9% of discharged from cath-lab with return of spontaneous circulation (ROSC) and 25% discharged hospital with optimal neurological outcome. We designed a study to evaluate a new treatment strategy for the patients with coronary suspicious origin refractory out of hospital cardiac arrest (OHCA), with no response to conventional advanced live support (ALS), that could be transferred to the cath-lab for PCI with ongoing cardiopulmonar resuscitation (CPR) with MCC.

Material and methods:

Prospective and descriptive study from 26.12.2014 until 26.04.2016 of patients with OHCA transferred to Joan XXIII University Hospital in Tarragona (Spain), with 795.101 reference population. Inclusion criteria: Age <70 years, quality of life without terminal illness, suspect of AMI, witnessed CA, immediate and good quality CPR (<3 minutes), shockable rhythm, absence of ROSC after 10 minutes of CPR, possibility of MCC, possibility of PCI, time CA-Hospital< 45 minutes.

Results:

23 patients were included. **Average age:** 59.69 years (13% <40 years; 8.7% 41-50; 17.4% 51-60; 43.5% 61-70; 17.4% >70). **Gender:** men 78.2%. **Concomitant diseases**: Smoking 34.7%, hypertension 52.2%, diabetes 4.3%, hyperlipidaemia 39.1%, chronic ischemic heart disease 13%, hypertrophic cardiomyopathy 4.3%. **Time of CA:** morning 8-15h 56.5%; evening 15-22h 21.7%; night 22-8h 21.7%. **Witnessed CA:** yes in 95.6%, with no health professional witness in 65.2%. **CA location:** home 52.2%; public 13%; ambulance 13%; work 8.7%; restaurant 8.7%; hotel 4.3%; sports facilities4.3%. **Initial time chest compressions**: <3 minutes 52.2%; 3-5 minutes; 30.4%; 5-8 minutes 8.7%; > 8 minutes; 4.3%; unknown 4.3%. **CPR initiated by:** health professional in 65.3%. **Shockable rhythm in any time:** 69.5%. **First defibrillation (DF):** ambulance 60’7%; public AED 13%; no DF 26%. **Average time of first DF:** 6.8 minutes (62.5 %< 8 minutes). **Average time of arrival ambulance:** 8.1 minutes. **Use of MCC:** 73.9%. **Return of spontaneous circulation (ROSC)**: 78.2% (before start transport 47.8%; during transport 13%; in cath-lab 21.7%). **Average time to arrive at the cath lab:** 75.6 minutes. **Angiography done:** 86.3%. **Primary PCI done:** 36,3%. **Cath lab discharge:** 65.2%. **Hospital discharge**: 34.7%. **Cerebral performance category (CPC) 1-2:** 26%.

Conclusions:

1. - Coronary reperfusion therapy is a real possibility of treatment in patients with refractory OHCA.

2. - We must improve our use of public AED and bystanders CPR.

3. - The absence of shockable rhythm is a bad prognostic factor and a frequent inclusion error (30.5%).

4. - The average delay time of arrival at the hospital is 30 minutes. The main delay factor is caused by waiting for ROSC before starting the transport.

5. - The results of survive and CPC in our study encourage us to increase efforts in this new treatment strategy with diffusion and staff training.

#7641 : Should we now change our policy of tetanus prophylaxis thanks to a bedside immunochromatographic test for the detection of anti-tetanus antibodies?

Preferred format : ePoster

Authors:

Jean-Christophe CAVENAILE (1), Judith HERRERO GARCIA (1), Jean DUCHATEAU (2)

1. Emergency Department, CHU Brugmann ULB, Brussels, BELGIUM
2. , Université Libre Bruxelles, Brussels, BELGIUM

Keywords: tetanus prevention, point of care, cost benefit study, vaccination

Abstract :

Introduction

The prevention of tetanus performed in the Emergency Department (ED) is not reliable when it is based on clinical history. Indeed, many patients don't know their immune status and could receive an unnecessary booster, while other patients wrongly think themselves to be vaccinated and could not receive any prevention.

In 2005, a rapid bedside semi-quantitative immunochromatographic test (TQS) became available, allowing the evaluation of tetanus antibody levels in 10 minutes. The validity studies demonstrated that the accuracy of TQS is much better than the accuracy of clinical history.

The sensitivity and specificity of TQS were respectively 93% and 94%, while the sensitivity and specificity of clinical history were respectively 41% and 85%.

Therefore, TQS has been used for tetanus prevention in our ED.

Objectives

To evaluate within the frame of a cost-benefit study whether the systematic use of TQS is conceivable

Methods

In this prospective monocentric study, 2032 patients with a wound were included. TQS was performed to the patients who had not a written track-record of their immunity.1995 TQS were realized. Whenever TQS was positive the patient consequently received no tetanus prevention. If TQS was negative or doubtful the patients received tetanus prevention using WHO algorithm. We then compared the cost of tetanus prevention employing TQS against the cost of prevention using classical prevention. To obtain the costs for the anti-tetanus vaccination with the help of the TQS, we added the costs of the TQS with the costs to vaccinate the patients with a negative TQS.

Results

1431 TQS were positive and 564 TQS were negative. Among the patients with a negative TQS, 294 had a tetanus prone wound. To realize the tetanus prevention of this cohort with TQS, 564 boosters and 294 tetanus immunoglobulin(anti-TT) were administrated.

The cost of the prevention with TQS was €22313.

Without TQS, 1874 vaccinations and 930 tetanus immunoglobulin would have been €37235

Conclusions

Systematic use of TQS is cost effective and avoids unnecessary and expensive treatments. The test could systematically be included in the tetanus prevention algorithm.

#7642 : Sepsis and its impact on outcome in elderly patients in emergency department

Preferred format : Oral presentation

Authors:

wided Bousselmi (1), Hanen Ghazali (2), aymen zoubli (1), Anware Yahmadi (3), Rania Jebri (4), farah riahi (1), Najla El Heni (3), Sami Souissi (3)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
3. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
4. service des urgences -SMUR , hôpital régional ben arous, ben arous, TUNISIA

Keywords: sepsis, elderly, outcome

Abstract :

Introduction:

Sepsis remain a major cause of mortality and morbidity especially in the elderly over than 65 years.

Objective:

To determine the epidemiological, clinical, therapeutic and outcome features in elderly presenting to the emergency department.

Methods:

Prospective study conducted over six months. Inclusion: patients (Age ≥ 65 years) with suspected infection associated with two or more criteria of the systemic inflammatory response syndrome (temperature ≥38 ° C or ≤ 36 ° C , heart rate > 90 bpm / min , respiratory rate > 20 / min or PaCO2 < 32 mm Hg, WBC > 12,000 cel / mm3 or < 4,000 / mm3) . The presence of organ dysfunction defined severe sepsis. Persistent hypotension (systolic blood pressure < 90 mmHg) or signs of hypoperfusion (lactate ≥ 4 mmol / l, oliguria) despite adequate fluid resuscitation during severe sepsis, defined septic shock.Clinicals, epidemiologicals, biologicals, bacteriologicals, therapeutic characteristics and APACHE 2 score were noted. Evaluation of inhospital and 7 day mortality.

Results:

Inclusion of 66 patients. Sepsis : n = 38 , 57%. Severe sepsis: n = 17, 26%. Septic Shock: n = 11, 16 %. Mean age = 75 ± 10 years. Sex ratio = 1.35.Comorbidities n (%): hypertension 41 (62), Diabetes 34 (51), chronic pulmonary Obstructive disease 8 (12), chronic renal failure 3 (4). Clinical manifestations n (%): Fever 48 (72), impaired general condition 36 (54), respiratory signs 14 (21), digestive signs 12 (18), and neurological signs 8 (12). Source of sepsis n (%): pulmonary 30 (45), urinary 13 (20), skin 12 (18) and digestive 8 (12). APACHE average =14 ± 13. Organ failures n (%): Renal 25 (38), pulmonary 9 (14), hemodynamic 6 (9), hepatic 4 (6) and hematologic 5 (8). Vasoactive drugs used in 11 patients (16%). Hospitalization in intensive care unit in two patients. Inhospital mortality: 3% and 7-day mortality: 0%.

Conclusion: This study shows that despite several comorbidities that present the elderly, early mortality is relatively low. The sepsis resuscitation and management bundles should be started early and have been shown to improve survival of the elderly in emergency department without a transfer to intensive care unit.

#7643 : Economic and operational impact of the Alere™ i Influenza test in a German emergency department

Preferred format : Oral presentation

Authors:

Matthias Brachmann (1), Katja Kikull (1), Kill Clemens (2), Schaumberg Susanne (2)

1. , bcmed GmbH, Düsseldorf, GERMANY
2. , Universitätsklinikum Gießen und Marburg GmbH, Marburg, GERMANY

Keywords: Influenza,emergency department,economic analysis,process optimisation,Alere i Influenza test,iNAT,Point-Of-Care test,process optimisation,workflow

Abstract :

Objective

Among all infectious diseases, the influenza (flu) is especially difficult to deal with due to the unpredictability of its outbreak. A flu season strains the resources of Emergency Departments (ED) and hospitals. The isolation management is a key challenge as the uncertainty about the patients' health status makes isolation necessary for influenza and influenza-like-Illness (ILI) patients alike, until a definite test result is available. This uncertainty has a significant impact of the process efficiency and costs within an ED and also affects the hospital's normal wards.

Method

In order to determine the process efficiency and cost impact of using a new rapid molecular test for influenza, the Alere™i Influenza A&B test, the patient's care process with the PCR pathway was compared to a new pathway including the Alere™i Influenza A & B test. Further, a calculation model was designed using data from the 2014-2015 flu season from the University Hospital of Marburg and Gießen. Focus was on the potential operational and economic effects for the ED as well as for the hospital in general for the entire flu season.

Results

Several effects were found in the analysis: the patient care process using the PCR pathway takes several additional steps to reach the test result and the diagnostic uncertainty prior to obtaining the result makes isolation necessary for each step. In addition, the process takes longer; the time to decision and thereby also the necessary isolation time, can be shortened by an average of 9 hours, going from 10 hours to about 1 hour, using the Alere™i test. Upon streamlining and accelerating the process, costs fell from €94 to €53 per patient when using the Alere™ i test, extrapolating to an overall process cost reduction of €31,891 in one flu season (812 tested patients within the season). In addition, due to the fewer necessary isolation hours, additional room capacity is generated within the ED, and a saving of 1 examination room per day was estimated. On the normal wards, the new pathway freed up bed capacity for an estimated 8 additional inpatients during the crowded flu season.

Conclusion

The analysis shows that the management of ILI-patients during a flu season can benefit greatly from integrating the rapid molecular Alere™ i Influenza A&B test into the ED. Speeding up the diagnostic pathway results in both, economic, as well as procedural effects for the ED, and for the hospital.

Acknowledgements

The economic evaluation was supported by a grant to bcmed from Alere. Susanne Schaumberg and Clemens Kill received no payment for this work.

#7644 : Shock index as a prognosticator in patients with non ST segment elevation myocardial infraction (NSTEMI)

Preferred format : Oral presentation

Authors:

HANA HEDHLI (1), Rim Hammami (2), Feten Amira (2), Zied Guermazi (2), wided Derouich (2), Béchir Bouhajja (1)

1. emergency department, EPS Charles Nicolle, Tunis, TUNISIA
2. Emergency departement, Charles Nicolle hospital, Tunis, TUNISIA

Keywords: Shoc index, acute coronary syndrome, prognosis

Abstract :

Introduction:

Several risk scoring models have been shown to identify patients at increased risks for adverse outcomes in ACS populations [1]. Recently, shock index (SI) a ratio of heart rate/systolic blood pressure, has been reported to predict increased mortality in patients with NSTEMI [2].

Objective:

To evaluate whether the shock index (SI) is useful for predicting cardiovascular outcomes in patients with NSTEMI admitted to the emergency department (ED).

Methods:

A prospective observational study that was conducted over three months [January- March 2016]. We enrolled patients aged more than 18 years, presenting to the hospital alive with presumptive diagnosis of ACS. Were excluded those with ventricular tachycardia, supraventricular tachycardia, implantable cardioverter defibrillator shock, and blood pressure on presentation more than 230/130 mmHg.Patients were divided into those with SI<0.7 and those with SI≧0.7. The prognosis was evaluated based on the occurrence of myocardial infarction (MI) or death at 30 days.

Results:

A total of ninety-two patients were analyzed: fifty- eight patients (63%) had SI < 0.7, thirty-four (37%) had SI ≧ 0.7. The average of age was 62 ± 11 years, sex-ratio= 1.48. No statistically significant difference was observed in baseline characteristics between the two groups.Systolic and diastolic blood pressures were lower in patients with SI ≧0.7 than those with SI < 0.7. Heart ratewas significantly higher in patientswith SI≧0.7.MI rates was 12% in patients with SI ≧ 0.7and 5% in patients with SI <0.7 (p=0.41); 30 days mortality was 11,5% in patients with SI ≧0.7 and 7% in patients with SI 0.7< (p=0.46)

Conclusion:

Shock index is a simple parameter that we can have on admission; it isa useful risk-stratification module to identify high-risk in-hospital mortalitypatients in a NSTEMI population. However itis not a powerful prognosticator to predict adverse cardiovascular outcomes.

References:

[1] Granger CBet al. Arch Intern Med 2003; 163:2345-53

[2] Kobayashi A et al. Cardiovasc Revasc Med 2016

#7645 : Prediction of survival and neurological outcome in paediatric cardiac arrest.

Preferred format : Oral presentation

Authors:

Nieves de Lucas (1), Jesús Lopez-Herce (2), Patrick Van de Voorde (3), Antonio Rodríguez-Núñez (4), Bob Phillips (5), Rihanne Oostenbrink (6), Ian K Maconochie (7), Edurne López (8), Niccolo Parri (9), Sofia Mesa (10), Nuria Clerigué (11), Benedicte Le Roux (12), Rafael Marañón (13), Isabel Durán Hidalgo (14), Dušan Vlahovič (15), Elena Lence (16), Louis Beyssac (17), Deolinda Matos (18), . Pediatric Cardiac Arrest Study Group (19)

1. SAMUR-Protección Civil-Madrid, Ayuntamiento de Madrid, Madrid, SPAIN
2. Cuidados Intensivos Pediátricos, Hospital Universitario Gregorio Marañón, Madrid, SPAIN
3. Paediatric Intensive Care, University Hospital Ghent, Ghent, BELGIUM
4. Cuidados Intensivos Pediátricos, Complejo Hospitalario de Santiago, A Coruña, SPAIN
5. Centre for reviews and dissemination, University of York, York, UK
6. General pediatrics, Erasmus MC – Sophia, Rotterdam, THE NETHERLANDS
7. Emergency Department, St Mary's Hospital, London, UK
8. Servicio de Urgencias, Hospital Universitario de Cruces, Barakaldo, SPAIN
9. , Azienda Ospadellero Universitaria Meyer, Firenze, ITALY
10. Servicio de Urgencias, Hospital 12 de Octubre, Madrid, SPAIN
11. Urgencias de Pediatría, Complejo Hospitalario de Navarra, Pamplona, SPAIN
12. , Centre hospitalier universitaire de Nantes, Nantes, FRANCE
13. Servicio de Urgencias, Hospital Gregorio Marañón, Madrid, SPAIN
14. Urgencias de Pediatría, Hospital Regional Universitario, Málaga, SPAIN
15. , University Medical Centre Ljubljana, Ljubljana, SLOVENIA
16. Departamento de Operaciones, SAMUR-Protección CIvil, Madrid, SPAIN
17. , Centre Hospitalo-Universitaire de Pointe-à-Pitre/Abymes, Les Abymes, FRANCE
18. , Hospital Garcia de Orta em Almada, Almada, PORTUGAL
19. RISEUP, GERCPPYN, REPEM, SPAIN

Keywords: pediatrics, outcome, cardiac arrest

Abstract :

INTRODUCTION. Mortality of paediatric Cardiac Arrests (CA) remains high despite efforts towards its reduction, and survivors may have profound neurological impairments. Certain blood parameters (pH and lactate) and the Paediatric Logistic Organ Dysfunction (PELOD) score in 24 first hours have been described as predictors of worse outcome. There is however still a need for additional evidence in children as these parameters could then help to inform parents and to support decisions.

PARTICIPANTS AND METHODS. Prospective study (65 hospitals, 6 countries) using Utstein style with paediatric Out-of-Hospital CA (OHCA) and Emergency-Department CA (EDCA) in patients admitted to Emergency Departments. The association between first blood pH, first lactate and PELOD score in first 24 hours with survival and good neurological outcome to discharge (paediatric overall performance category –POPC– 1 or 2) was studied. Data collection from 1st June 2014 to 31st March 2016.

RESULTS. We have analysed 101 CA, 14.9 % of which were EDCA. The median age of the sample was 3.6 years (range 0 - 17.2), 62.4% were male. The initial rhythm was asystole in 51.4% of CA, bradycardia in 22.8%, ventricular fibrillation in 6%, pulseless electrical activity in 4%, pulseless ventricular tachycardia in 3% and unknown rhythm in 12.8%.

38 children survived to hospital discharged: 15 with POPC 1, 7 with POPC 2, 10 with POPC 3, 4 with POPC 4, 2 with POPC 5. 6 children are still inpatients or are missed patients.

We found an association between survival to discharge and:

a) Higher blood pH (<0.001). Minimum venous pH in survivors, 6.67.

b) Lower lactate (p=0.006). Maximum venous lactate in survivors, 17.8 mmol/l.

c) Lower PELOD score in first 24 hours (0.003). Maximum PELOD in survivors, 63.

We found an association between survival to discharge with POPC 1 or 2 and:

a) Higher blood pH (p=0.007). The minimum venous pH in patients with POPC 1 or 2 was 6.70.

b) Lower PELOD score in first 24 hours (p<0.001). The maximum PELOD in patients with POPC 1 or 2 was 52.

Lower lactate was n.s. (p=0.088). Maximum lactate in patients with POPC 1 or 2 was 15.3 mmol/l.

CONCLUSION.

Blood pH, blood lactate and PELOD in first 24 hours are good predictors of survival to hospital discharge in children after OHCA and EDCA. Nevertheless, only blood pH and PELOD score in first 24 hours seem to be adequate predictors of a good neurological outcome to discharge.

The worse values of theses parameters in survivors are so extreme that it is not easy to identify patients with no chance of survival.

#7646 : Can we improve recognition of acute coronary syndrome in criteria based medical dispatch

Preferred format : Oral presentation

Authors:

Radmila Majhen Ujevic (1), Leo Luetic (1)

1. prehospital, Institute for emergency medicine split-dalmatian county, Split, CROATIA

Keywords: index, criteria, chest pain, AMI

Abstract :

Introduction: Croatian Index of Urgent Call Admission is criteria based tool of Medical Dispatch Unit (MDU) in Split, city with 178000 inhabitants. MDU receives calls according to symptoms and consequently alerts adequate medical response - red , yellow and green . EMS in Croatia has two-tier system - it consists of team 1 (physician, medical technician, driver) and Team2 (two medical technicians). 12 channel ECG is a standard for evaluating cardiac rhythm and myocardial ischemia in the field. Adequate assessment and response enable the patient with acute myocardial infarction to arrive in time to PCI procedure. We tried to assess the correlation of Index and confirmation of acute coronary syndrom made by EMS physician in field.

Methods: quantitative retrospective analysis of data collected in one-year period in eRinels database. We compared calls admitted by Index as criteria A09 (chest pain/ heart disease) to final physician 's medical records concluded with International Classification of Disease (ICD) R07 and I20 - I25 with particular emphesize to I21 (acute myocardial infarction confirmed by 12 channel ECG) . We also wanted to see what other diagnosis were found behind the calls admitted as A09. After that, we made a survey in opposite direction - we searched medical records for all R07 and I20-I21 trying to see what other criteria have been used besides A09 to dispatch the call which finally resulted with diagnosis mentioned above. Only primary missions were included (patients who have been examined by GP, cases where T1 from Split was used as transport from harbor or helidrom to hospital, and patients who came by themselves to EMS room were excluded from the survey).

Results: There were 3753 red responses for T1. There were 496 calls admitted as A09 – red criteria chest pain/heart disease. There were 198 (39,91%) confirmed diagnosis considering heart problems (R07, I20-I25). There were 34 cases I21 (6,85%) – acute myocardial infarction confirmed by 12 channel ECG and assessed as A09 by MDU, 24 cases I20 – I25 without I21 (4,84%), 140 cases R 07(28,22%) pain in throat and chest). A09 has sensitivity 43,03% and specificity of 87,58% in detecting I21.Other diagnosis after being dispatched as A09 were I group (other than I20 - I25) 71 (14,31%), R group (other than R07) 47 (9,47%)... Total number of AMI in 2015 in Split was 79. There were 34 (43,03%) calls assessed by MDU as A09; 17 (21,51%)were assessed as A05 – unclear problem. There were 14 (17,72%) calls dispatched as yellow response.

Conclusion: Majority of I21 (82,28%) were dispatched as red response so the patients could benefit of prompt care, although less than half was admitted as A09. More training in MDU through re-listening of incoming calls and reassessment of criteria is needed in intention to improve acute coronary syndrom recognition and to diminish undertriage. Final outcome of such patients could be assessed with ED records about the time of the reperfusion.

#7647 : Prognostic value of SOFA score in a population of patients admitted in an Emergency-Department High-Dependency Unit

Preferred format : Oral presentation

Authors:

Federico Meo (1), Francesca Caldi (1), Rita Audisio (1), Caterina Savinelli (1), Valerio Teodoro Stefanone (2), Lucia Taurino (2), Francesca Innocenti (2), Riccardo Pini (2)

1. Emergency Department High Dependency Observation Unit, Careggi University Hospital, Florence, ITALY
2. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY

Keywords: High Dependency Unit, SOFA score

Abstract :

Aims: To evaluate the prognostic role of anamnestic variables and Sequential Organ Failure Assessment score (SOFA) in a population of patients admitted in an Emergency Department High Dependency Unit (ED-HDU).

Methods: ED-HDU is a clinical setting with a sub-intensive level of care, whose mission is to stabilize patients in order to prevent admission in Intensive Care Units (ICU); a maximum 48-hour ED-HDU length of stay is recommended. From June, 2014, we recorded all our patients in a standardized database; after 20 months, we analyzed the database in order to identify predictive parameters of an adverse outcome. To standardize comorbidity, Charlson index was calculated; SOFA score calculation was employed to evaluate organ dysfunction. The primary end-points were ED-HDU mortality and ICU admission.

Results: In the study period (June 2014-March 2016) we admitted 2300 patients, mean age 72±16 years (range 14-102; 5% aged ≤40 years, 22% aged 41-65 years, 38% aged 66-80 years, 34% aged >80 years), 53% male gender; Charlson index was 4±3 (range 2-15) and SOFA score was 2.4±2.6 (range 0-17). Final dispositions were: 733 patients were discharged to home, 1242 were admitted in an ordinary ward, 144 in a HDU, 138 in an ICU and 43 died. Overall, we could stabilize and avoid a level of care increase in 86% of our patients. Compared with admitted patients, discharged patients were significantly younger (69±16 vs 73±16 years, $p<0.001$) and had a lower Charlson index (3.9±2.3 vs 4.6±2.5) and SOFA score (1.0±1.3 vs 3.0±2.8 all $p<0.001$); 91% did not show any organ failure at admission, 89% did not have any infection (respectively vs 62% and 61% in admitted patients, $p<0.001$) and among the 82 patients with infection, 79 had not the criteria for sepsis or septic shock. Non-dischargeable patients were divided in three subgroups: patients admitted in ordinary ward or HDU (D1, n=1368), admitted in ICU (D2, n=138) and non-survivors (D3, n=43). D3 patients were significantly older than D1 and D2 patients (81±13 vs 73±12 and 73±16 years, both $p\leq0.01$), had a higher Charlson index (D1: 4.5±2.5, D2 4.9±2.4, D3 6.4±2.9, $p<0.001$) and SOFA score (D1 2.7±2.4, D2 4.3±3.6, D3 9.8±3.8, $p<0.001$). Presence of moderate to severe organ failure, involving up to two systems, increased significantly (D1 35%, D2 53% and D3 84%, all $p<0.001$) in the aforementioned subgroups with increasingly worst prognosis, as well as proportion of patients with an infection at ED-HDU admission (D1 37%, D2 45%, D3 81%, $p<0.001$ D3 vs D1 and D2) and infection severity (sepsis/septic shock: D1 28%, D2 55%, D3 83%, all $p<0.001$). A multivariable regression analysis including age, Charlson index, SOFA score and presence of infection at ED-HDU admission showed that only SOFA score showed an independent prognostic value both for ICU admission (RR 1.21, 95%CI 1.13-1.29) and ED-HDU mortality (RR 1.76, 95%CI 1.57-1.96, all $p<0.001$).

Conclusions: ED-HDU carried out its own mission in the most proportion of admitted patients; a high SOFA score was the only independent predictor of a bad outcome.

#7648 : Should we now change our policy of tetanus prophylaxis thanks to a bedside immunochromatographic test for the detection of anti-tetanus antibodies?

Preferred format : Oral presentation

Authors:

Jean-Christophe CAVENAILE (1), Judith HERRERO GARCIA (1), Jean DUCHATEAU (2)

1. Emergency Department, CHU Brugmann ULB, Brussels, BELGIUM
2. , Université Libre Bruxelles, Brussels, BELGIUM

Keywords: tetanus prevention, cost-benefit study,

Abstract :

Introduction

The prevention of tetanus performed in the Emergency Department (ED) is not reliable when it is based on clinical history. Indeed, many patients don't know their immune status and could receive an unnecessary booster, while other patients wrongly think themselves to be vaccinated and could not receive any prevention.

In 2005, a rapid bedside semi-quantitative immunochromatographic test (TQS) became available, allowing the evaluation of tetanus antibody levels in 10 minutes. The validity studies demonstrated that the accuracy of TQS is much better than the accuracy of clinical history.

The sensitivity and specificity of TQS were respectively 93% and 94%, while the sensitivity and specificity of clinical history were respectively 41% and 85%.

Therefore, TQS has been used for tetanus prevention in our ED.

Objectives

To evaluate within the frame of a cost-benefit study whether the systematic use of TQS is conceivable

Methods

In this prospective monocentric study, 2032 patients with a wound were included. TQS was performed to the patients who had not a written track-record of their immunity.1995 TQS were realized. Whenever TQS was positive the patient consequently received no tetanus prevention. If TQS was negative or doubtful the patients received tetanus prevention using WHO algorithm. We then compared the cost of tetanus prevention employing TQS against the cost of prevention using classical prevention. To obtain the costs for the anti-tetanus vaccination with the help of the TQS, we added the costs of the TQS with the costs to vaccinate the patients with a negative TQS.

Results

1431 TQS were positive and 564 TQS were negative. Among the patients with a negative TQS, 294 had a tetanus prone wound. To realize the tetanus prevention of this cohort with TQS 564 boosters and 294 tetanus immunoglobulin(anti-TT) were administrated.

The cost of the prevention with TQS was €22313.

Without TQS, 1874 vaccinations and 930 tetanus immunoglobulin would have been €37235

Conclusions

Systematic use of TQS is cost effective and avoids unnecessary and expensive treatments. The test could systematically be included in the tetanus prevention algorithm.

#7649 : A blended learning approach to implementing new guidelines in sepsis using the Medutainment concept

Preferred format : Oral presentation

Authors:

Mathias Geldermann Holgersen (1), Theo Walther Jensen (2), Sandra Viggers (3), Anders Granholm (1), Mads Seit Jespersen (1)

1. Chairman, Students' Society for Anaesthesiology and Traumatology, Copenhagen, Denmark, Copenhagen, DENMARK
2. EMS, EMS Copenhagen, Copenhagen, DENMARK
3. Chair, Students' Society for Anaesthesiology and Traumatology, Copenhagen, Denmark, Copenhagen, DENMARK

Keywords: Medutainment, Sepsis, Flipped Classroom

Abstract :

Background: Implementing new guidelines and changing clinical practice is a challenge. In April 2015 the Surviving Sepsis Campaign (SSC) released new guidelines on the treatment of severe sepsis and septic shock. Many barriers related to implementing guidelines exist; these include lack of awareness and lack of dissemination. "Medutainment" is a concept that presents the curriculum in an entertaining way addressed at improving the learner's motivation towards the subject. The concept incorporates elements from popular entertainment and combines it with the academic curriculum

Methods: The study was performed during a 7-day international summer school in emergency medicine with 60 attending medical students. The intervention was based on the flipped classroom model and contained five elements: online videos, a pocket guide, an interactive online game ("Who wants to be a Sepsionaire?"), a workshop (based on the "Jeopardy" television programme) and a simulation scenario. Post-course the participants evaluated the course through an online survey. Data from the online game was collected and used to quantify the students' progress.

Results: The online game had a total of 273 entries. The average of points attained increased with 106 points out of 1484 possible points from the first to the final attempt on the game. The amount of correct answers was improved by 7.6% and the answering time was reduced from 3.22 to 1.33 minutes. A total of 77% evaluated the method as being both useful and entertaining.

Conclusion: Using a blended learning model together with the "Medutainment" concept increased the time students spent on preparation and increased their self-assessed abilities in diagnosing and treating sepsis.

#7650 : Survival of patients with high voltage electrical injuries. Case reports.

Preferred format : Oral presentation

Authors:

Volodymyr Kizyma (1), Oleksandr Opanasenko (2), Eva Havlikova (2)

1. EMS, Falck Zachranna, Košice, SLOVAKIA
2. EMS, Falck Zachranna, Kosice, SLOVAKIA

Keywords: high voltage electrical injury, successful resuscitation, good neurological outcome

Abstract :

Introduction. Electrocution is an injury of low incidence but with high mortality. In years 2013 – 2015 in Slovakia emergency medical service (EMS) providers completed at average 140 calls per year (2.58 calls per 100, 000 people) for patients with electrical injuries whereas 3.33 % of the patients died right on the scene. Yet, there were reported cases of the patients´ successful resuscitation with good neurological outcomes even after high voltage electrical injuries. Authors present three such cases associated with different high voltage injuries (a lightning strike, direct current and alternating current) from year 2015.

Case 1. During a Holy Mass the lightning hit a tree under which people prayed. Nine people were injured and were moved inside a church. Six were unconscious but breathing, one had cardiac arrest and a lay rescuer CPR was started. After the first EMS unit arrival this patient was triaged black because of a massive bleeding from lungs and the CPR efforts were stopped. Meanwhile another unconscious patient developed cardiac arrest. Actual resources were evaluated and ALS was started immediately. ROSC occurred after 25 minutes and the patient was transported to the hospital. In 3 days he was discharged home with CPC1. Though CPR is seldom started in MCIs the organization of medical care on the scene during this MCI allowed enough facilities to start CPR. This is in line with the ERC 2015 Guidelines as rescuers should give the highest priority to patients in respiratory or cardiac arrest after the lightning injury. This decision proved to be a benefit to the mentioned patient as he developed the ROSC, nowadays suffering only from mild consequences as myalgia and chronic fatigue.

Case 2. A 20 – year old boy was hit by direct current of 1,500 V from overhead power lines when jumping on the roof of a wagon and went into cardiac arrest. His girlfriend called 112 and immediately started CPR. The EMS team continued the CPR on the wagon roof whilst it was still under traction mains. To protect themselves from the possible electrical injury the paramedics worked only on kneeling positions to keep the distance of 1.5 m from the overhead lines. After delivering two shocks of 200 J and 300 J ROSC was achieved and the patient was shifted down to the ambulance. He was discharged from the hospital without any neurological deficit after 3 days.

Case 3. A 19 – year old boy jumped into a river near a working high voltage industrial water pump. He developed seizures and went into cardiac arrest. Lay rescuers started CPR. The EMS team came after 10 min and immediately delivered the 200 J shock. The ROSC was achieved and after 16 days of treatment the patient was discharged home without any neurological deficit.

Conclusion. Authors emphasized the fact that immediate resuscitation of young victims even from high voltage electrical injury can result in long term survival with good neurological outcome. EMS providers should also pay strict attention to safety measures when performing CPR to such patients.

#7651 : An Unusual Source For Nosocomial Infections Due To Multi Drug Resistant Acinetobacter Baumannii Complex: Emergency Department

Preferred format : Oral presentation

Authors:

Murat Ersel (1), Husnu Pullukcu (2), Meltem Tasbakan (2), Sohret Aydemir (3)

1. Department of Emergency Medicine, Ege University School of Medicine, İzmir, TURKEY
2. Department of Infectious Diseases, Ege University School of Medicine, İzmir, TURKEY
3. Department of Clinical Microbiology, Ege University School of Medicine, İzmir, TURKEY

Keywords: emergency department, nosocomial infection, Acinetobacter Baumannii

Abstract :

Introduction: The treatment and control of nosocomial infections due to multidrug-resistant *Acinetobacter boumannii* is a challenge. Many multi-problem patients were treated in critical care area of the ED for a long period of time. Therefore we aimed to investigate with this retrospective study the prevalence of multidrug resistant *A. baumannii* and ED related risk factors.

Methods: Patients who admitted between 1 July 2012 - 1 April 2016 to the ED and has a positive culture for A. baumanii were included to the study. Risk factors and patient history were recorded from the patient charts.

Results: Our new emergency department was builded three years ego. Fourty eight patients' (29% female) who were hospitalized in our emergency deparment during the last three years, cultures were positive for *Acinetobacter baumannii complex*. Mean age was calculated as 70.04 +/- 13.43 years. *A.baumanii complex* were isolated from the cultures of peripheral blood, urine, sputum, deep tracheal aspiration, pleural fluid, tissue and wound swab with the numbers of eight, twenty four, four, three, one, two, one and five, respectively. Eleven culture positivities were not accepted as an infection and one of the culture couldn't been evaluated. Emergency department was thought to be the source of infection for the total number of eight patients whose hospitalized for a long time or only had admission to the emergency department. The main complaints of the patients were fever, nausea-vomitting and confusion. Half of the patients (24/48) were confined to bed. Fourty two patients had a history of hospital or nursing home stay. Fourty one patients had comorbidities as a complicatory factor. Success rate of empirical treatment which was started according to initial complaints was only 50 percent (23/48). Avarage stay in the emergency department was 1.8 day. Twenty one patients were hospitalized and eighteen patients were discharged with oral treatments. Seven patients were transported to another hospital intensive care unit and two patients were accepted as exitus in our emergency department. Twenty one of the isolated Acinetobacters which were thought to be cause of infection were quite susceptible bacterias. Whereas, twenty seven of them were susceptible to colistin, amikacin and tigecycline but resistant to beta-lactams including widely used carbapenems, quinolones and trimethoprim-sulfamethoxazole. In one of the patients, there was also *Pseudomonas* positivity (colistin resistant) with *Acinetobacter complex*. In addition to this, vancomycin resistant enteroccus (VRE) was spotted in one patient and carbapenem resistant enterobactericae (CRE) was spotted in another one.

Conclusion: Nosocomial infections due to resistant gram-negative microorganisms are the important causes of mortality. The treatment choices are limited in Acinetobacter baumannii infections, especially if they are panresistant. The data presented in this study demonstrates that patients who have complicated factors and hospitalized before, should be considered carefully. Empirical treatments should be directed according to previous antibiotic history in these population. Maximum isolation measures should be taken even in the ED, because of spreading the isolates such as acinetobacter, pseudomonas, CRE, VRE from these patients to other ones and full compliance of these measures must be done.

#7652 : PERSISTENT BRONCHITIS IN A YOUNG MALE WITH SURPRISING FINAL DIAGNOSIS

Preferred format : ePoster

Authors:

BEATRIZ SIERRA BERGUA (1), MARIA de la PEÑA LOPEZ GALINDO (1), ALBA HERNANDEZ MARCOS (1), ALEXANDER MAZA GONZALEZ (2)

1. Emergency department, Hospital Clínico Lozano Blesa - Zaragoza, Spain, ZARAGOZA, SPAIN
2. Neurosurgery department, Hospital Clínico Lozano Blesa - Zaragoza, Spain, ZARAGOZA, SPAIN

Keywords: dyspnea, heart failure, chemotherapy

Abstract :

Anamnesis: 35 year old male with a history of acute myeloid leukemia twelve years prior to the current query reason, treated with chemotherapy: Anthracyclines (Idarubicin / Cytarabine) and twice Mitoxantrone plus autologous bone marrow transplantation in complete remission for three years and no standard treatments. He consulted for persistent dyspnea associated with moderate activity, coughing, lower limbs edema and a paroxysmal nocturnal dyspnea episode. Previously examined on several occasions in the health center and hospital for the same symptoms weeks earlier, it was labeled as a bronchitic process and anxiety without clinical improvement. Acute heart failure (AHF) was suspected probably secondary to previous treatment with Anthracyclines. Clinical examination: conscious, oriented, Blood pressure: 125/90 mmHg, basal oxygen saturation 99%, 100 per minute rhythmic heart beats with gallop rhythm and mitral systolic murmur. Bilateral basal lung hypoventilation and bilateral ankle edema. Rest of exploration within normality.
Given the clinical suspicion of AHF an electrocardiogram was made showing sinus rhythm with signs of left branch blockage. Chest radiograph showed cardiomegaly and interstitial edema. Blood work showed natriuretic peptide of 12.883 and the initial echocardiogram (VScan method) showed dilated left ventricle with estimated ejection fraction of 15-20% and moderate mitral and tricuspid regurgitation. During admission in the Cardiology Department more studies were made with new echocardiogram and cardiac MRI. The final diagnosis is dilated cardiomyopathy with severe ventricular dysfunction of nonischemic etiology. Medical treatment was established and an implantable defibrillator-resynchronization pacemaker was placed since recorded episodes of ventricular tachycardia were detected. The patient is currently pending for heart transplantation.

Discussion: Anthracyclines are cytotoxic drugs used in the treatment of different cancers. Cardiotoxicity is a characteristic and serious side effect of these drugs that occurs through different mechanisms lastly generating increased oxidative stress, myocyte apoptosis and fibrosis.
The overall incidence of symptomatic heart failure by these drugs is between 2.2 and 5.1%. Heart damage can occur immediately after treatment, subacute in the following months and finally chronically until 20 years after starting treatment; thus, it is recommended that long-term patients with Anthracycline follow up with echocardiography to detect their possible damage since Anthracycline-induced cardiomyopathy has been associated with a poor prognosis and a 2-year mortality of up to 60%.
This case shows the importance of early recognition of clinical syndromes such as heart failure and knowledge of the potential side effects associated with the patient’s previous treatment

#7653 : Post-traumatic stress disorder in mild traumatic brain injury

Preferred format : ePoster

Authors:

HANA HEDHLI (1), Salwa Amri (2), Feten Amira (2), Bassem Chatbri (2), Syrine Jouani (2), Béchir Bouhajja (1)

1. emergency department, EPS Charles Nicolle, Tunis, TUNISIA
2. Emergency departement, Charles Nicolle hospital, Tunis, TUNISIA

Keywords: post traumatic stress disrder, mild traumatic brain injury, emergency department

Abstract :

Introduction :

Post-traumatic stress disorder (PTSD) is an important psychopathology that persists for a period of time after a mild traumatic brain injury (MTBI) has occurred. This period of time can range from weeks to months. Symptoms of PTSD are often vague and non-specific.

Purpose:

To examine the frequency of PTSD symptoms in MTBI patients admitted in emergency department (ED).

Participant and methods:

A prospective observational study that was conducted over seven months [December 2014 - June 2015]. We included a consecutive adults who were at least 18 years, presented with a MTBI defined according to the criteria of the Head Injury Severity Scale (HISS). PTSD is characterized by persistent re-experiencing, avoidance/numbing, and hyperarousal symptoms. After six months patients were contacted via standardized telephone interview to ascertain the symptoms of PTSD.

Results:

Three hundred eighty- seven patients were enrolled. Mean age = 41 ± 18 years, 77% were male. Mechanisms of injury were (%): traffic accident (77), falls (14), assault (15) and work accident (5). The way of the patient's arrival at the emergency department was provided by (%): own means (35), pre-hospital care system (55). Clinical findings showed were (%): GCS =15 (89), loss of consciousness suspected or confirmed (58), Repeated vomiting (≥ 2 episodes) (11), clinical signs of depressed or basal skull fracture (14) and physical evidence of trauma above the clavicles (40). ninety – four percent of our population had a brain computed tomography (CT) which demonstrated intracranial hemorrhage in 75 cases. PTSD: re-experiencing = 17%, avoidance/numbing = 19%, hyperarousal symptoms= 40%.

Conclusion:

Not all people who suffer mild traumatic head injury experience PTSD. Early recognition and correction of these problems may limit the secondary effects of TBI and improve patient outcome.

References:

[1] Lebigot F. Ann Med Psychol 2015; 173:819-27.

#7654 : Efficacy of therapeutic hypothermia combined with fasciotomy on experimental compartment syndrome in a rat model

Preferred format : Oral presentation

Authors:

CENGIZ KAYA (1), MEHMET ERYILMAZ (2), IBRAHIM ARZIMAN (2), UMIT KALDIRIM (1), MURAT DURUSU (2), GUCLU AYDIN (1), EMRE CAVANA (3), ALI FUAT CICEK (4), SALIM KEMAL TUNCER (2), SABAN MEHMET YASAR (2)

1. EMERGENCY MEDICINE, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, TURKEY
2. EMERGENCY MEDICINE, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, TURKEY
3. , GULHANE MILITARY MEDICAL ACADEMY, ANKARA, TURKEY
4. PATHOLOGY, GULHANE MILITARY MEDICAL ACADEMY, ANKARA, TURKEY

Keywords: compartment syndrome, hypothermia, fasciotomy

Abstract :

Objective: Acute limb compartment syndrome is a surgical emergency due to raised pressure within the facial area and if not treated within the first six hours can cause irreversible muscle and nerve injuries. The goal of the treatment in compartment syndrome is lowering the intracompartmental pressure to prevent tissue necrosis and loss of function. Recently, alternative methods to fasciotomy that is a surgical emergent intervention or other methods may contribute to treatment are to be investigated. Supposing that hypothermia would be effective in reducing the tissue damage, we planned to compare fasciotomy and hypothermia.

Material & Methods: This study was carried out with forty rats which were randomly divided into four groups: control, fasciotomy, hypothermia and fasciotomy including hypothermia. Compartment model was created by a method including compression by tourniquet applied to one hindlimb of all rats followed by 2 hours of reperfusion. Hypothermia and fasciotomy including hypothermia groups were applied water at temperature of 8-10 º C for 4 hours. Lower limbs of all groups were amputated and examined histopathologically. Subsequently Creatine Kinase, Lactate Dehydrogenase, Myoglobine and Potassium levels were measured from the blood samples obtained from all groups. During the evaluation of the results obtained, statistically significant differences were found.

Conclusion: It is determined that hypothermia is effective on reducing tissue edema, congestion, inflammation and intracompartmental pressure. According to the results of our study; due to all of these features, hypothermic treatment provide time and contribution to fasciotomy.

#7655 : Reversible left bundle-branch block due to carbon monoxide poisoning: a case report

Preferred format : Oral presentation

Authors:

Atif Bayramoglu (1), Abdullah Osman Kocak (1), Ilker Akbas (1), Alpaslan Unlu (1)

1. Department of Emergency Medicine, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: carbon monoxide poisoning, left bundle-branch block, ECG changes, coronary angioplasty

Abstract :

Carbon monoxide (CO) is known as a potent poisonous gas. The clinical features of CO poisoning are not specific. Cardiac disorders due to changes in cellular and subcellular levels, cardiomyopathy, angina pectoris, acute myocardial infarction, arrhythmias, heart failure, pulmonary edema, cardiogenic shock, and sudden death may occur. Myocardial damage has been determined as an indicator of increased mortality in patient with CO poisoning in the long term. The electrocardiographic (ECG) changes that may be detected in carbon monoxide intoxication are repolarization disorders, flattening and inversion of T waves, ischemic changes, QT-interval prolongation, P-wave elevation, QRS widening, and new-onset bundle-branch block in 2 consecutive derivations.

With this case, we aimed to present the development of a transient left bundle-branch block due to CO intoxication. The case had no known prior cardiac disorder, and subsequently performed percutaneous transluminal coronary angioplasty revealed normal results.

A 48-year-old female patient was admitted to our emergency service with complaints of headache, nausea, and somnolence. Her medical history revealed exposure to coal gas of the stove at home for approximately 3 hours. The patient was cooperative and well oriented during her physical examination. Her Glasgow Coma Scale score was 15. Her vital signs were normal. In ECG, which was obtained for assessment of cardiac involvement, left bundle-branch block was present. In workup for blood gases, which was performed with preliminary diagnosis of CO poisoning, carboxyhemoglobin was 14.8% (normal value, 1%-5%); her biochemical laboratory test results revealed troponin I as 0.05 (normal value, < 0.04). Other laboratory test results were within normal limits. She was consulted with the Cardiology Department. In ECG obtained during consultation with Cardiology, normal sinus rhythm was identified The patient whose coronary angiography findings were interpreted as normal and who had no additional complaint during follow-up was discharged from the hospital.

Consequently, our case is the first and only case in whom transient left bundle-branch block had developed due to CO poisoning and this left bundle-branch block was proven to be CO-induced by normal coronary angiography

(This case report is accepted in American Journal of Emergency Medicine with doi number as:10.1016/j.ajem.2015.06.034)

#7656 : Herpes simplex encephalitis: top priority diagnosis and treatment in emergency department

Preferred format : Oral presentation

Authors:

Paul GAYOL (1), Eleonore SEUVIC (1), Ruxandra COJOCARU (1), Manana POTOCNIK (1), Fadi KHALIL (1), Eric BAYLE (1), Syamak AGHA BABAEI (1), Pascal BILBAULT (1)

1. Emergency Department, Strasbourg University Hospital NHC (Nouvel Hôpital Civil), Strasbourg, FRANCE

Keywords: herpes simplex infection, viral encephalitis, viral meningitis

Abstract :

Introduction: Herpes simplex encephalitis (HSE) is a sporadic, endemic but devastating viral infection. In general it is due to a reactivation or a reinfection by herpes simplex virus 1 (HSV1) while herpes simplex meningitis (HSM) is due to HSV2. Objectives: a. to analyze their clinical presentations, complementary exams, treatment (TT) and patient's outcome; b. to retrospectively evaluate a diagnostic score of encephalitis (IEC, International Encephalitis Consortium 2013). **Material and method**: Observational retrospective study of all patients admitted in the emergency department (ED) between May 2005 and May 2015 with final diagnosis of HSM or HSE. **Results**: inclusion of 32 patients over 10 years: 12 HSM and 20 HSE. Patients with HSE were older (average age: 65.6 years). The clinical consultation deadline was ≤ 84h for 75% of patients (average time: 67 hours). Patients with headache had a poor risk of HSE, whereas those with confusion and/or neurological signs had a higher risk of HSE. The IEC score retrospectively permitted to differentiate HSM and HSE by considering results "possible" as HSM. The lumbar puncture was positive for viral meningitis in 93.8% of cases. An EEG was always abnormal in HSE (100%), with a statistical significant difference between HSM and HSE. Brain CT scan did not differentiate HSM and HSE. An abnormal brain MRI (gold standard) statistically signed a HSE, and its average delay time was > 24 hours for 75% of HSE patients. Regarding TT all patients had received acyclovir, and its average duration in HSE was 21 days. No patient having HSM presented neurological sequelae compared with 65% of HSE patients. **Discussion**: PCR results should not delay the treatment start time. Brain MRI is the exam of choice if suspicion of HSE. **Conclusion**: The HSE need top priority diagnosis and treatment related to the risk of neurological damage. Score IEC had an excellent sensitivity and specificity in the HSE diagnosis and could thus be used to differentiate MH and MEH clinical presentations on ED admission.

#7657 : Medium- and long-term health effects of earthquakes in high-income countries: a systematic review of research methods.

Preferred format : Oral presentation

Authors:

Alba Ripoll Gallardo (1), Barbara Pacelli (2), Marta Alesina (3), Dario Serrone (4), Giovanni Lacutone (5), Fabrizio Faggiano (6), Francesco Della Corte (1), Elias Allara (6)

1. , CRIMEDIM- Research Center in Emergency and Disaster Medicine - Università del Piemonte Orientale, Novara, ITALY
2. , Regional Health and Social Care Agency of Emilia-Romagna, Bologna, ITALY
3. , Department of Sciences of Public Health and Pediatrics, University of Turin, Turin, ITALY
4. , Department of Biotechnological and Applied Clinical Sciences (DISCAB), L'Aquila, ITALY
5. , Department of Life, Health and Enviromental Sciences, University of L'Aquila, L'Aquila, ITALY
6. , Department of Translational Medicine; Università del Piemonte Orientale, Novara, ITALY

Keywords: natural disaster, earthquake, high-income countries, health effects

Abstract :

BACKGROUND

Over the last decades, the negative effects of earthquakes have increased sharply. In high-income countries, the immediate health outcomes resulting from these events (e.g., crush injuries, infections) are usually monitored and managed using standardized procedures. Conversely, the health effects arising during the chronic phase appear to be scarcely and heterogeneously monitored even in countries with well-established healthcare systems. This study aims to highlight the methodological strengths and weaknesses of present surveillance practices in high-income countries to prompt the development of future contingency plans.

METHODS

Medline, Scopus, and 6 international and national sources of grey literature including the websites of the World Health Organization, Centers for Disease Control and Prevention and the European Centre for Disease Control and Prevention were systematically searched. Keywords included a combination of the most common synonyms of “earthquake” with all high-income countries according to the World Bank list. Review papers retrieved with the above searches were manually screened for relevant references. Inclusion criteria comprised: measurement of health outcomes at least one month after the earthquake, investigation of earthquakes occurred in high-income countries and use of an observational study design including at least one control group with subjects unexposed to the earthquake. Only studies on human species and written in English, Italian, Spanish, French, Portuguese or German were included. No time restrictions were set.

RESULTS

The search yielded a total of 2,976 titles and 64 articles were included. The studies referred to 14 different earthquakes occurred in 8 countries between 1981 and 2015. The Kobe/Hanshin-Awaji (Japan, 1995) and L'Aquila (Italy, 2009) seisms were the most investigated earthquakes. The studies had a median sample size of 454 subjects, used most frequently a cross sectional (21/64) or time series design (21/64), and included predominantly temporal control groups (42/64). The highest number of measurements (median 12) and largest samples sizes (median 103,788) were found in studies with a time series design (median 12). Most studies focused on patients with specific diagnoses (25/64) rather than on the general population (17/64) and (43/64) used routine data collection. The 116 outcomes reported were evaluated for a median follow-up time of 16 months and articles focused on a wide range of physical and mental health outcomes including: all-cause mortality, cardiovascular diseases, intentional self-injury and problems related to lifestyle. Evidence of an increase was reported for 66 outcomes (56%) while 40 (34%) did not vary and 12 (10%) decreased.

CONCLUSION

A more intensive and coordinated use of routine data could benefit future epidemiological surveillance in the aftermath of earthquakes. Whenever possible, a cohort design should be preferred and both geographical and temporal control groups should be used. Future epidemiological surveillance systems should consider capturing the impact of earthquakes on the access to health services and its utilization.

#7658 : Accuracy in emergency medical dispatch - A comparison between two dispatch protocols

Preferred format : Oral presentation

Authors:

Klara Torlén (1), Lisa Kurland (2), Maaret Castrén (3), Knut Olanders (4), Katarina Bohm (5)

1. MD, Karolinska Intitute, Södersjukhuset, Stockholm, SWEDEN
2. PhD, Ass Prof, Institute, institution of clinical science and education, KISÖS, Stockholm, SWEDEN
3. PhD professor, Institute, institution of clinical science and education, KISÖS, Helsinki, SWEDEN
4. PhD, Vo Anestesi och Intensivvård, Lunds Universitetssjukhus , Lund, SWEDEN
5. PhD ass prof, Institute, institution of clinical science and education, KISÖS, Stockholm, SWEDEN

Keywords: Emergency medical dispatch, protocol, accuracy

Abstract :

Background
The Emergency Medical Communication Center (EMCC) is the first contact for patients needing acute care and thus the first part of the chain of emergency care. In Sweden the emergency medical system is based on the single emergency number 112.Today the EMCC uses a computerized, criteria-based protocol called Medical Index to ensure the best possible prioritization in ambulance dispatching. A new dispatch protocol was developed, based on Rapid Emergency Triage and Treatment System (RETTS), the triage scale currently used by the majority of Swedish EDs as well as emergency medical services. The prototype, RETTS-A, has been modified to fit the complex situation of the EMCC. The aim of the current study was to compare the accuracy in priority level between the two dispatching protocols.

Participants and methods
A randomized controlled non-blinded simulation study was performed at the EMCC in Stockholm, Sweden, between 2015-10-27 and 2016-03-17. Fifty call-takers from Swedish EMCC's were recruited to participate in the study. Callers were recruited from a pool of experienced standard patients. Manuscripts for 26 patient scenarios, based on real-life emergency-medical-calls to the Swedish EMCC, representing the six most common chief complaints (breathing difficulties, chest pain, minor trauma/wounds, stroke, abdominal pain and non-specific complaints) were written by the research group. Priority level and medical condition for each scenario was predetermined by expert consensus. A cross-over model with 13+13 calls was used. A power calculation anticipating a difference in accuracy of eight percentage point between the two protocols showed a need for n= 2x650= 1300 unique calls (two-sided alpha 0.05, beta 0.80). Frequency tables and cross tables were created using SPSS software (SPSS, Version 23, IBM Company, Chicago, IL, USA, statistical software). Differences between groups were calculated with Fisher's Exact Test. P-values <0.05 were considered statistically significant.

Result

A total of 1,300 calls were performed, 650 calls with Medical Index and 650 calls with RETTS-A. According to the predetermined priority level for each of the 26 cases, 45.9% (n=301) were correct with Medical Index and 34.5% (n=226) with RETTS-A (p< 0.0001).

Discussion/Conclusion
The current simulation study compared two protocols for dispatching. The new dispatch protocol RETTS-A, had a lower accuracy for priority level than the protocol in current use, Medical Index. The results may in part be explained by the call takers being more familiar with the Medical Index having worked with this system. Another factor to consider is that the Medical Index has a three tiered priority, while the RETTS-A is four tiered, which may be a disadvantage for RETTS-A. However, future studies considering other factors e.g. time to dispatching should be considered before deciding which protocol is to prefer.

Acknowledgments
KB and KO has consult missions at the EMCC organization SOS Alarm Sverige AB. No other conflicts of interest.

#7659 : Severe metabolic alkalosis: a case report

Preferred format : ePoster

Authors:

HANA HEDHLI (1), Salwa Amri (2), Sarra Jouini (1), Imen Mekki (2), wided Derouich (2), Béchir Bouhajja (1)

1. emergency department, EPS Charles Nicolle, Tunis, TUNISIA
2. Emergency departement, Charles Nicolle hospital, Tunis, TUNISIA

Keywords: metabolic alcalosis, emergency department, acid-base disorders

Abstract :

Introduction:

Metabolic alkalosis is common; accounting for half of all acid- base disorders amongst patients presenting in the emergency department (ED) [1]. It can threaten life by causing tetany, leading to seizures and death. We report a patient with severe metabolic alkalosis.

Case report:

A 61-year-old woman was admitted with nausea vomiting and abdominal pain lasting for two weeks. On arrival, the physical exam found that she was confused: Glasgow Coma Scale (GCS) = 14 without any sign of focalization or lateralization. Her vital signs showed a blood pressure of 120/70 mmHg, heart rate of 62 beats per minute, respiratory rate of 30 per minute. Chvostek's sign was positive associated with obstetrician's hand. Neurological examination revealed marked myoclonus predominantly of the upper limbs. Blood biochemistry results were as follows: hypokalemia of 2.2 mmol /l, with severe metabolic alkalosis (PH ˃ 7.80, PaCO2 = 22 mmHg, PaO2 = 87 mmHg, HCO3 uncalculable, SaO2= 98%), lactate= 4 mmol/l, the ionized calcium was 0.4 mmol/l, urea = 27 mmol/l, creatinine = 177µmol/l. The marked metabolic alkalosis was thought to be due to loss of hydrogen ions and the response of the kidney leads to decrease in bicarbonate excretion. The myoclonus was considered to be due to marked alkalosis and reduced ionized serum calcium. She was treated with intravenous physiological saline rehydration, intravenous administration of large amount of potassium chloride (10 mmol/l per hour), and rebreathing. Serum electrolyte levels returned to normal on this therapy: potassium = 3.7 mmol/l, bicarbonate = 28 mmol/l, creatinine = 72 µmol/l, ionized calcium = 0.9mmol/l. The myoclonus disappeared from the face and she was discharged approximately 72 hours later. Endoscopy showed gastric outlet obstruction secondary to infiltrating process.

Conclusion:

The combination and degree of metabolic derangement in this case is unusual. Treatment is aimed at reversing the underlying cause. The importance of conservative management of carbon dioxide retention was emphasized.

References:

[1] Jennifer T et al. Emerg Med Clin North Am 2014.

#7660 : Epidemiology of systemic inflammatory response syndrome in acute strokepatients admitted in the emergency department short stay unit

Preferred format : ePoster

Authors:

Mohamed Mezgheni (1), Mohamed ali Cherif (2), Farah Riahi (3), Najeh Hajjem (4), Malek Hsouna (3), youssef zied El hechmi (2), Ines Sedghyeni (5), Zouhaier Jerbi (2)

1. service des urgences, hôpital habib thameur, tunis,
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis, TUNISIA
4. emergency department , hospital habib thameur, tunis, TUNISIA
5. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: SIRS, stroke,emergency

Abstract :

Introduction:

The systemic inflammatory response syndrome (SIRS) is the body’s response to a multitude of chemical mediators. Conditions inciting the release of these mediators include bacterial sepsis, viremia, pancreatitis, trauma, neoplasia, heat stroke, and many others. The relation between SIRS and acute strokes remains poorly described, no study to date has investigated epidemiology of SIRS in acute stroke patients.

The aim of this study was to evaluate the frequency of SIRSin acute stroke patients admitted in the emergency department short stay unit (EDSSU), to list its main causes and compare the epidemiological characteristics and evolution

Methods:

A retrospective study including patients who were admitted during more than 24 hours for acute stroke into the EDSSU starting from January 1st, 2015to December 31, 2015.

We collected data regarding age, gender, past medical history, length of stay, intra-hospital mortality andreferralat the end of hospital stay to study the epidemiological and clinical features of this population.

SIRS was defined as the presence of 2 or more of the following criteria: body temperature less than 36°C or greater than 38°C, heart rate greater than 90, respiratory rate greater than 20, or white blood cell count less than 4000/mm^{3}or greater than 12,000/mm^3 or more than 10% bands.

Results:

Among 27980 of all emergency department visits during 2015, 696 patients were admittedfor more than 24 hours into the EDSSU from whom 192admitted for acute stroke and169 patients were selected

Patients were separated into two groups: positive SIRS (n = 38;22.5%) and negativeSIRS (n=131; 77.5%).

The two groups were comparable in age, sex ratio and past medical history.

Mortality was 31.6% (n = 12) in the positive SIRS group and 10.7% (n = 14) in the negative SIRS group with a significant difference between the two groups (p = 0.002).

The sensitivity was 46.15% and the specificity was 81.82% (OR = 4.19 [1.74 to 10.09]).

Conclusions:

SIRS has a high incidence in acute stroke patients admitted inEDSSU. In our series these patients have a mortality of 31.6%. These SIRS criteria are easily accessible in emergency department and can be collected on arrival of patient. A study on a larger scale would be needed to verify its prognostic value.

#7661 : The pesticide poisoning (PP) : Epidemiological study

Preferred format : Oral presentation

Authors:

wided bahria (1), anware yahmadi (2), wided bousslimi (3), hanane ghazali (4), ahmed souyeh (4), cyrine keskes (5), Ahlem Azouzi (3), sami souissi (4)

1. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , ben arous, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Tunis, TUNISIA
4. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
5. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , tunis, TUNISIA

Keywords: pesticide poisoning, emergency department, Epidemiological study

Abstract :

Introduction: The Pesticide poisoning (PP) represents a major clinical concern responsible of persistent elevated mortality in the developing countries and resulting in frequent emergent hospital admission. In our country, the OP poisoning accounts for 11% of all acute poisoning emergency. The objective of this study was to investigate the epidemiological, clinical, and prognostic of acute pesticide poisoning in the emergency department.

Matherials and methods: It was a retrospective study based on analysis of 73 consecutive patients In an emergency department, for 4 years .The epidemiological data, the nature of the offending product, timely care, clinical and laboratory signs, treatment and evolution were studied.

Results:N= 73 patients. Mean age was 27 ± 9 years, sex ratio=0,25. Women psychiatric history were noted in 8% of patients. The causes of poisoning were with suicidal intent in 92% of cases related mainly with parental conflict (34%) and marital conflicts (28.7%), and were accidental in 8% of cases. Chloralose was the most frequently implicated in 52.1% cases monitoring of organophosphates in 45.2% of cases. Most patients (57.5%) consults, in the first hour. Muscarinic syndrome was present in 82% of patients and nicotonic syndrome was present in 60%. Gastric lavage was done in 54 patients (74%). Atropine was administered in 26 patients. The ventilatory support was performed in 28 patients (38%). 53% of patients were transferred to an intensive unit care. Thirty-three patients (38 %) returned home. Average duration of stay in the emergency department was 3h±2.8 hours. Only 6 deaths were noted.

Conclusion: The PP is frequent in ED and is associated with high mortality. It requires many preventive measures and standardization of care to improve the prognosis.

#7662 : Management of ST-elevated myocardial infarction : insights from ReSCUS Registry

Preferred format : ePoster

Authors:

Achref HAJ ALI (1), CHAWKI JEBALI (2), wael CHAABENE (3), LOTFI BOUKADIDA (3), Asma ZORGATI (4), FETHI GRAA (3), Riadh Boukef (5)

1. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. Emergency of Sahloul, Sousse, Sousse, TUNISIA
4. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
5. Urgences , CHU Sahloul de Sousse , Sousse , TUNISIA

Keywords: STEMI, Registry, Emergency

Abstract :

Introduction : During the last decades, the prognosis of myocardial infarction has not stopped improving. Several years of considerable therapeutic progress in ST-elevated myocardial infarction towards a reduction in morbidity and mortality has been achieved. The management of this emergency cardiology must be in the shortest time to permit early reperfusion and prompt management of complications.

Our aim was to assess the quality of care and management acute coronary syndromes.

Material and methods : We collected data on ST-elevated myocardial infarction (STEMI) patients as part of the ReSCUS Registry, in a prospective study (between February 2014 and December 2015). We included 142 patients admitted to emergency department.

Results : we collected 142 patients. We noted a male predominance (sex ratio = 4.68) and a mean age of 62 ± 12 years. Only 12% of our patients were admitted to our emergency through medical transport. Tobacco, hypertension and diabetes were the 3 risk factors predominant in our patients with respective rates of 51.4%, 33, 8% and 33.4%. Six patients (7.9%) have peripheral signs of shock at initial presentation. Eleven patients (7.75%) present with acute Heart failure. Patient delay was 450 min (with extremes ranging from 24 mn to 48 hours). The average time first medical contact to realize an EKG was 28 minutes with a median of 15 minutes. The average time for thrombolysis was 122 mn, with extremes ranging from 2 to 225 mn. The anterior localization was the most frequent (51%) followed by the inferior STEMI (41%). The thrombolysis rate was 14.1% (n = 20) with a success rate of 62%. The primary angioplasty rate was 85.9%. Only four cases of cardiac arrest was noted, one of them was recovered.

Conclusion: The management of acute coronary syndrome is appropriate for the time of implementation of the EKG and initial management but still insufficient for the late angiographic exploration. It is a real challenge for the emergency physician. An improvement in the overall management first requires a better practice to identify, assess risk and treat patients in the shortest time possible.

#7663 : Sex-based Differences in Clinical Features, Management, and Prognosis of Acute Myocardial Infarction: insights from ReSCUS Registry

Preferred format : ePoster

Authors:

Achref HAJ ALI (1), CHAWKI JEBALI (2), ALI OUSGI (3), LOTFI BOUKADIDA (4), Asma ZORGATI (5), Asma JERBI (4), Riadh Boukef (6)

1. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. emergency of Sahloul, Sousse, Sousse, TUNISIA
4. Emergency of Sahloul, Sousse, Sousse, TUNISIA
5. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
6. Urgences , CHU Sahloul de Sousse , Sousse , TUNISIA

Keywords: STEMI, Registry, Emergency

Abstract :

Introduction: We sought to investigate sex-related differences among patients with ST-elevated myocardial infarction in order to identify gender-related factors associated with outcomes, and to analyze sex-based differences in clinical characteristics, diagnosis, management, and prognosis after a myocardial infarction.

Methods: Between February 2014 and December 2015, one hundred and fifty-two ST-elevated myocardial infarction(STEMI) were consecutively registered in our emergency department. We exploited ReSCUS registry data. Clinical characteristics, management, mortality (at 30-day and at 90-day) and major adverse cardiac events (MACE) were prospectively recorded.

Results: The registry included 35 women and 117 men with STEMI. Compared with men, women were older (70.9 vs. 59.8, $p < 0.001$), had a higher prevalence of hypertension (56% vs 29%, $p = 0.004$) smoking and dyslipidemia (24 % vs 11 %, $p = 0.002$). There was no difference in the prevalence of diabetes ($p= 0.09$). Women were more likely to have a history of previous myocardial infarction (18% vs. 16%, $p < 0.01$). The thrombolysis rate was 14.1% (n = 20) with a success rate of 62%, the angioplasty rate was 85.9% overall. No differences were observed in use of invasive procedures. Women were less likely than men to receive care within the benchmark time for reperfusion therapy (time to treatment from symptom onset <12 hours: 68.4% vs 72.46%, $p <0.001$). There were no significant differences in door-to-needle (median; 79 min vs 76 min) and door-to-balloon times (median: 85 min vs 87 min). The angiographic success defined as a re-permeabilization of the artery with TIMI 2 or 3 and a residual stenosis of less than 20 % was obtained in 82.1% of cases for men and 87,9% for women ($p = 0.78$). Case-fatality at 1 month was similar in women and men (6.89% vs 6.46%; $p = 0.24$). MACE were also similar: n=9 for men vs n=2 for women at 1 month ($p = 0.47$). Case-fatality at 90-day was worse for men than women (8.42% vs 6.76%; $p=0.02$).

Conclusion: There are demographic and clinical differences between men and women STEMI. The short-term prognosis of a first myocardial infarction in this stady is similar in both sexes. However, the long-term vital prognosis after a first myocardial infarction is worse in men than in women. Delays in both women and men in STEMI remain unacceptably long and should be improved.

#7664 : Predictive factors related with poor outcome in patients presenting to the emergency department with Seizures

Preferred format : Oral presentation

Authors:

rania jebri (1), anware yahmadi (2), aymen zoubli (2), hanane ghazali (1), mouna gammoudi (1), farah riahi (3), sawsen chiboub (4), sami souissi (1)

1. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , ben arous, TUNISIA
4. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Tunis, FRANCE

Keywords: outcome, seizures, emergency department

Abstract :

Introduction: Seizures are a common pattern for seeking care in the Emergency Department (ED). Several studies have identified prognostic factors that allow early identification of patients with poor outcome.

Early identification of patients whose seizures are likely to have poor outcome may help the emergency physicians to provide better management.

The objective: to identify factors associated with poor outcome in patients presenting to the ED with seizures

Design and Methods:

A prospective observational study, conducted over two years. Were included all patients who presented to the ED with seizures. The epidemiological, clinical, biological, therapeutic, and evolution criteria were collected. Patients who were at risk of poor prognosis were: patients with status epilepticus (SE), those who underwent intubation, patients admitted to the intensive care unit (ICU) and the non surviving patients. Multivariate analysis by multiple logistic regression was performed.

Results:

272 patients were enrolled. Mean age 45 + -19 years. Sex Ratio: 1.69. Comorbidities: history of epilepsy N = 117 (43%), diabetes N = 40 (15%), history of systemic disease N = 9 (3.3%), history of neonatal pain N = 3 (1%). Patients with SE N=116(42%), Intubated patients N=15(6%), admission to the ICU N=14(5%), non-surviving N=19(7%). Patients with bad outcome N=129 (47%).

In univariate analysis, factors associated with bad outcome were: alcohol intoxication (p = 0.178), bad adherence to treatment (p=0,104), generalized tonic-clonic seizure (p = 0.007), recurrence of seizure (p = 0.002), meningeal syndrome (p = 0.141), post critical coma (p = 0.002), respiratory rate> 28 (p = 0.103), Glasgow coma scale <13 (p <0.001), length of post critical coma> 42 min (p = 0.026), lactate levels> 8,7 (p = 0.014).

Multivariable logistic regression analysis identified the recurrence of seizure as a bad-outcome related factor with an Odds ratio (OR) at 4,69 and confidence interval (CI) 95% [1.477 – 14,899] p=0,009.

Conclusion:

Recurrence of seizure can lead to poor prognosis in patients with seizures presenting to the ED.

#7665 : Evaluation of the management of severe sepsis in the emergency : insights from ReSSUS Registry

Preferred format : Oral presentation

Authors:

CHERIFA BECHIKH (1), CHAWKI JEBALI (2), HAJER YACOUBI (1), Asma ZORGATI (3), LOTFI BOUKADIDA (1), Riadh Boukef (4)

1. Emergency of Sahloul, Sousse, Sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
3. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
4. Urgences , CHU Sahloul de Sousse , Sousse , TUNISIA

Keywords: Sepsis, Emergency, Registry

Abstract :

Introduction: sepsis are associated with high mortality worldwide. It is now accepted that support the precocity is a prognostic factor. The role of the emergency physician is essential in the recognition of severe sepsis and treatment initiation. Few data exist regarding the evaluation of our daily practice in the emergencies.

Methods: This is a prospective study of 77 cases of severe sepsis and septic shock among 153 cases recorded in a register of sepsis: ReSSUS. It database observational on the management of all sepsis in our service began on 03/01/14. The general data, clinical, biological, microbiological, and the final diagnosis and characteristics of support were collected. management of deadlines were particularly mentioned. The definition used in the severe sepsis is like that adopted by surviving sepsis compaign 2013.

Results: The percentage of severe sepsis is 50.32%. The mean age = 64 ±7 years. 50.6% are women and third have diabetes. Hemodynamic failure was marked in 22.07% of cases. An altered state of consciousness is found in 16.8% of cases. The hemostase disorder noted in 28.57% of cases. Renal failure in 85.71% of cases. The origin of infection is in 36,40% of pulmonary origin, in 23.40% of urinary origin. The average time of administration of antibiotics is 3h 40 mn (0 mn - 18h). Fluid replacement is immediately administered in most cases 70.10%. The catecholamines (norepinephrine) is used in 12.98% of cases. The evolution was marked by clinical improvement in 42.90% of cases, death in 14.30% of cases. The state of septic shock is the most frequented complication in 9.1% of cases.

Conclusion: The management of severe sepsis remains insufficient. Including the period recommended antibiotic treatment delivery are not respected in the majority of cases. Recognition of risk factors for severe sepsis from the sorting is essential.

#7666 : Dyspnea secondary to acute sarcoidosis

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Pulmonary sarcoidosis, Erythema nodosum

Abstract :

An 28 year old woman, 3 children, housewife. Smoking 10 cigarettes a day. No previous disease or family history of interest. Hospital emergency derived by family doctor dyspnea at 20 days of evolution, little cough, general malaise and striking afebrile basal saturation 94%. It has become symptomatic treatment with paracetamol and cough suppressants. Children with upper tract respiratory infections. Do not trip. A bird Lovebirds at home for months.

On examination, normotensive 75 pm in sinus rhythm, no fever, good general condition, eupneic, basal saturation 95%. Auscultation rhythmic sounds and breath sounds without murmurs preserved without pathological noises. Wandering 50 meters began with increased dyspnea, lip cyanosis, increased respiratory rate and saturation to 92%, all with acceptable tolerance. Abdomen without findings. Right leg elevated erythematous lesion 5 cm anterior tibial diameter.

Our first suspected diagnosis of pulmonary embolism was screening or hypersensitivity pneumonitis lovebirds, less likely sarcoidosis or atypical pneumonia.

Radiography ask where drew attention infiltrated diffuse bilateral alveolar-interstitial pattern. Analytical leukocytosis 11,800 (69% N) PCR dimer D 28 917 normal EKG and CT angiography negative for TEP with hilar lymphadenopathy and bilateral interstitial pattern and ground glass consolidation patched Thorax. blood cultures, legionella Ag and pneumococcus, HIV, Chlamydia and Mycoplasma Ag, PCR Influenza, growing M tuberculosis, immunity and angiotensin-converting enzyme (rises in 50-80% of patients with sarcoidosis) study were extracted.

For suspected hypersensitivity pneumonitis Sarcoidosis versus enters Pneumology, with a final diagnosis of Sarcoidosis by lung biopsy (non-necrotizing granulomatous inflammation).

Sarcoidosis is a granulomatous multisystem disease characterized by the accumulation in various organs, especially the lung, granuloma formed by T lymphocytes and macrophages, distorting normal tissue structure in the seating. It is of unknown cause, the current hypothesis relates it appears in genetically susceptible people, adults more common in women younger than 50 years. Often it presents bilateral hilar lymphadenopathy, pulmonary infiltration (90%), skin lesions and ocular erythema nodosum type. The prevalence of erythema nodosum sarcoidosis is highly variable, ranging between 3 and 53% of cases, due to racial, geographic and genetic factors. The diagnosis is established when clinical and radiologic findings are supported by pathology. The most commonly used treatment options are corticosteroids, methotrexate, antimalarials.

Forecast 60% have spontaneous resolution of the disease, while the rest evolve chronically, the most serious complication is pulmonary fibrosis. Mortality 1-5%, mainly due to respiratory failure.

#7667 : Brucellosis back pain as cause of acute emergencies

Preferred format : ePoster

Authors:

Maria Isabel Correa (1), Justino Pacheco (2)

1. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Brucella, Low back pain

Abstract :

An 74 year old woman with a history of arterial and diabetic hypertension independent and active life, which refers in the last two months, multiple emergency room visits for lumbosacral pain of inflammatory and mechanical characteristics, which radiates to gluteal and lower limb right associating dysesthesia and gradually you have finished prostrating in bed in the last 7 days. It has repeatedly been diagnosed lumbosciatica right. She lives in an urban environment and eat dairy and meat supermarket. It has been treated with analgesics and anti-inflammatories several null responders them. Associated asthenia, hyporexia and weight loss. After being removed all anti-inflammatory medication, for mild renal impairment in a visit to the emergency room 48 hours prior to admission, begins with fever, reason leading to perform several differential diagnoses to symptoms of fever, acute low back pain.

On examination patient collaborator, overweight, fair general condition, fever 39.4Cº, on a stretcher. .Eupneic, Normotensive. Well hydrated and perfused.

Auscultation and regular rhythmic tones, aortic systolic murmur IV / VI, hypoventilation in both bases. Mamas without findings.

Abdomen: globular, symmetrical, soft, depressible without mass or organ enlargement. Pain on deep palpation in the right iliac fossa, without peritoneal irritation.

Lower extremities signs of chronic venous insufficiency. No edemas.

Neurological examination: no focal neurological deficits of cranial nerves or sensory-motor pathways. No meningeal signs.

Locomotor: slight deformity of both knees in relation to degenerative changes. Acupressure pain of lumbar spinous dorsal distal and proximal movement Arcos de coxofemorales diminished by pain. bilateral negative fabers. bilateral negative brush with limited flexion no signs of arthritis or knee or ankle or metatarsophalangeal. bilateral flexor plantar skin with no signs of spasticity. Lassegue and positive Bragard Left 40 Cº.

Analytical hemoglobin 10 Leukocyte 6790.

Simple Thorax Radiography: costophrenic grip both breasts.

Radiography lumbosacral spine: listesis L5 and decreased joint space of the right sacroiliac joint.

Rose Bengal test: positive.

Final diagnosis: right sacroiliitis with spondylodiscitis L5-S1 brucella source.

Evolution: The patient was admitted to the Infectious Diseases, evolve Doxycycline more favorably after start streptomycin.

Discussion: Brucellosis is a disease transmissible to humans and capable of affecting various organs and tissues zoonoses. The most common in the human species is Brucella melitensis, whose main reservoir is cattle. The main mechanism of transmission is oral for dairy products. In our case we had to make several differential diagnoses as: degenerative causes, structural changes, infectious, inflammatory changes, tumors, metabolic bone diseases, gynecological problems, kidney or intra-abdominal. It should detect the so-called symptoms and signs of "alarm": the realization fever, toxic shock syndrome, weight loss, previous history of cancer, steroid use, age greater 50 years nocturnal severe pain that does not subside, pain exacerbated supine and standing.

The incidence rate in Andalusia Brucellosis is 7.17 cases per 100,000 inhabitants. Malaga is endemic Brucella infection.

#7668 : Out of Hospital cardiac arrest: prospective study

Preferred format : ePoster

Authors:

Achref HAJ ALI (1), Nesrine Ibn HASSINE (2), CHAWKI JEBALI (3), Nawfel CHBILI (4), AYMEN JAOUDI (5), Hajer KRAIEM (6), MEJDI OMRI (4), Mohamed NEJIB KAROUI (7)

1. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse , Sousse, TUNISIA
3. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
4. SAMU 03 , CHU SAHLOUL, Sousse, TUNISIA
5. Emergency of Sahloul, Sousse, Sousse, TUNISIA
6. SAMU 03 , CHU SAHLOUL, sousse, TUNISIA
7. SAMU 03 , CHU SAHLOUL, Sousse , TUNISIA

Keywords: Out of hospital, cardiac arrest, resuscitation

Abstract :

Introduction: In spite of much progress in medicine, out-of-hospital cardiac arrests (OHCA) still remain a large health, social, and economic problem. The epidemiologic data on the incidence, the survival and the prognostic factors of OHCA is often heterogeneous. We therefore conducted the present study to evaluate the managing of OHCA in our region.

Methods: Our study proceeded between October 2014 and December 2015. We conducted a prospective observational study for all OHCA managed by ours EMT. Thus we collected the epidemiologic data (age, sex, ground, the hour of stop, the place of stop…). The beginning of CPR and the decision of the regulating doctor. As well as the rhythm of the cardiac arrest, the initial rhythm and signs preceding the arrest. We carried out the analysis of the various results by using the SPSS software 13.0 .

Results: During the period of study we collected 230 cases. We noted a clear male prevalence with a sex-ratio of 2 and an average age of 55 years with extreme ages of H1 of life at 93 years. The hour of call was relatively more frequent between 16h and midnight: 57% versus 22% (between 8h and 16h) and 20% (between 1heure and 8 hours of the morning). The time between the call and the OHCA could be identified only in 104 cases only (45%) and was of 21± 18 minutes. 2 only cases of OHCA during transport was recorded. Alarm was given by a doctor in 43% of the cases and 37% of the OHCA by a citizen. The OHCA were more frequent in residency (47%) vs (38%) of the cases in a health establishment. In 59% of the cases the CPR was begun, the decision to limit the reanimation was taken in 41% of the cardiac arrest. The average duration of No flow noted was of 22±15 minutes, for a low flow estimated at 26±15minutes. An initial shockable rhythm was found among 41 (18%) patient against 189 patients (82%) in asystolia. Lastly, initial survival in our study is estimated at 16%. In the multivariable analysis, the following pre-arrest factors were significantly associated with survival: age, public location, chest pain, dyspnoea, dizziness, vomiting, ventricular tachycardia, and inotrope administration.

Conclusion: The prognosis of victims CA depends on the initial patient’s characteristics, the circumstances of the CA and the quality of the management. As a result, the subsequent outcome of these patients relies on the efficiency of the chain of survival: prompt alert, bys-tander cardiopulmonary resuscitation and early defibrillation, the advanced care life support provided by the emergency medical services and the integration of in-hospital care. Great efforts relating to the improvement of quality and the data processing, associated a collaboratif effort (transverse research, creation of registers, organization in consortium) must be carried out to allow a better apprehension of this phenomenon.

#7669 : Massive intentional intoxication digoxin

Preferred format : ePoster

Authors:

Justino Pacheco (1), Maria Isabel Correa (2)

1. Emergency, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Digoxin. Intoxication. Treatment

Abstract :

Female 57 years history of recurrent from 32 years depressive disorder treated with amitriptyline and Bromazepan with 4 previous suicide attempts, the patient denies. He lives with his daughter in marriage separation process, aggravating his depressed state.

Go to our urgent transferred in medicalized ambulance, due to massive intake of 225 tablets of digoxin (56mgr) with autolytic ends 1 hour before .Gag reflex, normotensive, sinus rhythm 75 bpm, conscious collaborator not recognizing intake (his daughter confirms) .In analytical high levels of digoxinaemia (usual range 0.8-1.9ng / ml, had> 5 ng / ml, can not specified exact digoxinaemia technical problems) .Procedemos to orogastric washing tablets abundant extraction and subsequent administration of activated charcoal . Immediately we ask digoxin immune pharmacy and administer 9 40 mgr vials (each vial neutralizes 0.59 mg of digoxin), the number of vials is equal to digoxinaemia by weight divided by 100. If the amount ingested or digoxinaemia is unknown, administered at 10 vials in adults, children 5.

Blood count and biochemistry and X-ray Thorax without findings.

During admission he presented gusting not self-limiting sustained ventricular tachycardia rhythm of sinoatrial block based on Grade 1 more PR than 260 msec, occasionally sinus bradycardia to 35 bpm and marked digitalis bucket. He entered the 72 hours Cardiology in sinus rhythm at 55 bpm PR less than 200 msec being evaluated and treated by psychiatry.

DISCUSSION

Digitalis toxicity associated with chronic treatment, is a recurring complaint in emergency, aggravated if associated with hyperkalemia or renal failure. Acute poisoning is exceptional, associated with high mortality, due to the variability of rhythm disorders that occur. Bradyarrhythmias treated with atropine and ventricular arrhythmias with phenytoin or lidocaine. Life-threatening situations require use of anti-digital anti antibodies and although there are only seven case studies series having a low scientific evidence, many authors consider that the anti-digital anti antibodies are a first-line treatment in severe digitalis intoxication. availability of antibodies anti-digital anti reference hospitals is recommended.

#7670 : Quality of life after a mild to moderate trauma in old patients: a long-term follow-up

Preferred format : Oral presentation

Authors:

Chiara Gigli (1), Federica Trausi (2), Alessandro Coppa (1), Rita Audisio (1), Stefano Calcagno (1), Francesca Innocenti (2), Riccardo Pini (2)

1. Emergency Department High Dependency Observation Unit, Careggi University Hospital, Florence, ITALY
2. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY

Keywords: trauma; prognosis; comorbidities; scoring systems

Abstract :

Background: To evaluate long-term reduction in health-related quality of life (HRQOL) after a mild to moderate trauma in old patients admitted to an Emergency Department High Dependency Unit (ED-HDU), and to study possible determinants of the HRQOL reduction.

Methods: We performed a follow-up study of a cohort of 662 trauma patients admitted to the ED-HDU of the University Hospital of Florence from July, 2008 to December, 2014; 247 subjects were lost at the follow-up. Anamnestic and main clinical data were obtained for each patient, in order to evaluate the organ dysfunction index Sequential Organ Failure Assessment (SOFA) score at ED entrance (T0) and after 24 hours of ED-HDU stay (T1). Injury Severity Score (ISS) was calculated using the 2005 updated version of the Abbreviated Injury Score. A follow-up based on telephone interviews using the Physical (PCS) and Mental (MCS) Health Composite Score (SF12) was conducted in the period October, 2015-January, 2016.

Results: Overall mortality rate was 9% (2% in-hospital mortality and 7% mortality rate during follow-up). The study population included 344 patients, 223 aged ≤65 years (G1) and 121 >65 years (G2). Male gender was more frequent in G2 compared to G1, (47 vs 23%, p<0.001) and prevalence of comorbidity was disproportionately higher in G2 compared to G1 (79 vs 24%, p<0.001). Trauma severity was comparable between the two groups (ISS: G1 12±8 vs G2 13±9; major trauma 30 vs 35%, all p=NS), while T0 and T1 SOFA scores were higher in G2 compared to G1 (T0: 2.2±1.7 vs 1.4±1.4; T1: 2.2±1.5 vs 1.6±1.3, all p<0.001). All but one non-survivors belonged to G2. PCS and MCS scores were significantly lower in G2 than in G1 (PCS: 38±12 vs 47±10, p<0.001; MCS 47±13 vs 50±12, p=0.03). After categorization of the scores into four disability levels, G1 and G2 distribution of subjects across levels was different both for PCS (normal 54% vs 25%, mild disability 19% vs 17%, moderate disability 20% vs 23%, severe disability 6% vs 35%, p<0.001) and MCS scores (normal 62% vs 52%, mild disability 19% vs 15%, moderate disability 9% vs 22%, severe disability 10% vs 12%, p=0.014). Among G1, subjects with an abnormal (<39) PCS score were older (48±13 vs 41±15 years, p=0.001), had a higher prevalence of comorbidities (43 vs 19%, p<0.001) and developed a higher degree of organ damage in the acute phase (T1 SOFA 2.0±1.4 vs 1.5±1.2, p=0.015) compared with subjects with a normal score. G1 patients with an abnormal MCS score were older (49±12 vs 42±15 years, p=0.001) and had a higher prevalence of comorbidities (39 vs 21%, p=0.018) compared with G1 subjects with a normal score. Among G2 patients, older patients had higher PCS and MCS scores (PCS: 79±7 vs 75±7; MCS 80±6 vs 76±7, all p<0.05) and, only for PCS, a higher prevalence of comorbidities (87 vs 70%, p=0.029).

Conclusions: mild to moderate trauma carries a significantly worse prognosis among old subjects compared with their younger counterpart, both in term of mortality and quality of life.

#7671 : The role of simulation unit in CPR training of health professionals: target audience focused CPR training programs

Preferred format : Oral presentation

Authors:

Zerrin Defne Dundar (1), Sema Soysal (2), Alpay Aribas (3)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY
2. Medical Education Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY
3. Cardiology Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY

Keywords: CPR, simulation, high-fidelity manikin, training

Abstract :

Objective: The emphasis on cardiopulmonary resuscitation (CPR) training with skill trainers and high-fidelity manikins for health professionals has increased in recent basic and advanced cardiac life support (BLS and ACLS) guidelines. Simulation training supported with high-fidelity manikins has additional advantages due to interactive scenarios. Team leadership, distribution of tasks during CPR, team communication and time management skills can be improved in addition to improvement of chest compression and ventilation skills. Here, we aimed to present target audience focused CPR simulation training program models planned by Necmettin Erbakan University Simulation and Modeling Research and Application Unit (NEUSRU).

Methods: NEUSRU has been established in 2014 to carry out graduate and postgraduate training programs. NEUSRU has started postgraduate educational programs in April 2015. Two different CPR training programs were conducted between April 2015 and March 2016. In the first one-step program, CPR Simulation Training was provided with ACLS scenarios using high-fidelity manikin and standard debriefings for residents and nurses who performed CPR as a part of their professional activities routinely. The second program had two steps for health professionals trained with standard theoretical and practical CPR training once during their graduate degree but who did not perform CPR routinely. In the first step of second program, CPR Skill Training Module was provided with theoretical lectures and trainings with skill trainers, including airway, chest compression, and defibrillation. In the second step, Audience Focused CPR Simulation Training was provided with target audience focused BLS and ACLS scenarios by using high-fidelity manikin and/or standard patients. The scenarios were planned according to the professional requirements of trainees, e.g. only BLS scenarios for dentists. All CPR training programs and modules were evaluated by trainees with 5 point scale satisfaction questionnaire, 5 point was excellent and 1 point was failed.

Results: In one-year activity period of NEUSRU, 58 residents and 63 nurses attended to CPR Simulation Training program. 39% of trainees rated the equipment used in the training as excellent and 42% of them rated as good. 78% of trainees rated the training skills of trainers as excellent and 21% of them rated as good. At the same activity period, 168 health professionals from different disciplines attended to CPR Skill Training Module. 52% of trainees rated the equipment used in the training as excellent and 43% of them rated as good. 72% of trainees rated the training skills of trainers as excellent and 23% of them rated as good. 41 volunteers of those 168 trainees attended to Audience Focused CPR Simulation Training. 47% of trainees rated the equipment used in the training as excellent and 51% of them rated as good. 91% of trainees rated the training skills of trainers as excellent and 9% of them rated as good

Conclusion: We conclude that CPR training programs for health professionals with skill trainers and high-fidelity manikin supported simulation increase trainee satisfaction and trainer interactivity. Also, we suggest that CPR training programs may be planned unique for every target audience to increase the effectivity of skill and process training.

#7672 : Heart attack of origin nonatherosclerotic

Preferred format : ePoster

Authors:

Justino Pacheco (1), Maria Isabel Correa (2)

1. Emergency, Hospital Regional Universitario, Malaga, SPAIN
2. Emergency and critical care, Hospital Regional Universitario, Malaga, SPAIN

Keywords: Coronary artery dissection, Myocardial infarction

Abstract :

Female 43 years without medical history being at home have chest pain radiating to left arm central opresive accompanied by intense vegetative courtship. In principle it attributed to recent treatment with benzodiapecines due to secondary Whiplash suffered a car accident 4 days before rollover of its tourism and trauma to chest with the steering wheel. Because of the duration of the emergency alerts box, on arrival home objective is electrocardiogram ST underside rise to normal after administration of nitroglycerin and giving pain.

It is he transferred to our hospital, normotensive remains in critical area has Idioventricular pace with normal initial troponin self-limiting. It is entered under observation with suspected coronary vasospasm as electrocardiogram was normal. At 6 hours troponins and CK-MB 18.5 32.3 remained asymptomatic. At 8 hours of admission presents new box typical chest pain with ST elevation in anterior territory. Given the traumatic history is requested Thorax CT angiography without significant findings. are contacted hemodynamics cardiologist and cardiac catheterization proceed to that objective compatible amputated anterior descending distal dissection, deciding conservative treatment. With the diagnosis of chest pain secondary to traumatic dissection of the left anterior descending coronary artery enters for 48 hours in intensive care unit remained asymptomatic and was discharged to ground where he remained admitted for 3 days.

At discharge he was treated with nitroglycerin, beta-bloquentes and dual antiplatelet therapy.

DISCUSSION

Within nonatherosclerotic etiologies of acute myocardial infarction secondary to blunt chest trauma is a rare entity. The difficulty in making the diagnosis is masked by the traumatic context, it is confused with the trauma clinic. Suspicion of this disease is the basis of successful management since early diagnosis allows to start the correct treatment.

There are also cases of spontaneous dissections in patients with: fibromuscular dysplasia, Marfan disease, Ehler-Dahnlos disease, pregnant or intake of contraceptives, cocaine intoxication or iatrogenic (angioplasty, catheterization). At present conservative treatment is recommended as most dissections heal spontaneously.

CABG is suggested in multivessel dissections, dissections extensive ongoing ischemia or commitment of left main coronary artery

#7673 : Out of Hospital Difficult Intubation Management: prospective study

Preferred format : ePoster

Authors:

Achref HAJ ALI (1), Nesrine Ibn HASSINE (2), CHAWKI JEBALI (3), Nawfel CHBILI (4), AYMEN JAOUDI (5), MEJDI OMRI (6), Hajer KRAIEM (7), Mohamed NEJIB KAROUI (8)

1. Urgences , CHU Sahloul de Sousse , sousse, TUNISIA
2. Urgences, CHU Sahloul de Sousse , Sousse, TUNISIA
3. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
4. Urgences , CHU Sahloul de Sousse , Sousse, TUNISIA
5. Emergency of Sahloul, Sousse, Sousse, TUNISIA
6. SAMU 03 , CHU SAHLOUL, Sousse, TUNISIA
7. SAMU 03 , CHU SAHLOUL, sousse, TUNISIA
8. SAMU 03 , CHU SAHLOUL, Sousse , TUNISIA

Keywords: intubation, out of hospital, Difficult intubation

Abstract :

Background and objective: Laryngeal tube (LT) airways are commonly used in the prehospital setting, but there are limited data on clinical success rates across emergency medical services (EMS) agencies. Prediction of intubation difficulty can save patients from major pre-operative morbidity or mortality. We aimed to determine factors associated with unsuccessful LT placement in the prehospital setting.

Methods: We conducted a prospective observational study on prehospital endotracheal intubation (ETI) performed by prehospital care providers, from January 2015, to January 2016. We quantified patient, provider, and system characteristics. Success rates and number of ETI attempts were calculated. Predicting difficult ETI and procedure complications were evaluated for the entire study.

Results: During the study period, we observed 112 attempts at laryngeal tube placement by Emergency Interns or Prehospital Emergency physicians. We noted a clear male prevalence with a sex ratio of 3 and an average age of 41 years with extreme ages of H1 of life at 71 years. Unsuccessful LT placement occurred in 14.2% of first attempts and 1.7% of cases overall. The majority of EIT occurred in patients with traumatic complaints (32.1%) and in cardiac arrest (30.3%). Guidelines consensus conferences on difficult intubation are only partly followed by the EMS. Only 60% of the EMS perform systematic rapid intubation sequence. Unexpected difficult ETI occurred in 5.0% of the ETIs suspected to have no difficulties. The incidence of difficult ETI was 14.2%. Only 1 case ETI was impossible, but no patient was unable to be ventilated sufficiently. Predicting conditions for difficult intubation were limited surrounding space on scene, short neck, obesity, face and neck injuries, mouth opening < 3 cm and Burn injuries, ($p < 0.01$). ETI on the floor or with C-spine immobilisation in situ were of no significant influence. Complications occurred in 26 (23,2%) patients. The incidence of complications was associated with the number of attempts made; 7% in one attempt, 15% in two attempts, and 32% in three attempts ($p < 0.001$). Severe desaturation and inhalation associated with ETI were noted in respectively 8 and 5 cases.

Conclusion: The laryngeal tube is an effective airway management tool for both advanced life support and critical care prehospital providers. Short neck, obesity, face and neck injuries, mouth opening < 3 cm and Burn injuries were associated with unsuccessful laryngeal tube placement by prehospital personnel.

#7674 : Prognostic significance of left and right ventricular systolic dysfunction during sepsis

Preferred format : Oral presentation

Authors:

Valerio Teodoro Stefanone (1), Chiara Donnini (1), Vittorio Palmieri (2), Francesca Innocenti (1), Riccardo Pini (1)

1. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY
2. Cardiology Unit, S. G. Moscati Hospital, Avellino, ITALY

Keywords: Sepsis, prognosis, myocardial dysfunction

Abstract :

Background: In sepsis, organ failure is used for risk stratification, myocardial dysfunction is common, but abnormal left ventricular (LV) ejection fraction (EF) does not predict outcome . We sought to evaluate frequency and prognostic impact of biventricular dysfunction in patients with severe sepsis or septic shock independent to standard assessment of organ failure.

Methods: Consecutive septic patients admitted between October,2012 and March,2016 to a High-Dependency medical unit were enrolled. Sepsis-related Organ Failure Assessment (SOFA) score was assessed along with LV and right ventricle (RV) dimensions and systolic function by echocardiography within 24 hours from the admission (T1). LV systolic function was evaluated also by bi-dimensional speckle tracking modality. Mortality was evaluated in the short (day 7, D7) and intermediate follow-up (day 28, D28).

Results: In 143 patients (85% of the consecutive candidates) mortality was 17% at D7 and 28% at D28. Non-survivors were significantly older than survivors (D7: 80±15 vs 72±12 years; D28: 79±14 vs 71±13, all p<0.01); SOFA score was comparable among survivors and non-survivor at both follow-ups (D7: 8.3±2.8 vs 7.2±2.8; D28: 7.8±2.9 vs 7.2±2.6, all p=NS). LV diastolic diameter (4.6±0.8 in non-survivors vs 4.7±0.8 mm in survivors) and RV basal diameter (3.7±0.7 in non-survivors vs 3.6±0.6 mm in survivors; midventricular diameter 2.7±0.8 in non-survivors vs 2.7±0.9 mm in survivors; longitudinal diameter 7.4±1.1 in non-survivors vs 7.7±1.1 mm in survivors, all p=NS) did not differ according to outcome. LVEF was only slightly lower in non-survivors compared with survivors (D7: 42±21 vs 51±15%; D28: : 44±19 vs 51±15%, all p=0.06); Tricuspid Annular Systolic Posterior Motion (TAPSE) only tended to be lower in the short term while it was lower in non-survivors compared to survivors (D7: 1.7±0.4 vs 1.9±0.5, p=0.05; D28 1.6±0.4 vs 2.0±0.5, p=0.002). LV global longitudinal peak systolic strain (LVGLS) was significantly less negative, i.e. indicative of more pronounced impairment of LV contractility , in non-survivors than in survivors (D7: -9.0±4.1 vs -11.0±5.3, p=0.002; D28 -10.0±4.0 vs -11.5±3.4, p=0.009)indicating a more pronounced impairment of LV contractility. Overall, 20 patients showed normal LV and RV systolic function, 77 showed either LV or RV systolic dysfunction (LV systolic dysfunction: LVGLS >-14%; RV systolic dysfunction: TAPSE<)

Conclusions: A significant proportion of septic patients developed a LV and/or RV systolic dysfunction, but LV systolic dysfunction assessed by LVGLS was the strongest prognosticator of outcome both in the short and intermediate follow-up.

#7675 : Amino acids predicting prognosis in patients with acute dyspnoea

Preferred format : Oral presentation

Authors:

Karolin Wiklund (1), Maria Bengtsson-Toni (2), Marjaneh Peyman (2), Lena Tegnér (2), Klas Gränsbo (3), Mattias Wieloch (4), Olle Melander (4)

1. MD, The Department of Clinical Sciences Malmo, Faculty of Medicine, Lund University, Lund, Sweden, Malmö, SWEDEN
2. RN, Department of Internal Medicine and Emergency Medicine, Skane University Hospital - Malmo, Sweden , Malmö, SWEDEN
3. MD, Department of Internal Medicine and Emergency Medicine, Skane University Hospital - Malmo, Sweden , Malmo, SWEDEN
4. MD PhD, The Department of Clinical Sciences Malmo, Faculty of Medicine, Lund University, Lund, Sweden, Malmö, SWEDEN

Keywords: Biomarkers, amino acids, dyspnoea

Abstract :

Objective

To identify amino acids that predicts risk of 90-days mortality in patients with acute dyspnea.

Introduction

Dyspnoea is one of the most common symptoms at the emergency department (ED), accounting for approximately 3-4 million visits in the emergency department every year in the US. The underlying differential diagnoses are diverse and range from conditions with high risk of mortality to virtually no risk of mortality at all. Determining risk of mortality may aid first-line physician in subsequent decision-making regarding investigation and level of care.

Metabolic changes as part of a pathology can aid to indicate severity of disease and prognosis. Amino acids are a vital part of the metabolism, and can be altered during a catabolic state. They may therefore be of importance in determining prognosis in patients with acute dyspnoea.

Method

Nine amino acids were analysed in plasma, in 674 adult patients admitted to the Emergency Department (ED) with acute dyspnoea, and then related to risk of 90-days mortality using Cox proportional hazard models adjusted for age, sex, oxygen saturation, respiratory rate, C-reactive protein (CRP), lactate, estimated glomerular filtration rate (eGFR) and “Medical Emergency Triage and Treatment System-Adult” - score.

Result

Eighty-four patients (12.5%) died within 90-days from admission. Two strong and independent amino acid signals were detected: The Hazard Ratio (95% confidence interval) for 90-days mortality per 1 standard deviation (SD) increment of Phenylalanine was 1.31 (1.02-1.68) ($P=3.5x10^{-2}$) and for Valine 0.63 (0.51 – 0.79) ($P = 4.9x10^{-5}$) An “Amino Acid Mortality Risk Score” (AMRS) summing standardized and weighted values of Phenylalanine and Valine, revealed that of patients belonging to quartile 1 (Q1) of the AMRS, only 4 patient died, whereas 52 patients died among those belonging to quartile 4. Each 1 SD increment of the AMRS was associated with a Hazard Ratio of 2.31 (1.76 – 3.03) ($P=1.3x10^{-9}$) for 90-days mortality and the point estimate was 10 times higher in Q4 as compared to Q1 of the AMRS (Ptrend over quartiles=$4.0x10^{-7}$).

Conclusion

Phenylalanine and valine are strongly and independently related to risk of 90-days mortality in unselected patients admitted to the ED because of acute dyspnea, suggesting that they may guide first-line physicians at the ED in risk assessment which in turn could lead to more accurate level of care and treatment intensity.

We speculate that high levels of phenylalanine reflects muscle breakdown and low levels of valine due to increased metabolic substrate demand as a result of acute catabolic stress in response to acute dyspnoea.

#7676 : Initial mechanical ventilation settings in pre-hospital and hospital emergency medicine : retrospective study with emphasis on lung protective ventilation

Preferred format : ePoster

Authors:

Anne Méléard (1), Philippe Pes (1), François Javaudin (1), Philippe Le Conte (1)

1. Urgences, Hôtel Dieu, Nantes, FRANCE

Keywords: ventilation, ARDS

Abstract :

Introduction

Mechanical ventilation (MV) is usual in Emergency Medicine (EM). Utilization of protective ventilation (PV) has been shown to improve outcomes for patients both with or without acute respiratory distress syndrome (ARDS). It associates a low tidal volume (6-8 ml/kg), a positive expiratory pressure (PEP) and an adapted inspiratory fraction of oxygen (fiO2) to SpO2 95%. Benefits have been shown in intensive care units patients and in anesthesiology. Furthermore, animal models have proven than a 20 minutes inappropriate ventilation cause histologic and pathophysiologic changes. Though emergency physicians (EP) are skilled in definitive airway management, their management of mechanical ventilation is not well described.

We undertook a retrospective survey to explore MV settings.

Patients and methods

Patients

All patients intubated and mechanically ventilated in pre-hospital and hospital settings during a nine months period were included via a dedicated register. The lonely non inclusion criteria was a cardiac arrest (CA) without return to a spontaneous rhythm.

Methods

After anonymisation, ventilation settings were compared to protective ventilation.

Primary objective

Number of patients with PV

Secondary objectives

indication of intubation and MV

duration of MV

Mortality

Statistical methods

Data stored in Microsoft Excel were analyzed with PASW Statistics. Numerical data expressed as mean + SD were compared by a Student t test. Categorical data by a Khi2 test. $P< 0.05$ was considered significant.

Ethic

As it was a retrospective study, according to the French legislation, approval of the ethics committee was not needed to use data for epidemiologic study.

Results

201 patients were included, 63 women and 138 men, mean age 51+17 years old. A protective ventilation was observed in 19% of patients. Indications of ventilation were neurological 127 (64%), CA 42 (21%), 21 multiple trauma (10%) and 11 acute respiratory failure (5%). Duration of MV was 71+65 min (mean + SD). 57 patients (28,4%) died in the hospital.

Discussion

Few patients were ventilated with PV settings. Mortality was high in our population. Duration of ventilation was probably sufficient to influence outcome. Formation of our EP is warranted to improve their ventilation skills in order to increase survival.

#7678 : Budesonide Nebulization Added to Systemic Prednisolone in the Treatment of Severe Acute Asthma in adults

Preferred format : Oral presentation

Authors:

wided bousslimi (1), anware yahmadi (2), rania jebri (3), hanane ghazali (3), houssem aouni (4), chaabani ghzela (3), noura naguech (5), sami souissi (3)

1. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Tunis, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
4. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, FRANCE
5. emergency department of ben arous tunisia, ben arous tunisia, tunis, TUNISIA

Keywords: Inhaled corticosteroids, emergency department, severe asthma

Abstract :

Introduction:

Inhaled corticosteroids, known to be effective as a maintenance medication in chronic asthma, have also been suggested as a therapy for acute asthma when given at high doses in children. The role of inhaled corticosteroids in the treatment of acute asthma exacerbations in adults is controversial.

Aim of study: to study the efficacy of high dose nebulized budesonide (BUD) in the treatment of severe acute asthma in adults.

Methods:

A double-blind, randomized, placebo-controlled trial conducted over six months. Inclusion: Age ˃18 and ˂45 years with a peak expiratory flow (PEF) <50% of predicted value. Patients were assigned to receive 0.5 mg Budesonide (BUD) nebulized or placebo isotonic saline serum (ISS), in addition to Terbutaline 5mg and 0.5mg Ipratropuim bromide every 20 minutes the first hour. All patients received single oral dose of prednisolone 1 mg/kg given at the beginning of therapy. The primary outcome was the delta PEF in the first hour (H1).The secondary outcome was hospital admission rate within 4 h and length of stay in the emergency department (ED).

Results:

A total of 108 visits by adults with severe acute asthma were evaluated.Mean age = 36 ± 9 years. Sex ratio = 0.43. On admission, the two BUD groups (n = 49) and placebo (n = 55) were similar. The delta PEF in H1 was 25% in the BUD group versus 20% in the placebo group (p = 0.01, OR = 3.4) . The hospitalization rate was 47% in the BUD group against 53% in the placebo group (p = 0.97). The average length of stay was 7 ± 5 hours in the BUD group versus 11 ± 9 hours in the ISS group (p = 0.04, OR = 1.9). No major complications were observed in both groups.**Conclusion :**The addition of high repetitive budesonide nebulization improve the lung function and decrease the admission rate of adults with severe acute asthma.

#7679 : Outcome of patients transported without medical assistance after mobile intensive care unit intervention : prospective study

Preferred format : ePoster

Authors:

KHAOULA Bel Haj ALI (1), Nesrine Ibn HASSINE (2), CHAWKI JEBALI (3), MEJDI OMRI (2), Hajer KRAIEM (4), AYMEN JAOUDI (1), Nawfel CHBILI (2), Mohamed NEJIB KAROUI (5)

1. Emergency of Sahloul, Sousse, Sousse, TUNISIA
2. SAMU 03 , CHU SAHLOUL, Sousse, TUNISIA
3. Urgences, CHU Sahloul de Sousse, Sousse, TUNISIA
4. SAMU 03 , CHU SAHLOUL, sousse, TUNISIA
5. SAMU 03 , CHU SAHLOUL, Sousse , TUNISIA

Keywords: Pre-hospital, Mobile intensive care, Emergency

Abstract :

Introduction :

To reveal short-term outcome and risk factors for patients transported with No medical assistance after mobile intensive care unit intervention.

Method :

We realized a prospective regional survey including consecutively 301 transported with no medical assistance patients. The following events occurring within 72 hours were registered: unexpected and expected death, mobile intensive care unit and hospital medical procedures, mobile intensive care unit and hospital diagnosis. Data were collected from mobile intensive care unit dispatching center computer, telephone follow-up on Day 3 and medical report for hospitalized patients.

Results :

There were no lost to follow-up. Rate events and confidence intervals were: 2% [0-3%] for death, 20% for hospitalization among which 5% in intensive care unit and 9,2 % [10-15%] for diagnostic disagreement. Patients presenting with chest pain or dyspnea were at higher risk together for intensive care requirement and diagnostic disagreement ($p < 0.01$).

Conclusion :

Unexpected short term outcome is not uncommon for patients transported with no medical assistance after mobile intensive care unit intervention. As main risk factors seem to be chest pain and dyspnea, mobile intensive care unit transport should be encouraged whenever these symptoms are encountered.

#7680 : ASSESSMENT OF KNOWLEDGE AND PERCEPTION OF Addis Ababa City RESIDENTS ABOUT PRE HOSPITAL CARE

Preferred format : Oral presentation

Authors:

asmamaw abebe (1), aklilu Azazh (1)

1. , Addis Ababa University, Addis Ababa, ETHIOPIA

Keywords: knowledge and perception, Addis Ababa City Residents, Prehospital Care

Abstract :

Background: In developing countries including Ethiopia pre hospital care is not well developed asin other developed countries. In Addis Ababa, there are few governmental and private institutions which provide pre hospital care.

Objective: To assess the knowledge, and perception of residents about pre hospital care in Addis Ababa city

Methods: A house to house cross-sectional survey was conducted **between April and March, 2014 in Addis Ababa city. A** multi stage sampling technique was applied to select 422 households for the survey.. Data were collected by administrating interviews with a randomly selected individuals using a structured questionnaire. Data was entered, analyzed, and interpreted by using SPSS Software version20.

Results: A considerable proportion of respondents (86.3%) heard about the existence of pre-hospital care in Addis Ababa, however more than half of the respondents had no information on what to do, who to contact and which phone to call during emergency. About 248(58.8%) and 275(65.2%), respondents reported that they have no phone numbers of Red Cross and Fire and Emergency centers, respectively. About 245(58.1%) of the respondents had some form of emergency in their work place or at home with highest frequency of falling accident (51.4%) followed by road traffic accident (41.6%). When asked about involvement of service providers in pre-hospital care, 254 (60.2%) respondents said that Red Cross Ambulances as primary provider, while only 37 (8.8 %) reported that ambulances of Hospitals and Health centers are involved in the pre-hospital care. Almost all (411(97.4%)) respondents believed that pre hospital care should be strengthened by increasing number of ambulances (23.7%), by training health professionals (18.7%), by teaching the community about pre hospital care (26.1%) and a combination of the above methods(31.5%).

Conclusion: Although the knowledge of the community on pre-hospital care is high, there is lack of information on what actions to take within the community. Therefore, concerned bodies such as the city administration, Red Cross, fire and emergency dispatch centers, hospitals and other concerned bodies need to undertake coordinated works in order to create awareness among the community for proper care of emergency situations at home or work places.+

#7681 : Iceberg: what lies beneath the water. Accurate diagnosis are crucial in emergency and that implies a careful examination of the patient and ordering the correct exams.

Preferred format : ePoster

Authors:

Andrea Barca (1), Svetlana Rita (1), Nadia Korchevnyuk (1), Gabriel Oliveira (2), Cristina Rodrigues (3), Luís Cuña (1)

1. Urgency and Emergency Department, Hospital CUF Descobertas, Lisbon, PORTUGAL
2. Surgery-General Service, Hospital Garcia de Orta, Almada, PORTUGAL
3. Thoracic Surgery Service, Hospital Pulido Valente, Lisbon, PORTUGAL

Keywords: Back pain, esophagic perforation, mediastinitis, foreign body, lung abscess

Abstract :

Case report

A 75 years-old female patient presented at our Emergency Department (ED) with complaints of fever and right lumbar pain for 10 days. At the beginning of symptoms, she went to her local hospital where a diagnosis of pyelonephritis was made. She was discharged on cefuroxime 500 mg bid for 8 days. After finishing treatment without any improvement, she decided to go again to an ED.

On arrival to our ED, her major complaints were right lumbar pain and fever. She also had mild dysuria and shortness of breath. She had no significant medical history and she wasn´t on any medication.

Her temperature was 37.7 ºC, she had a normal blood pressure, normal heart and pulmonary sounds. Abdomen had no relevant findings, and both Murphy signs were absent.

Blood tests revealed leukocytosis, neutrophilia and high C-reactive protein. Chest X -ray film showed a right pulmonary base infiltrate.

We were considering a patient whose condition didn´t improve under a course of cefuroxime and whose X-ray finds didn´t seem to be related with the previous diagnosis of pyelonephritis. A renal abscess with contiguous spread, a sub-phrenic abscess or a pulmonary infection were considered.

Abdominal CT scan was normal but thoracic CT scan revealed a pulmonary abscess contiguous with lower third of the esophagus and a linear density strongly suggesting a foreign body.

The patient denied any previous episode of dysphagia, sialorrhea, thoracic pain, cough and sputum.

A diagnosis of mediastinitis and pulmonary abscess due to esophagic perforation was made, and she was proposed for surgery.

She was referred to her local hospital, where she was submitted to surgery. Removal of a chicken bone and drainage of the abscess were performed. The patient was totally recovered.

Discussion: Back pain is a conundrum. It is crucial to carefully evaluate this symptom to have a more accurate scope in the differential diagnosis. In our case, pain was a lower thoracic pleuritic pain instead of a lumbar pain. The key findings in the workout of this patient were the absence of a renal Murphy sign and the presence of dyspnea. Chest X-ray also pointed to a thoracic infectious condition, which was also supported by blood work.

This case draws our attention towards the importance of a diagnosis-oriented management in emergency, as well as the potential danger of multiple urgency episodes with the same complaints. A serious diagnosis may be concealed by an innocent presentation and we must not be misled by a former diagnosis.

#7682 : Gelejinse questionnaire is useful as a method of triage of chest pain?

Preferred format : ePoster

Authors:

Carmen Hernández Martínez (1), Maria del Mar de la Torre Olivares (1), Daniela Rosillo Castro (1), Rocío López Valcarcel (1), María de la Paz Egea Campoy (1), Alessandro Guaschi Caglieri (1), Amalia Castaño Villar (1)

1. Emergency , Hospital Comarcal del Noroeste de Caravaca, Murcia, SPAIN

Keywords: ischemic heart disease, probability, questionarie

Abstract :

Introduction
Chest pain is a frequent complaint in the emergency department. Geleijnse questionnaire is used to classify suspicious chest pain of heart disease by obtaining a score of 6 or more points

objective
Evaluate those patients discharged from the emergency department with our discharge diagnosis of ischemic chest pain of low probability, if they had completed the questionnaire Gelejinse had submitted a suspected heart disease. As a secondary objective evaluate what high profile presents a cardiac event within 3 months following

Material and methods
Study: descriptive, observational review of medical records. Age, sex, if they had a high suspicion of heart disease according to the Gelejinse questionnaire: patients with a discharge diagnosis of our emergency department chest pain of atypical features in the first quarter of 2015. The study variables were selected. If they had had any previous episode of ischemic heart disease. If presented alterations in the electrocardiogram (ECG), cardiac enzyme test if they were made and whether they were serialized. If chest radiography was performed if were reviewed in outpatient cardiology. If they had structural heart disease.

Results
152 patients with a discharge diagnosis of atypical chest pain or low probability for IHD were collected. The average age of our patients was 50.27 + - 19.05. 50.7% were men. They had presented an episode of previous ischemic heart disease 9.9%. They showed some alteration in the EKG 17.8% and 82.2% no. They made a determination of cardiac enzymes to 84.9% and 10.5% a second. They were asked chest X-ray to 82.2%. They presented an equal or greater rating of 6 on the scale Gelejinse 10.5% and therefore could have been suspected of heart disease. . They were reviewed in outpatient cardiology 15.8%. They presented structural cardiac pathology 2%. They suffered an event of ischemic heart disease in the next 3 months 0.7% (only one patient) patients, which prsentaba a value greater than 6 on the Gelejinse questionnaire. Of those who were not suggestive none suffered cardiac pathology in the next 3 months. Among patients with the highest score of 6 they had suffered an episode of ischemic heart disease by 25%, not suggestive of 8%.

Conclusions
Only 1 in 10 patients had suspected high risk of heart disease. The questionnaire Gelijense in our series presents a sensitivity of 100% and a specificity of 90%. So we can say that it could be useful as a method of screening in these patients for further studies from the emergency and / or referral to outpatient cardiology to complete the study. None of the low-risk patients having a cardiac event in the next three months

#7683 : Narrow QRS tachycardia in Down´s Syndrome patient with history of intervention for ventricular septal defect and hypotiroidism

Preferred format : ePoster

Authors:

Maria Gil Lopez (1), Elena Prado Mel (2), Maria Josefa Martinez Lopez (1), Antonio Bernabé Rojas Ramirez (1)

1. Emergency Service, Andalusian Health System, Seville, SPAIN
2. Hospital Pharmacy Service, Andalusian Health System, Seville, SPAIN

Keywords: Tachycardia, atrioventricular nodal reentry, Down syndrome, electrical cardioversion

Abstract :

Case report: we report a 33 years old female, who was admitted in emergency department with a Narrow QRS tachycardia. It is a patient with Down syndrome, hypothyroidism and congenital heart disease (ventral septal defect) underwent surgery 6 months after birth with good outcomes.

Patient was in the school in a physical education class and begins with vomiting, sweating with relaxation of sphincters and loss of consciousness self-limited (syncope) by what is taken suffering three episodies of syncope in the travel. The patient was admitted in observation area for monitoring: TA 96/60 mmHg, and Electrocardiogram (ECG) with narrow complex tachycardia to 200 bpm with retrogade P wave, suggestive of atrio ventricular nodal reentrant tachycardia.

After consultation the medical record, the last ecocardiography was done in 2002 (more than 15 years ago) with theses results: close patch well preserve, Ventricular size and eyecction fraction normal.

First, treatment is performed with Adenosine and verapamil unanswered. Subsequently, esmolol IV is given, getting only reduce the frequency of tachycardia. As a third pharmacological line treatment, amiodarone perfusion was given during 12 hours, without getting sinusal rhythm.

For last, echocardiography is performed, with results within normality. After that, patient presents again an episodie of tachyarritmia and we decided underwent her to a electrical cardioversion. After midazolam administration for sedation, a discharge of 100 julies was done, being efective at the first time, with ECG in sinusal rhythm with right bundle branch block.

Discussion:

Atrioventricular nodal reentrant tachycardia represents a significant part of tachy-arriythmias seen by attending physicians in emergency departments.

The clinical practice guidelines , recommend synchronized electric cardioversion as the first therapeutic option for a patient with tachyarrhythmia and clinic instability situation.In our particular case (patient with Down's Syndrome And congenital heart disease) it is decided as a first choice pharmacological cardioversion despite the situation of hemodynamic instability finally being ineffective

#7684 : Reasons for attending emergency departments - a survey of 2.010 walk-in patients

Preferred format : Oral presentation

Authors:

Rajan Somasundaram (1), Alexander Geissler (2), Bernd A. Leidel (1), Christian Wrede (3)

1. Department of Emergency Medicine, Charité - Universitätsmedizin Berlin, Campus Benjamin Franklin, Berlin, GERMANY
2. Department of Health Care Management Berlin, Berlin University of Technology, Berlin, GERMANY
3. Department of Emergency Medicine, HELIOS Hospital Berlin-Buch, Berlin, GERMANY

Keywords: walk-in patients, survey, ambulatory emergency facilities

Abstract :

Background: Internationally, the number of patients in emergency departments (EDs) is steadily increasing. In Germany the reasons for walk-in patients to seek medical aid in EDs are not well examined and predominantly based on assumptions so far. Focussing on the patient´s view, we here present data of a survey among walk-in patients of two high level EDs in Berlin, Germany.

Methods: In 2015 during a period of four weeks, 2.010 walk-in patients were anonymously surveyed in two high level EDs (each approx. 60.000 ED visits p.a.) located in different catchment areas of Berlin. A standardized questionnaire and descriptive statistics for data analysis were used.

Results: More than 90% of patients assessed themselves as an emergency. They classified their subjective feeling of “urgency” and thus, the need to be seen by an ED physician as follows: Immediately (25%), emergent (27%, “as quick as possible”), urgent (38%, “must be seen today”), less-urgent (9%, e.g. “someone else sent me”), non-urgent (1%). Three quarter of patients indicated pain. The level of pain correlated significantly to the patients subjective view of urgency. The majority of patients (57%) who attended during regular working hours tried to contact statutory health insurance (SHI) office- based physicians in advance. 59 % of patients would make use of ambulatory emergency facilities if they were available and well established. However, 55% of patients had been unaware of the (mobile) emergency service of the association of SHI physicians.

Conclusion: The results indicate that (1) more than 90% of walk-in patients visiting the two EDs classified themselves to be an “emergency” and (2) centralized ambulatory emergency facilities should be available 24/7 closely related to hospitals with EDs. Therefore, the future planning of emergency services should integrate providers of the ambulatory and inpatient sector. International experience suggests that different instruments aiming at better coordination of care, such as integrated call centres, extended ambulatory services and facilities for less urgent cases within or nearby hospitals should also be implemented in Germany.

All authors contributed equally

#7685 : Cannabis-induced acute coronary syndrome

Preferred format : ePoster

Authors:

Imen Mekki (1), Hamed Rym (1), feten Amira (1), Ryef Ammar (1), Bassem Chtabri (1), Rym Hammami (1), Bouhajja Béchir (1)

1. Emergency Department Charles Nicolle Hospital , tunisia, tunis, TUNISIA

Keywords: Coronary, syndrome, Cannabis, emergency

Abstract :

Introduction :

Smoking cannabis is a rare trigger of acute coronary syndrome but several cases of myocardial infarction have been increasingly reported during the last few decades. The physiological pathway involves a coronary vasospasm but remains uncertain.

Observation :

We report the observation of a 20-year-old young male, regular cannabis smoker and alcohol consumer with no other medical history, who presented to the emergency department after complaining of paroxysmal recurrent episodes of retrosternal isolated chest pain occurring at rest and lasting longer than 20 minutes. The patient reported the use of cannabis during the three days before admission on ED with last consumption 12 hours before the beginning of chest pain. On examination : The patient was conscious; the blood pressure was 130/80 mmHg in both arms; The pulse rate was regular = 59 beats per minute and the evaluation of the pain was estimated over 30 mm. Otherwise, there were no vascular left signs nor clinical findings of heamodynamic instability. The electrocardiogram at admission showed a regular sinus rythm at 60 bpm with an early repolarization in the inferolateral territories. The patient was admitted to the emergency ward for further decision clinical making and therapeutic options. The evolution was marked by a dynamic T-wave negativation during the EKG monitoring and positive points of hypersensitive Troponins : 194 ng/ml to 452 ng/ml. A Non ST Elevation Myocardial Infarction diagnosis was made and the patient was transferred to the cardiology unit for further explorations. Echocardiography was normal. The coronary angiography revealed thight thrombotic stenosis of the proximal anterior interventricular artery with TIMI-3 flow and a general spastic coronary system.

Discussion and Conclusion :

Several Cases of acute coronary syndrome due to the use of cannabis have been reported in the literature, especially among young people. However, the pathophysiological mechanism remains not completely understood with multiples hypothesis involving vasospasm, increased demand oxygen and decreased supply and plaque rupture. Actually, myocardial infarction may be more frequent than recognized by the literature. The medical taking history is the hallmark of the decision making.

#7686 : Superior mesenteric artery syndrome: a rare cause of intestinal obstruction

Preferred format : ePoster

Authors:

Amel Amamou (1), Taieb Jomni (2), Dorsaf Bellasfar (1), Saloua Houimli (1), Mouna Titey (1), Fatma Ben salem (3), Ghania fetiha Aouadi (3), Jihen Aouem (1), Ben Romdhane Abdelmajid (1)

1. emergency department, Hopital des FSI La Marsa, Tunis, TUNISIA
2. gastrology, Hopital des FSI La Marsa, Tunis, TUNISIA
3. emergency department, Hopital des FSI La Marsa, tunis, TUNISIA

Keywords: superior mesenteric artery syndrome, Wilkie's syndrome, Nutcracker syndrome, intestinal obstruction

Abstract :

Background: Superior mesenteric artery syndrome is a rare but potentially life threatening gastrointestinal condition. This syndrome is a clinical phenomenon caused by the compression of the third part of the duodenum between the superior mesenteric artery and the aorta, leading to obstruction.

Case report: A 36 years-old patient with a medical history of appendectomy presented to the emergency room with acute abdominal pain and vomiting. The patient reported similar episodes resolved spontaneously with episodes of not explored intermittent hematuria. Clinical examination noted abdominal distension and tenderness in the left iliac fossa. Laboratory investigation showed only an anemia. Abdominal radiograph revealed gastric dilation. Ultrasonography was normal. Abdominal Computerizing Tomography scan showed a distended colon and a compression of the left renal vein between the mesenteric artery and the aorta. The Magnetic Resonance Imaging enterography showed a duodenal distension upstream its compression by an acute angulation of the superior mesenteric artery. The diagnosis of Wilkie’s syndrome associated with the nutcracker syndrome was therefore established. Then, the patient was proposed to surgery.

Conclusion: The superior mesenteric artery and the nutcracker syndromes are rare conditions. The diagnosis is based on clinical symptoms and radiologic evidence of obstruction.

#7687 : Descriptive study of the assistant activity of a dispositive of emergencies and critical care.

Preferred format : ePoster

Authors:

Maria Gil Lopez (1), Elena Prado Mel (2), Almudena Lozano Vicente (1), Jose Ignacio Villar Navarro (1)

1. Emergency Service, Andalusian Health System, Seville, SPAIN
2. Hospital Pharmacy Service, Andalusian Health System, Seville, SPAIN

Keywords: Primary Health Care, emergencies, house calls.

Abstract :

Introduction: Primary health care is the first level of access of the population to the health system in which the Dispositive of Emergencies and Critical Care (DECC) is the first link of the assistant chain to out-of-hospital emergency services.

In these requests of emergency situations, a quality health assistance must be guaranteed as quickly as possible. All together, along with the poor bibliography on this topic, led us to outline this study.

Objectives: To describe the health care activity of the DECC of La Rinconada, according to its demographic features, assisted pathologies, ambulance arrival time, and concordance between the DECC and hospital diagnoses. As well as the relation between the analyzed variables.

Methodology: Descriptive, transversal and retrospective study carried out during the year 2014 .To calculate the sample size stratified probability sampling , depending on the seasons was performed .The size of the sample determined to a confidence level of 95% and an accuracy of 3 % , was 185 subjects . Finally, a representative sample of 206 patients of all patients seen was selected.

Conclusions: The highest percentage of assistances is: people over 60; female; day of the week: Monday; time, from 8 to 12 a.m.; seasons: autumn and winter. The most frequent pathologies are: neurological, cardiovascular and respiratory, in that order (there are slight differences of percentage in terms of age and season). Most cases are priority 2 (no emergency demorables), there is also a percentage of cases Priority 3 which wouldn’t be attended by the DECC. Arrival times is right, but in Priority 1, it can be improved. The percentage of patient referrals might seem high but more than 50% of those are hospitalizations. The diagnostic agreement between DECC and the hospital is high, but only to a limited extent. On the basis of the results; preventive, instructive and organizational measures should be introduced in order to respond to the needs of the attended population and also to set up other lines of research, allowing a better understanding of the emergency care.

#7688 : Risk factors for intubation in pesticide poisoning in the Emergency Department

Preferred format : Oral presentation

Authors:

wided bahria (1), anware yahmadi (2), hanane ghazali (3), wided bousslimi (4), farah riahi (1), aymen zoubli (2), mohamed mguidich (3), sami souissi (3)

1. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , ben arous, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
4. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Tunis, TUNISIA

Keywords: pesticide poisoning, Emergency Department, intubation

Abstract :

Introduction: Acute pesticide poisoning is frequent in the Emergency Department (ED). It can be severe or even fatal. The management may require the use of intubation and the hospitalisation in the unit intensive care. Many factors are correlated with the risk for intubation.

Objective: The purpose of our study is to evaluate risk factors of intubation for acute pesticides poisoning

Matherials and methods: it was a retrospective study based on analysis of 73 consecutive patients in an emergency department,for 4 years .The epidemiological data, demographic features, circumstances, outcome,the nature of the offending product, timely care, clinical and laboratory signs, treatment and evolution were studied. To detect the possible relationship between two variables; correlations were used.

Results: Seventy three patients were enrolled.The average age was 27 ± 9 years, sex ratio=0,25**.** Women psychiatric history were noted in 8% of patients. The causes of poisoning were with suicidal intent in 92% of cases, and were accidental in 8% of cases. Chloralose was the most frequently implicated in 52% of cases and organophosphates in 45% of cases. Most patients (57%) consults in the first hour. Muscarinic syndrome was present in 82% of patients and nicotonic syndrome was present in 60%. The ventilatory support was performed in 28 patients (38%). Several risk factors for intubation were detected : the female sex (p=0,03), chloralose (p=0,03), tremor (p=0,01) and hypersalivation (0,006).

Conclusion: In the Emergency Department, physians must be conscientious about potential pesticide danger. the female sex , chloralose, tremor and hypersalivation are correlated with a high risk of intubation and intensive care unit (ICU) admission.

#7689 : Hodgkin lymphoma Mixed cellularity in patients with multiple emergency room visits for knee pain

Preferred format : ePoster

Authors:

Rafael Infantes Ramos (1), Maria Eugenia Reyes Garcia (1), Cristina Fernandez- Figares Montes (2), Jose Ignacio Valero Roldan (1), Ivan Villar Mena (1), Maria Victoria Alarcon Morales (1)

1. Critical care and Emergency Service, Regional Hospital Carlos Haya, Malaga, SPAIN
2. Critical care and Emergency Service, Health center Victoria, Málaga, SPAIN

Keywords: Hodgkin lymphoma, anemia, frequent attendance.

Abstract :

42 year old patient with no known drug allergies and a history of multiple sclerosis, diagnosed 6 years ago by optic neuritis and tracking neurology; Iron deficiency anemia in tracking microcítica digestive additional tests without pathological findings; anxious and depressive syndrome hiatal hernia.

Current treatment: trazodone 100mg / 24hrs, ferrous sulfate, bupropion 150 mg / 12 hours, Vitamin B1-B6-B12 / 8 h, Betaferon three days a week.

Current disease: Patient has consulted several times in emergencies in the past two months by box of pain in the right lower limb at the level of tibial region, go for intensity of pain that wakes you up during sleep did not improve with analgesia and paresthesias that level. During the interview highlights anorexia 30 kg weight in the last year accompanied by asthenia. In previous consultations they had been conducted additional tests without findings except microcytic anemia known,

After further tests the patient is admitted to the Internal Medicine,

Additional tests on admission

Blood test: Hemoglobin 6.9, VCM 69, 18,100 leukocytes (neutrophils 84%) Platelets 551,000, 113% prothrombin time, glucose 84 mg / DCL, Creatinine 0.58, 9.74 calcium corrected. GOT 11 19 GPT, GGT 360, FA 176, total bilirubin 0.25, C-reactive protein. 192

Chest x-ray line broadening suggestive of right paratracheal lymphadenopathy. Increase bilateral hilar lymphadenopathy suggest. Mild bilateral pleural effusion.

Radiography of right knee injury lytic bone epiphyseal-metaphyseal external proximal right tibia with ill-defined borders consistent with aggressive bone injury.

Evolution. During admission expansion of additional tests (venous ultrasound doppler and bilateral arterial, CT thorax and abdomen, bone scan, colonoscopy and PET) is performed objectifying aggressive litca lesion in the right tibial region, multiple bilateral pulmonary nodules predominantly in the right lower lobe, occupying lesions liver and spleen space. After liver biopsy diagnosis of lymphoma Mixed cellularity classical Hodgkin confirmed, starting chemotherapy treatment.

Conclusion: The reasons for repeated consultation frequent attenders emergency patients often hide serious diseases. It is important to make a correct medical history on each visit and let us not be carried away by previous episodes.

#7690 : Impact of refugee presentations on the case-load of a medium-sized German emergency department (ED).

Preferred format : Oral presentation

Authors:

Patrick Dissmann (1), Felix Koehring (1), Florian Fischer (2)

1. Emergency Department / Centre for Refugee Medicine, Klinikum Lippe GmbH, Detmold, GERMANY
2. School of Public Health, University of Bielefeld, Bielefeld, GERMANY

Keywords: Impact, Refugees, Case-Load, German, Emergency Department

Abstract :

Introduction:
Alone in 2015 Germany saw in influx of approximately 1.1 million refugees. German immigration authorities mandate, that refugees receive the amount of medical treatment sufficient to avert dangers to life and limbs and remove any immediate health threats to themselves or the German public. However, the delivery of medical services to refugees in Germany is heterogenous and relies heavily on local health policy and indivual volunteer health care workers. As a result, the general feeling is that many refugees seem attend their local emergency department (ED) for emergent, urgent and non-urgent medical conditions alike on a 24/7 basis. It is also felt, that refugees require a disproportionate amount of ressources due to language barriers and special cultural needs. Aim of this retrospective case note study was therefore to evaluate the real impact of refugee presentations to the case-load and consequently work-load of a medium-sized German ED.

Methods:
We conducted a retrospective case record review of all refugees presenting to the ED in the first three months of 2016. The following data were recorded: type of emergency (trauma/surgical, medical/neurological, paediatric, obstetric/gynaecological), patient age and disposition (inpatient/outpatient). Secondly we looked at the presenting complaint/main ED diagnosis in order to gauge whether an ED attendance, out-of-hours (OOH) or next-day general practitioner (GP) visit would have been appropriate.

Results:
According to the latest census, the County of Lippe has a population of 353.000 residents. Of these, we recorded around 13.000 ED visits during the study period. This compares to 669 refugee ED visits on the background of around 4.500 refugees and asylum-seekers living in the County of Lippe. Approximately 70% of refugees were male with 30% being female. 33% of refugees attended because of a medical/neurological condition, 29% with trauma or surgical conditions, 28% were unwell children whereas 10% sought help for pregnancy-related concerns. Most refugees attending could be discharged from the ED (65%). This compared favorably to an overall ED discharge rate of 51% for the resident population during the above study period. Going by the presenting complaint/main diagnosis 35% of refugee ED visits were deemed emergencies, 19% where classified as urgent, whereas 46% could have seen a GP or office-based consultant the following working day.

Discussion:
This study is the first to describe the real impact of refugee attendances to the overall case-load of a medium-sized German ED. We believe our data to be representative, as the regional refugee distribution in Germany is governed centrally by fixed quotas depending on the relative population size and density. Our data suggest that refugees in transit present less often to the local ED than the sedantry local population and account for no more than 5% of overall ED visits. Compared to the sedantry population most refugees can be discharged from the ED, indicating a larger proportion of minor complaints suitable for an OOH- or GP-setting.

#7692 : Prognostic value of the NR2 peptide in patients underwent cardiopulmonary resuscitation

Preferred format : Oral presentation

Authors:

Tamer Colak (1), Sedat Kocak (2), Zerrin Defne Dundar (2), Mehmet Ergin (3), Abdullah Sadik Girisgin (2), Basar Cander (2), Mehmet Gul (2)

1. Emergency Department, Izzet Baysal State Hospital, Bolu, TURKEY
2. Emergency Department, Necmettin Erbakan University Meram Faculty of Medicine, Konya, TURKEY
3. Emergency Department, Yildirim Beyazit Universitiy Medical Faculty Ataturk Training and Research Hospital, Ankara, TURKEY

Keywords: NR2, cardiopulmonary resuscitation, emergency room

Abstract :

Background: It is important to know the factors affecting survival, good neurological outcome and prognosis in patients underwent cardiopulmonary resuscitation (CPR). NR2 (N-methyl-D-aspartate receptor 2) peptide is a plasma biomarkers for acute cerebral ischemia. In literature, it has not been demonstrated any study assessing NR2 levels in patients undergoing CPR. In this study, we investigated the relationship between the NR2 peptide levels and prognosis in patients underwent CPR in our hospital emergency room.

Method: In the study, the patients with cardiopulmonary arrest (CPA) consecutively admitted to the emergency room and the patients suffer from CPA while being followed in the emergency department, were evaluated prospectively between October 2014 and June 2015. Traumatic, non-traumatic, pre-hospital and in-hospital cardiac arrest patients were included the study. Blood samples for NR2 and other biochemical analysis were taken during resuscitation. NR2 levels in patients who can provided return of spontaneous circulation (ROSC) and not provided ROSC, and the benefits of NR2 in predicting 28-day mortality were investigated. SPSS ™ ver.16.0 was used for statistical analysis.

Results: A hundred patients were included in the study but nine patients were excluded from the study due to errors in the blood sampling. Mean age of the patients was 63.6±17.6/year and 64.8% were male. Pre-hospital and in-hospital cardiac arrest percents were 56.0% and 44.0% respectively, and 13.2% of them were traumatic cardiac arrest patients. ROSC was achieved in 60.4% of patients. Between the patients who were achieved ROSC and those who died were detected significant differences in terms of NR2 levels (p=0.004). Although NR2 values of survivors at twenty-eight days were higher than those being exitus, there was no statistical difference (p=0,075). Also in the study, lactate levels in patients who provided ROSC and the patients who living 28 days were found significantly lower than those who died (p=0.02 and p=0.01 respectively).

Conclusion: NR2 levels are increased as an indicator of the ROSC in patients who underwent CPR. This condition is thought to be associated with reperfusion. However, NR2 levels has not been shown to be superior to lactate levels in 28-day mortality prediction.

#7693 : Identification of acute poisoning in emergency department

Preferred format : ePoster

Authors:

MARIA ANGELICA Rivera Núñez (1), Rosario Torres Santos-Olmos (1), ANA Martínez Virto (1), CHARBEL MAROUN-EID (1)

1. EMERGENCY DEPARTMENT, La Paz University Hospital, MADRID, SPAIN

Keywords: poisoning, drug abuse, alcohol, acute, suicide.

Abstract :

INTRODUCTION: Poisoning, alcohol over-consumption or drug overdose constitute a significant source of morbidity and mortality. According to Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS)" in 2014 there were almost 2.2 million toxic exposures in humans in the United States of America, of which 79.4% were unintentional and 16.4% were Intentional exposures, being mainly involved sedative/hypnotics/antipsychotics, cardiovascular drugs, opioids, stimulants and street drugs[1]. In Spain, a multicentre study in 2000 showed that drugs remain as leading cause of acute poisoning, especially in adults and in patients with psychiatric history. It is followed by alcohol intoxication, illegal drugs of abuse, and miscellaneous group including industrial products, spoiled food, plants and animals poisoning. **OBJECTIVE**: The aim of this study is to describe the clinical and epidemiological characteristics of the patients visiting the emergency department for acute poisoning. **MATERIALS AND METHODS**: All patients presenting with acute poisoning in the emergency department during January and February 2014 were included. Demographic, clinical and laboratory variables are collected. **RESULTS**: 156 patients presenting with acute poisoning in the study period were included. 51.3% were women. The mean age was 42 years. 21.8% had a history of alcohol abuse, 6.4% alcohol, tobacco and cocaine, 3.8% chronic smoking, 64% had no history of substance abuse. Regarding psychiatric history, 72% of patients had no history of psychiatric disorders, 20% had depression, 3.6% anxiety disorder, 3% schizophrenia, 2.4% eating disorder. 15.4% of patients had a history of self-harm/suicide attempts. According to the cause of admission to the emergency 45.5% of patients were admitted to the emergency department for alcohol poisoning, 44.2% for benzodiazepine intoxication, 5.1% cocaine overdose, 3.2% food poisoning, 1.3% CO2 poisoning 1.3% cannabis, 1.8% Hashish or MDMA. 42.3% of patients had suicidal ideation or autolytic intention. 52.6% of patients required psychiatric assessment during their admission in the emergency department. 85.9% of patients were discharged, 10.35% were hospitalized at the department of psychiatry and 3.2% at the internal medicine department. **CONCLUSIONS**: Patients who present with poisonings are mostly women. Alcohol poisoning is the most common cause of attendance. Mostly they have no history of substance abuse or psychiatric disease. Less than half refer intention or suicidal ideation and over 80% are discharged from the emergency department.

#7694 : Congenital coagulopathy patients attending at general emergency department

Preferred format : Oral presentation

Authors:

MARIA ANGELICA Rivera Núñez (1), Rosario Torres Santos-Olmos (1), ANA Martínez Virto (1), CHARBEL MAROUN-EID (1)

1. EMERGENCY DEPARTMENT, La Paz University Hospital, MADRID, SPAIN

Keywords: Haemophilia, emergencies, bleeding

Abstract :

INTRODUCTION: The purpose of the emergency care of patients with congenital coagulopathies is the adequate replacement of deficient clotting factors in order to restore haemostasis and control the acute bleeding episode. However, the clinical and epidemiological profile of patients with congenital coagulopathies attended at de ED is not yet defined. **OBJECTIVE**: We developed the following retrospective study in order to meet the clinical profile, the leading causes of consultation and complications of congenital coagulopathies patients treated at the General ED. **MATERIALS AND METHODS:** All patients attended at the ED of La Paz University Hospital in the period from April 1, 2011 and November 30, 2011 with congenital coagulopathy (hemophilia A [HA], B[HB] and von Willebrand disease[vW]). We analyzed demographic variables, cause of consultation, type and severity of coagulopathy, use of blood products or specific clotting factors, destination at discharge of Emergency Department (ICU admission, conventional care admission, death or discharge at home) and definitive diagnosis were recorded. Analytical variables were also recorded. The decision of studies and treatment was defined by emergency physician. **RESULTS**: 68 patients with congenital coagulopathy were treated in the ED. Of these, 80.9% (55) were men. The average age was 36.3 ± 13.3 years. A total of 32 patients with HA (47.1%), 29 patients with VWD (42.6%) and 7 patients with HB (10.3%) were attended. There was no difference in age (35.0±13.0 years in HA, 36.3±12.7 in VWD and 42.4±16.7 in HB; p = 0.41). The most frequent ED presentations were: bleeding manifestations 25% (Minor bleeding: 13,2% [subcutaneous hematomas 4,4%, gingival bleeding 4,4%, Epistaxis 2,9%]; Major bleeding 13,2%[lower gastrointestinal bleeding 5,9%, Upper gastrointestinal bleeding 1,5%, pharyngeal hematoma 1,5%, hemoptysis 1,5%, retroperitoneal hematoma 1,5%, intramuscular hematoma 1,5%]), abdominal symptoms 16,2%, fever 11,8%. Minor bleeding was observed only in patients with mild haemophilia and type 3 of VWD. Major bleeding episodes occurred in 77.8% of haemophilia patients and 22.2% of VWD patients (p=0.20). All patients with minor bleeding were discharged and 66% of patients with major bleeding were admitted to a hospital unit (p<0,001). Only 29.4%, required specific clotting factor therapy in the ED. There was no statistically significant difference between the type of coagulopathy and the requirement of in-hospital specific clotting factor therapy (34% HA, 42.9% HB and 20.7% VWD; p=0.35). Equally, there was no difference in the requirements of specific clotting factor treatment and severity of bleeding. **CONCLUSION**: We observed no difference in the rate of major and minor bleeding according to diseases severity. Therefore, life-threatening bleeding complications are independent of the severity of congenital coagulopathy and the assessment of all patients with congenital coagulopathy who consult the ED for a bleeding complication should be independent of the severity of the coagulopathy. All patients are at high risk of life-threatening conditions.

#7695 : Preceding NEWS among in-hospital cardiac arrest and their impact on survival

Preferred format : Oral presentation

Authors:

Samuel Bruchfeld (1), Therese Djarv (2)

1. , Karolinska Univeristy Hospital, Stockholm, SWEDEN
2. , Karolinska University Hospital, stockholm, SWEDEN

Keywords: NEWS, IHCA

Abstract :

Background: In-hospital cardiac arrest (IHCA) are often preceded by abnormal vital signs. Preceding abnormal vital signs might lower the physiological reserve capacity and therefore decrease survival after an IHCA.

Aim: To assess preceding national early warning score (NEWS) and its impact on survival after IHCA.

Material and methods: All patients ≥18 years suffering IHCA at Karolinska University Hospital between 1st January 2014 and 31st December 2015 were included. Data regarding the IHCA, patient characteristics, NEWS and 30days survival were drawn from the electronic patient records. Parameters included in NEWS were assessed up to 12hrs before the IHCA. Differences in survival were assessed with adjusted logistic regression models and presented as Odds Ratios with 95% Confidence Intervals (OR, 95% CI) between patients with NEWS of 0-4 points (low) versus those with at least 5points (moderate) and high (7 points). Adjustments included hospital site, gender, co-morbidities, first rhythm and place of IHCA.

Results: In all, 358 patients suffered IHCA, of whom 109 (30%) survived at least 30 days. The 87 patients with medium NEWS had a minor chance and those 78 with high NEWS (22%) had a minimal chance of surviving IHCA compared to those with low NEWS (Adjusted OR 0.24, 95% CI 0.12-0.50 and OR 0.08, 95% C.I. 0.03-0.22, respectively).

Conclusion: The NEWS can be a probable proxy for estimating physiological reserve capacity when discussing prognosis with patients and relatives. But even more important, it stresses the need for better preventive strategies in IHCA.

#7696 : Repeated episodes of low back pain in the emergency room, Ewing sarcoma

Preferred format : ePoster

Authors:

Rafael Infantes Ramos (1), Maria Eugenia Reyes Garcia (1), Cristina Fernandez- Figares Montes (2), Maria Victoria Alarcon Morales (1), Ivan Villar Mena (1), Jose Ignacio Valero Roldan (1)

1. Critical care and Emergency Service, Regional Hospital Carlos Haya, Malaga, SPAIN
2. Critical care and Emergency Service, Health center Victoria, Málaga, SPAIN

Keywords: Lumbago, sciatica, emergency

Abstract :

23 year old patient with no personal history doctors who came to the emergency for the fourth time within 5 days box pain severe lumbar region radiating to the left thigh of 1 month of evolution that does not improve with morphic, accompanied in the last hours constipation, oligoanuria and loss of feeling in perineum.

Additional tests on admission

Blood tests: 9.4 hemoglobin, hematocrit 29.3, platelets 337,000, 20,300 leukocytes (84% neutrophils), prothrombin time 69% glucose 103 mg / DCL, Urea 41, Creatinine 1.32 mg / DCL, Na 140 mEq / L, K 4,40mEq / L, creatine kinase 68 U / L, lactate dehydrogenase 995 U / L CRP 192 mg / L, Procalcitonin <0.05 ng / mL.

Radiography lumbar and sacral without pathological findings.

Evolution

During admission under observation for pain the patient is evaluated by traumatology, neurology, gynecology and internal medicine with income in the latter. Given the persistence of uncontrolled pain with morphine is performed CT pelvis and thighs objectifying lytic bone lesions in multiple in right and left pubis sacral wing, as well as a great mass of soft tissue in the left quadriceps with poorly defined boundaries, peripheral vascular anarchic with large pockets hypoechoic not FDG uptake by necrosis. Later pathology confirmed Ewing sarcoma left quadriceps with multiple metastatic bone lesions is performed.

The patient began treatment with radiotherapy and chemotherapy with grade 4 hematologic toxicity, being derived to inclusion in palliative care.

Conclusion: repeated episodes of low back pain and sciatica in emergencies unrelieved with pain medication should be cause for study.

#7697 : Nonspecific abdominal pain in the Emergency Department: malignancy incidence in a nationwide Swedish cohort study

Preferred format : Oral presentation

Authors:

Elfström Cecilia (1), Goransson Katarina (2), Therese Djarv (2)

1. , Karolinska University Hospital, Stockholm, SWEDEN
2. , Karolinska University Hospital, stockholm, SWEDEN

Keywords: elderly, epidemiology, non-specific abdominal pain

Abstract :

Introduction The role of emergency physicians is to identify patients in need of immediate treatment, but also to identify symptoms indicative of serious, if not immediately life-threatening conditions. Aim To assess whether symptoms described as nonspecific abdominal pain (NSAP) could be the first indication of an abdominal malignancy. Materials and methods This was a nationwide registrybased cohort study of all patients discharged with NSAP from Swedish Emergency Departments (EDs) during the year 2011, based on Swedish patient registries of in-patient and out-patient care, and the cause of death registry, studying patients diagnosed with de novo cancer within a year after their NSAP discharge. Results Of 24801 patients discharged with NSAP in 2011, 2.2% were assigned a cancer diagnosis within 12 months. Almost 20% of patients diagnosed with a malignancy died within the year, and 16% of these deaths occurred within a monthaftertheEDvisit.Themajorityofpatientswithcancer were 60 years of age or older, and thus significantly older than the remaining NSAP patients. Patients with malignancies also had a greater number of comorbidities than the remaining NSAP patients ($P<0.01$). Conclusion A small percentage of patients discharged with NSAP from Swedish EDs are diagnosed with a malignancy within a year. Patients aged 60 years or older and with comorbidities were over-represented in terms of developing malignancies after discharge. Emergency physicians should be aware of the fact that diffuse abdominal symptoms in elderly patients could be the first sign of an underlying malignancy and more liberally refer such patients for follow-up in primary care

#7698 : ELGE - ESI and Chief complaint triggered ECG [ESI & Leitsymptom getriggertes EKG]

Preferred format : ePoster

Authors:

Ronny Enk (1), Stephanie Müller (1), Harald Eisenbarth (1), Harald Dormann (1)

1. , Klinikum Fürth, Fürth, GERMANY

Keywords: ACS, AMI, Triage, ECG, EKG, ESI, Emergency Severity Index, Arrhythmia, Dyspnoe, Chest Pain, Chief Complaint

Abstract :

Background:

The number of patients at German emergency departments (ED) rises steadily. To identify critical ill patients immediately, clinical triage systems are used. Although the validity and reliability of the Emergency Severity Index (ESI) is quite good, there are still gaps, e.g. for patients with an ST segment elevation myocardial infarction (STEMI).

We tried to answer the question whether the combination of ESI level and a subsequent list of chief complaints could increase the sensitivity of identifying the “high risk situation” STEMI by performing an ECG diagnosis within 10 minutes after triage. This list contained: chest pain (CC1), dyspnea (CC2), arrhythmias (CC3), upper abdominal pain (CC4), syncope (CC5), suspected diagnosis of an ACS as pronounced by the pre-hospital emergency physician (CC6).

Methods:

We conducted a retrospective analysis of patients presenting to the ED of the Klinikum Fuerth in 2013 and 2014. Patients were analyzed by ESI level, a chief complaint list, and the corresponding diagnosis. If patients were dismissed with a diagnosis of acute myocardial infection (ICD I21.0-9 excluding ICD I21.4) we defined them as STEMI patients. We calculated sensitivity, specificity, and number needed to screen (NNS, defined as number of patients who need to be ECG-tested in order to get 1 positive result) for different combinations of symptoms and ESI levels, to find the most effective method in identifying possible STEMI-patients.

Results:

40505 patients (mean age 50.2y, sd ±25.9y, min 0y, max 105y, median 51y, 50% female) who presented to our ED in 2013 were enclosed in our analysis. Out of all ED patients in 170 cases, i.e. 0.4%, a STEMI was diagnosed. ESI levels at triage where distributed as follows: ESI1 1.3%, ESI2 21.2%, ESI3 35.0%, ESI4 39.7%, ESI5 2.9%; and the six chief complaints taken into account as: CC1 5.0%, CC2 6.1%, CC3 2.1%, CC4 2.1%, CC5 4.6%, CC6 0.5%.

In the unselected ED-population no patient triaged as ESI5 and only one as ESI4 suffered from a STEMI. Within ESI levels alone, the highest sensitivity of 74.1% was found for ESI2 patients (specificity 79.0%). Regarding chief complaints, the highest sensitivity of 50.6% was calculated for CC1 (specificity 95.2%). The lowest NNS of 6 was found for patients with CC6.

Combining ESI1, 2, and 3 patients with CC1, CC2, CC3, and CC6 resulted in a group 5436 patients (13.4% of all ED patients). Within this group 82.9 % of all STEMI patients could be detected with a specificity of 86.9% (NNS 39).

Conclusion:

By using ELGE within an unselected group of emergency patients it is possible to identify a high proportion of STEMI patients by also keeping the number of screened patients as low as possible. However, the best symptoms to enter the ELGE algorithm have to be evaluated in a prospective analysis. Given our current results, we would advice a group of ESI1-3 patients who present with one of the following chief complaints to an ED: chest pain, dyspnea, arrhythmias, and suspected diagnosis of an ACS as pronounced by the pre-hospital emergency physician.

#7699 : Why consult the emergency department patients with systemic autoimmune diseases?

Preferred format : Oral presentation

Authors:

MARIA ANGELICA Rivera Núñez (1), CARLOS Martínez Caballero (1), Rosario Torres Santos-Olmos (1), CHARBEL MAROUN-EID (1)

1. EMERGENCY DEPARTMENT, La Paz University Hospital, MADRID, SPAIN

Keywords: Autoimmune disease, Cardiovascular diseases, Emergency medical care

Abstract :

Background: The causes of acute decompensations of patients with systemic autoimmune diseases are not well known. **Aim**: To describe the causes for consultation in an emergency room of patients with systemic autoimmune diseases. **Material and Methods**: Review of medical records of patients with systemic autoimmune diseases, aged over 14 years, consulting in an emergency room of a general hospital during three months. **Results**: In the study period, 166 patients with systemic autoimmune diseases consulted in the emergency room, of a total of 18,153 consultations (0.9%). Patients with rheumatoid arthritis were those that consulted with higher frequency (37%) followed by patients with systemic lupus erythematosus (21%). The most common causes for consultation were cardiovascular diseases in 25%, followed by digestive disorders in 15%. The most common diagnosis was chest pain with suspected ischemic heart disease in 36%. No differences in cardiovascular risk factors were observed between those patients consulting for cardiovascular diseases and those consulting for other causes. **Conclusions:** The most common cause of consultation in the emergency room of patients with systemic autoimmune diseases is cardiovascular.

#7700 : Recognition and initial treatment of intracranial hypertension by pediatricians in Spain. An advanced simulation observational study.

Preferred format : ePoster

Authors:

luis sanchez santos (1), antonio rodriguez nuñez (2), manuel fernandez sanmartin (2), ignacio oulego erroz (3), antonio iglesias vazquez (1)

1. Emergencies Medical System, FPUSG - 061, santiago, SPAIN
2. pediatric critical care., universitario hospital of santiago, santiago, SPAIN
3. cardiologia pediatrica, hospital de leon, leon, SPAIN

Keywords: intracranial hypertension, loss of consciousness, advanced medical simulation

Abstract :

Background and objectives: Primary Care Pediatricians (PCP) use to be familiar with a wide range of children's health-related problems, but rarely face emergency situations. Little is known about the PCP's actual skills to adequately manage acute critical events; some evidences obtained in simulated scenarios indicate that they have diagnostic abilities but lack some practical skills. Acute intracranial hypertension (ICH) is not frequently seen in the out-of-hospital environment. However, a variety of diseases like brain tumors, brain trauma, non-traumatic intra cerebral hemorrhage, ischemic stroke, hydrocephalus and idiopathic ICH may cause acute ICH, a fact that emphasizes the need for adequate recognition and management of such events by Pediatricians.

Material and Methods: We systematically reviewed ICH simulated scenarios during advanced simulation courses designed for pediatricians in Spain. The assessment was based on a previously defined sequence of tasks (technical and non-technical), from diagnosis to initial treatment, stabilization and preparation for transport.

Results: A total of 27 scenarios from 21 courses, with the participation of 95 pediatricians were assessed. Suspicion of acute ICH was correctly done in 85% of scenarios after a median time of 7.5 minutes. Osmolar therapy was started in 78% and bag-mask hyperventilation was done in 63%. The patient's head was elevated in 41% and sedatives were administered in 11%. Median time to ask for a brain imaging was 8.5 minutes and to contact neurosurgery was 12 minutes. The evaluation of non-technical skills showed that in 12 of 27 scenarios this aspect was poor.

Conclusions: Primary care pediatricians are able to identify an acute ICH, but need to improve their treatment skills. Systematic analysis of professional's performance during a simulated scenario permits to detect both strengths and weakness; these evidences should be used to improve training programs. Our study has some limitations that should be considered to contextualize the results and designing future studies. The study was retrospective and analyzed sample was limited to PCP, a specific group of pediatricians working out-of-hospital; therefore, the results cannot be extrapolated to other hospital pediatricians that should be more familiarized with this kind of neurologic complication.

#7701 : The HEART score for early rule out of acute coronary syndrome in the emergency department: a meta-analysis

Preferred format : Oral presentation

Authors:

Patricia van den Berg (1), Richard Body (2)

1. Maastricht University, Faculty of Health, Medicine and Life Sciences, , Maastricht, THE NETHERLANDS
2. Central Manchester University Hospitals Foundation NHS Trust, The University of Manchester, , Manchester, UK

Keywords: HEART score, acute coronary syndromes, emergency department, clinical decision rule, meta-analysis

Abstract :

Background

Patients presenting with undifferentiated chest pain account for 5-10% of emergency department (ED) attendances. This puts enormous strain on healthcare services but, as less than 25% of those investigated have an acute coronary syndrome, there is great potential to reduce unnecessary hospital admissions by improving diagnostic technology. Several studies have suggested that the HEART score, based on patient information and a single blood test on arrival, could help to achieve that. In this systematic review and meta-analysis we aimed to summarise the available evidence on the diagnostic accuracy of the HEART score for predicting major adverse cardiac events (MACE).

Methods

Two investigators independently searched the Medline, Embase and Cochrane databases between 2008 and May 2016 identifying eligible studies providing diagnostic accuracy data on the HEART score for predicting MACE as primary outcome. Titles and abstracts were screened, including full-text review when necessary to decide about final inclusion. Study characteristics and diagnostic accuracy measures were systematically extracted and study quality was assessed with the QUADAS-2 tool before consideration in the final meta-analysis. Pooled estimates of sensitivity and specificity were calculated using a generalized linear mixed model approach with random effects assumption (Stata 13.1).

Results

We identified 12 studies meeting the inclusion criteria for this systematic review. After quality assessment, 9 studies including data from 11,217 patients were combined in a meta-analysis. In total 15.4% patients (range 7.3 – 29.1%) developed MACE after a mean of 6.0 weeks of follow-up. Among patients categorised as ‘low risk’ and suitable for early discharge (HEART score 0-3), the pooled incidence of ‘missed’ MACE was 1.6%. The pooled sensitivity and specificity of the HEART score for predicting MACE were found to be 96.7% (95% CI 94.0 to 98.2%) and 45.0% (95% CI 40.5 to 53.5%), respectively.

Conclusions

Patients with a HEART score of 0 to 3 are at low risk of incident MACE. As 3.3% of patients with MACE are ‘missed’ by the HEART score, clinicians must ask whether this risk is acceptably low for clinical implementation. Future work should focus on robust comparison with alternative strategies and integration with shared decision making.

#7702 : Evaluation of patients with maxillofacial trauma in the emergency department

Preferred format : Oral presentation

Authors:

Metin Sah (1), Turker Yardan (1), Celal Kati (1), Naci Murat (2)

1. Department of Emergency Medicine, Ondokuz Mayis University, Samsun, TURKEY
2. Department of Statistics, Ondokuz Mayis University, Samsun, TURKEY

Keywords: Maxillofacial trauma, Emergency Department, facial injury severity score, mortality

Abstract :

Background: In this study, we aimed to analyze the general features, maxillofacial fracture regions, concomitant injuries, and factors affecting clinical outcome of patients with maxillofacial trauma in the Emergency Department (ED).

Methods: Hospital records of the patients who applied to our ED due to maxillofacial trauma were analyzed retrospectively in a five year period. Patients whose maxillofacial fractures had been detected in maxillofacial tomography scans were included in the study. General features of patients, maxillofacial fracture regions, concomitant injuries, initial Glasgow coma score (GCS), facial injury severity score (FISS), injury severity score (ISS), the trauma and injury severity score (TRISS) and in-hospital mortality have been evaluated.

Results: A total of 282 patients were included in this study. Male/female ratio was 3.6/1, the mean age was 42.0±16.9 years. Most frequent cause of injury was falling (25.9%).The most frequent broken maxillofacial region was maxillary sinus (45%). 43.3% of the patients had at least one concomitant injury. The most frequent concomitant injury was head trauma (22.3%). There were 692 maxillofacial fractures. Maxillary sinus fractures were the most common in both sexes. The frontal bone, nasoorbitoethmoid complex and maxillary sinus fractures were related with head trauma. Mean duration of hospitalization was 7.9±15.6 days. It has been determined that the presence of concomitant injuries caused the duration of hospital stay to increase. In this study, the number of patients died was 11 (3.9%). The mortality was related with the frontal bone fractures and LeFort fractures. There was a positive correlation between FISS and ISS. There were negative correlation between FISS and GCS and between FISS and TRISS. There was a positive correlation between FISS and duration of hospitalization. The cut-off value determined for predicting in-hospital mortality of FISS was ≥5. Sensitivity of this cut-off value was 72.7% and its specificity was 70.5%.

Conclusions: The injury mechanisms, maxillofacial fracture regions and concomitant injuries are related with in-hospital mortality in maxillofacial trauma. FISS may be a useful parameter in the evaluation of clinical severity and prediction of mortality in maxillofacial trauma in the ED.

#7703 : Patient attitudes and barriers towards participation in the Manchester Acute Coronary Syndromes decision rule pilot trial

Preferred format : ePoster

Authors:

Patricia van den Berg (1), Richard Body (2), Sarah Kendal (3)

1. Maastricht University, Faculty of Health, Medicine and Life Sciences, , Maastricht, THE NETHERLANDS
2. Central Manchester University Hospitals Foundation NHS Trust, The University of Manchester, , Manchester, UK
3. University of Huddersfield, , School of Human and Health Sciences, Huddersfield, UK

Keywords: MACS rule, acute coronary syndromes, emergency department, qualitative interview study, patient experience

Abstract :

Background

Observational studies have shown that the Manchester Acute Coronary Syndromes (MACS) decision rule can effectively rule in and rule out acute coronary syndromes (ACS) following a single blood test in the Emergency Department. A well-designed randomised controlled trial (RCT) would now provide important evidence of its effectiveness when used in practice. We recently completed recruitment to a pilot RCT comparing use of the MACS rule to standard care. Successful recruitment to a definitive, fully powered RCT requires participation to be acceptable to patients. We therefore aimed to explore patient attitudes and potential barriers to participation in an RCT of this nature.

Methods

We conducted a qualitative study nested within a pilot RCT comparing use of the MACS rule to standard care. All trial participants were asked if they would be willing to participate in a follow-up interview discussing their experiences of trial participation. We then scheduled semi-structured interviews with consenting participants. We used purposive sampling, aiming to achieve a heterogeneous sample based on age, gender, ethnic origin and MACS rule risk group. Interviews were conducted with reference to a bespoke topic guide. They were audio-recorded, transcribed verbatim and analysed using the Framework method with an inductive approach. Identified themes were assessed on the individual participant and group level.

Results

Ten participants completed semi-structured interviews. Overall, interviewees felt that participation in the MACS trial was acceptable and all but one would recommend participation to others. They expressed few reservations concerning an early discharge according to the MACS rule when compared to usual care. Some participants expressed frustration at playing a “passive” role in their own healthcare. Trial participation allowed them to play a more active role, which they welcomed. They also welcomed the potential to reduce unnecessary waiting time so long as their medical care was appropriate with timely follow-up. In accordance with the trial protocol, patients were first approached to participate at the time of arrival in the ED. Some participants, who described being anxious or in pain at that time, felt this was undesirable. They were, however, welcoming of the approach once these matters had been attended to. Treatment by the MACS rule was perceived as largely non-invasive intervention and the process of randomisation seemed to hold little significance for participants. Although several participants described being generally sceptical of medical research, they were amenable to participation in this trial. This appears to be because they agreed with the need for research in this field. Personal qualities of the research staff (such as “friendliness”, “considerateness” and “competence”) also seem to have influenced the decision to participate.

Conclusions

Patients were positive about their participation in the MACS rule feasibility trial comparing the MACS rule to standard care. They welcomed the opportunity the MACS rule offers in reducing unnecessary waiting in the hospital. A number of potential limitations to the trial design were identified and should be considered in the planning of a future larger trial.

#7704 : Impact of Climatic Factors on the non-urgent visits to three Emergency Rooms in 2014

Preferred format : ePoster

Authors:

Nikolay Houbanov (1), Petko Stefanovski (2)

1. Emergency Department, University Hospital "Alexandrovska" , Sofia, BULGARIA
2. Emergency Department, Regional Hospital "Prof. G Stranski", Pleven, BULGARIA

Keywords: climatic factors, models, non urgent visits

Abstract :

Purpose. Conducted in 2016, the study seeks to find correlations between the non-urgent visits to emergency rooms and climatic factors.

Design: A multicenter retrospective study of registered medical records.

Participants: Three Emergency departments.

Tasks were: 1) Seeking to find correlations between climatic factors of the environment and the non-urgent medical examinations in emergency rooms. 2)Application of different models for evaluation of trends and evaluation of their validity

Methodology. Two methods have been applied. The first one employed a factorial analysis in order to reduce the included in the study climatic data. In the second one all data were included in a linear multifactorial regression model. The effect of each component on the demographic indicators was included and evaluated. The effect of the climate on leading classes of registered morbidity was also studied. The validity of the models was tested. Using a non-linear regression analysis, the role of the weather – fog, rain, and snow, was evaluated.

Results. The study has encompassed 32071 medical entries. Correlation dependencies were established between climatic components, age demographic indicators, and morbidity. There are present moderate statistically significant correlations between climatic factors, against the patient flow in childhood age (k=-0.416; p=0.001); morbidity in asthma (k=-0.416; p=0.001), and as to acute respiratory diseases (k=-0.579; p=0.001).

In the first model, the climatic factors were reduced to three groups: factor 1 – temperature and dew point; factor 2 – barometric, and factor 3 – humidity. The regression model indicated a predictive value of the first two factors of the non-urgent visits to the wards. Due to the marginal values of the confidence interval, the validity with regards to the general flow of patients not hospitalized (non-urgent patients) was dismissed (Ljung-Box Q statistics 24.428; Sig=0.041). The model indicated applicability with asthmatic patients (Ljung-Box Q statistics 27,152; Sig=0.076). The predictive value of the model is 5, 4%.

The carried out nonlinear regression analysis proved that fog is a factor when people seek medical help in emergency wards. There was a proved effect on the average number of patients seeking help in wards (AUC=0.571 Sig. =0.041) as well as the fact that fog is a factor for the increased number of medical examinations of children and of patients with acute respiratory diseases. There was established a linear regression model of climatic factors which revealed nearly the same summarized effect of predictability as to climatic factors - 5, 4%.

Conclusion. The study has proved the impact of separate climatic factors on the registered medical examinations. There is no evidence as to the role of sex in the studied group. The non-urgent visits of children as well as of patients with acute respiratory diseases and asthma are significant. The conclusion that there is a high risk of unjustified visits among these groups has been made.

The study has not established a substantial significance and validity of the application of the two methodologies – factorial analysis and reduction of climate components against.

#7705 : Case report – hypothermia after accidental intake of an antipsychotic agent and a tricyclic antidepressant

Preferred format : ePoster

Authors:

Laura Esteve Cuevas (1), Eva Slag (2), Barendina Bakker (1)

1. Senior Resident - Emergency Medicine, Albert Schweitzer Ziekenhuis, Dordrecht, THE NETHERLANDS
2. Emergency Physician, Albert Schweitzer Ziekenhuis, Dordrecht, THE NETHERLANDS

Keywords: hypothermia, antipsychotic agent, tricyclic antidepressant

Abstract :

Introduction

Intoxications with antipsychotics and tricyclic antidepressants are recognized as a cause of hyperthermia in the setting of an anticholinergic syndrome. In this case report we describe an adult patient with an accidental administration of levomepromazine with clomipramine and furosemide, presenting with somnolence, hypotension and hypothermia.

Case description

A 55-year old, mentally retarded, woman was brought to the Emergency Department by ambulance with somnolence and hypotension. Five hours earlier, she had been accidentally given medication that belonged to another patient in her nursing home – levomepromazine 25mg (phenothiazine, antipsychotic agent), clomipramine retard 75mg (tricyclic antidepressant) and furosemide 40mg (loop diuretic).

One hour after administration of the medication, she became more somnolent than usual, with shaking hands and a hypotension (95/60 mmHg).

Her medical history consists of said mental retardation due to perinatal asphyxia, an anemia, obstipation and gastroesophageal reflux when supine. Her prescribed medication consists of cholecalciferol 400IE 1dd1, domperidone 10mg 3dd1, hydrochlorothiazide 25mg 1dd1, magnesium hydroxide 724mg 1dd1, omeprazole 40mg 1dd1, macrogol 1dd1 and dalteparin 2500IE 1dd1. Her usual dose of domperidon, hydrochlorothiazide, magnesium hydroxide and macrogol had not been given that day due to the accidentally administrated medication.

She had no known allergies.

On physical examination the patient was somnolent, with an Glasgow Coma Scale of E2M5V1, hypotensive (82/38 mmHg) with a bradycardia (56/min), and hypothermic (31 °C, rectally). Her respiratory rate was slow, with a SpO2 of 94% without supplementary oxygen. Her ECG showed a mild sinusbradycardia with a first degree AV-block, a small QRS-complex and a QTc of 0,51sec. Laboratory testing revealed a respiratory acidosis.

The patient was admitted with the diagnosis of intoxication with levomepromazine, clomipramine and furosemide. Aggressive fluid resuscitation was initiated, while the patient was simultaneously internally and externally warmed. Based on her history, current state and in consultation with her legal representative a DNR order was agreed upon. During admission, no further complications occurred. After two days, the patient was discharged to her nursing home in her previous condition.

Discussion

Thermoregulation is controlled in the preoptic area of the hypothalamus through regulation of shivering, peripheral vasodilation and diaphoresis - with serotonin and dopamine being the most important neurotransmitters. While the exact mechanism of action in this matter is not understood, both phenothiazines (levomepromazine) and tricyclic antidepressants (clomipramine) interact with these neurotransmitters and may promote hypothermia.

In this patient, multiple factors may have contributed to the development of hypothermia. Besides said medications, the perinatal asphyxia and consequent cerebral damage in this patient in combination with her somnolent state may have lessened her ability to shiver.

Conclusion

Although antipsychotics and tricyclic antidepressants are known for their abilities to cause hyperthermia, these agents should also be considered as a possible cause in patients presenting with hypothermia.

#7706 : HOW MANY CHILDREN SURVIVE TO AN OUT-OF-HOSPITAL CARDIORESPIRATORY ARREST?

Preferred format : ePoster

Authors:

antonio iglesias vazquez (1), luis sanchez santos (1), manuel bernardez otero (1), ortiz rosell (2)

1. Emergencies Medical System, FPUSG - 061, santiago, SPAIN
2. emergencies Medical System, empresa publica de emergencias sanitarias, almeria, SPAIN

Keywords: Out-of-hospital cardiorrespiratory arrest, neurological outcome, cardiopulmonary resuscitation

Abstract :

Introduction: Paediatric out-of-hospital cardiorrspiaratory arrest (OHCA) is an uncommon condition, and since the staff of the emergencies medical system don´t face daily with it it suposes a big challenge for them. We describe the paeditric OHCA registered in Spain along one year.

Material and methods: A prospective, observational database including all the out-of-hospital cardiorespiratory arrests (OHCA) registered by the 19 regional Emergency Medical Systems (EMS) of Spain, with data collected according to Utstein style was designed. The paediatric sample (patients aged 0–18 years) corresponding to the period between October 2013–September 2014 is described.

Result: 160 patients aged between 0 to 18 year were included, 60.6% males. Median age was 6 years (range 0–18). The event occurred at home in 46.3% and was witnessed in 61.9% of cases (by a bystander in 61.6%). Basic life support was provided in 75% of cases (by a bystander in 41.7%, and first provider in 58.3%). The first detected rhythm was non-shockable in 89.9% and shockable in 10.1%. The arrest’s aetiology was car- diac in 47.2%, respiratory in 14.5%, traumatic in 18.9%, drowning in 13.2%, neurological in 2.5%, and other in 3.8%. ROSC was achieved in 36.3% patients and 6.3% were admitted to hospital in on-going CPR. Survival at hospital discharge was 13.75%, and 10.6% had good neurologic condition at that time.

Conclusions: Paediatric OHCA is an uncommon condition. Only 10% ofvictims have an initial shockable rhythm.In Spain the current rate of bystander CPR is relatively low. ROSC, survival to hospital discharge and specially the neurological outcome in these patients need to be improved by means of multifaceted resuscitation strategies.

#7707 : Potentially inappropriate medication in emergency

Preferred format : ePoster

Authors:

MARCELA JIRON (1), LUIS HERRADA (2), MATIAS MARTINEZ (1), TAMARA SANDOVAL (1), ELENA VEGA (1), CAROLINA LOBOS (1)

1. , Facultad de Ciencias Químicas y Farmacéuticas Universidad de Chile, SANTIAGO, CHILE
2. EMERGENCY , CLINICA LAS CONDES , SANTIAGO, CHILE

Keywords: emergency, pharmacology, medication

Abstract :

Background: Beers criteria have been widely used to identify potentially inappropriate medication (PIM). In Chile, these criteria are not used routinely.

Objective: The purpose of this study was to assess PIM frequency in emergency room visits at the Clinical Hospital of the Universidad de Chile.

Methods: Clinical Pharmacists carried out a prospective follow-up study in emergency room visit between January 2015 and January 2016. Selection criteria were ages 65 years or older and a medication prescribing. Inappropriate drug prescription was defined by Beers Criteria. Outcomes of the study were PIM frequency and type of PIM used.

Results: Preliminary results of a total of 1000 patients met selection criteria. The mean age of patients was 70.7±7.7 years and 65% were women. A 44.7% of patients received at least 1 PIM. The most common inappropriate drugs were NSAIDs and Cardiovascular drugs.

Conclusion: PIM remains a health problem in emergency care. Future analyses must be performed to determine potential adverse outcomes and their consequences in geriatric patients.

#7708 : Hyperthermia: heatwave or urinary tract infection: Which differential dignosis?

Preferred format : Oral presentation

Authors:

Zamprogno Emanuela (1), Salmina Damiano (1)

1. Emergency departement, Ospedale Regionale di Lugano, Lugano, SWITZERLAND

Keywords: hyperthermia, head stroke, headwawe

Abstract :

Backround

The increase in seasonal temperatures has a potential influence on the health of the population, especially elderly and polimorbid persons. There are specific disorders linked to hot summer, for exemple heatwave. In south of Switzerland the second half of July 2015 was particularly hot and the differents media gave great and continuos accent to this condition.

Aim

Helped to a case report we want focus attention on the importance of a large spectrum evaluation of a problem that present with carachteristics of heatwave but required also investigation for a urinary tract infection.

Method

During the period from 20 to 27 July 2015, a total of 241 consultation where registred at the Emergency Department. In 12 (5,0%) cases clinical manifestation related with the high temperature where noted as the reason for the consultation. Between the 87 patients that where hospitalized, 5 (5,7%) were affectet by problems related with high temperatures. One was admitted in the Intensive Care Unit.

The Case

A male of 72 years with hystory of pulmonary embolism for witch he takes oral anticoagulation, arterial hypertension (treated with a calcium channel blocker, beta-blocker and hydrochlorothiazide) and previous cerebral ischemic attack, come at the emergency department with ambulance after he was found on the floor of his kitchen unconsciuos by his daughter. The Glasgow Coma Score was 9/15, his blood pressure 180/100, SpO2 100%, HF 102 bpm. The timpanic temperature was 41°C. The management was initially performed in the intensive care unit because of the severe deshydratation and for the emodynamic observation. After administration of aboundant intravenous hydratation and paracetamol for management of the temperature, he become contactable and he reports suffering for the high temperatures in the last days. No symptoms of urinary tract or other infection was present. A blood sample show no electrolytes disturbance, a serum creatinine of 110 umol/l, a PCR of 6 mg/l, Leucocytes where 14,2 G/l with 10,6 Neutrophils. The urine examination showed 10 – 20 leucocytes/cluster, positive nitrites and the presence of number of bacteria. The coltures of urines show a growth of E. Coli multisensitive. A sonografy of the abdomen rouled out any echografic sign of pyelonefritis. A antibiotic therapy was started with prompt recovery.

Conclusion

For polymorbid and elderly patients the consequencese of a head stroke can be live treathening. It is not simply to determine if the infection of the urinary tract is the cause of the hyperthermia (which is rarely the case in lower urinary tract infection) or if the deshydratation with consequent stasis of urine in the bladder is the cause of the infection. It is important to have a large diagnostic approach to pose the correct diagnosis.

#7709 : Response of Treatment in Primary Headaches Patients with Arterial Hypertension, a Prospective Observational Pilot Study

Preferred format : Oral presentation

Authors:

ABDULLAH CÜNEYT HOCAGİL (1), HİLAL HOCAGİL (1), VOLKAN ÜLKER (1)

1. EMERGENCY MEDİCİNE DEPARTMENT, BULENT ECEVİT UNİVERSİTY, FACULTY OF MEDİCİNE, ZONGULDAK, TURKEY

Keywords: Primary Headache, Mean Arterial Pressure, Arterial Hypertension, Pain Management

Abstract :

Background: There is a hesitation on the topic that about how can we treat patients which have headache and accompanying complaints of arterial hypertension that admit to emergency services. In which conditions we must decrease arterial hypertension or treat headache primarily? The purpose of this study is to contribute to selecting primary treatment method in patients with primary headaches accompanying arterial hypertension. In our study, we compared if there is any relationship between changes of mean arterial pressure and headache severity after treatment of headache.

Methods: This prospective observational study was carried out with 101 patients that admitted to Kartal Yavuz Selim State Hospital emergency service having had primary headaches accompanying complaints of arterial hypertension between 1 March and 31 May of 2013. All of 101 patients were analyzed that changes of the headache severity, mean arterial pressure and percent reduction in mean arterial pressure after medical treatment of primary headaches. All statistical analysis was recorded in SPSS 19.0 software (SPSS Inc, Chicago, IL, USA) and frequency and descriptive statistics were calculated. The relationship between the reduction of primary headache severity and changes in mean arterial pressure were analyzed via Wilcoxin signed rank test.

Results: On admission, 40 (39,6 %) patients had unbearable, 42 (41,6 %) patients had very miserable and 19 (18,8 %) patients had moderate headache. 44 (43,6 %) of them patients had intravenous metoclopramide, 35 (34,7 %)of them had intravenous nonsteroidal anti-inflammatory drugs and 22 of them (21,8 %) had intramuscular anti-inflammatory drugs treatment methods for primary headaches. After treatment, 25 (24,8 %) of patients headache severity decreased in three levels, 43 (42,6 %) of them decreased in two levels and 23 (22,8 %) of them decreased in one lower level. While at the beginning patients had 118,58 ± 12,65 average of mean arterial pressure after 30 minutes of treatment the average of mean arterial pressure dropped to 98,41 ± 13,43. There is no statistical significance between the patients which have same level or one lower one in their decrease of headaches severity after symptomatic treatment and mean arterial pressure changes ($p > 0.05$). We found statistical significance between changes of mean arterial pressure and headaches severity in patient which lowered their headaches severity two or three levels ($p < 0.001$).

Conclusion: This study showed that arterial hypertension accompanied primary headaches should be treated firstly instead of secondary causes treatment of arterial hypertension. After treatment of primary headaches arterial hypertension is going to decrease with resolving of headache severity.

#7710 : A rare reason of sciatalgia: piriformis syndrome

Preferred format : Oral presentation

Authors:

Mustafa Uzkeser (1), Ilker Akbas (1), Orhan Karsan (2), Alpaslan Unlu (1), Abdullah Osman Kocak (1), Ihsan Yuce (3)

1. Department of Emergency Medicine , Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
2. Department of Orthopedics and Traumatology, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
3. Department of Radiology, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: sciatalgia, pyomyositis, piriformis syndrome, abscess of piriformis

Abstract :

Introduction: Piriformis muscle (PM) originates from the anterior part of the sacral 2-4. Vertebrae, runs through the greater sciatic foramen and ends on the trochanter major of the femur. PM crosses through the foramen ischiadicum majus with the neurovascular structures in the pelvic region. Piriformis syndrome (PS) is a rare clinical picture with sciatic pain caused by compression of the sciatic nerve in the foramen ischiadicum majus. Pyomyositis is the primary pyogenic infection in the skeletal muscle usually progressing to abscess. It is difficult to diagnose, because pyomyositis is deeply located in the pelvis with a non-specific clinical picture and rarely seen in the temperate climate. Pyomyositis is considered to develop secondary to injuries occurring in muscle during an asymptomatic and undiagnosed transient bacteremia. PM pyomyositis creates edema in muscles, causing irritation and compression in sciatic nerve. Classical sign of PS is pain, tingling or numbness beginning from the hips, extending down the length of the sciatic nerve. Because there is no definitive test for piriformis syndrome, the diagnosis is primarily established on clinic. Treatment of PS is directed to etiology. Methods used in treatment of PS include medical, physiotheraphy, acupuncture, therapeutic perisciatic blocks, botulinum toxin injections or surgical intervention.

Case report:A 18-year-old female patient presented to emergency department with severe pain and numbness in the right hip, thigh and leg for 5 days and pain induced inability to walk. Vital signs of the patient at presentation were normal except fever (38.8°C). In physical examination, there was tenderness on palpation in right gluteal area, but no other signs of inflammation. Patient was easily bringing her right thigh to flexion and extension, but feeling severe pain during external and particularly internal rotation. Laboratory outcomes were WBC: 17000 and CK:500, while other values were normal. In pelvic tomography ordered for increased tenderness in the gluteal area of patient, there was heterogeneity in the right piriformis, gluteus maximus and minimus muscles, compatible with abscess. MRI was ordered to find source of abscess formation. In MRI; a lesion was observed in right gluteus maximus, minumus and pirifiormis muscles which was hypointense on T1-weighed images (AG) and showed marked signal increase on (WI) fat-suppressed T2-weighted images. The appearance was evaluated as piriformis intramuscular abscess. Piriformis symdrome was considered in the patient from piriformis intramuscular abscess. The patient was consulted to orthopedics clinic, a part of abscess could be drained with the guide of tomography and antibiotherapy was initiated. *Staphylococcus aureus* was isolated in abscess culture. The patient with complaints resolved at follow-up was taken to operation, abscess was cleaned and closed after insertion of drainage. Upon complaints of the patient were resolved, she was discharged at the 20th day of hospitalization.

Conclusion: Because piriformis syndrome is rarely encountered by physicians, diagnosis may be delayed, causing morbidity and unnecessary invasive examinations. We presented a piriformis abscess case which is a rare cause of piriformis syndrome and emphasized that piriformis syndrome should be kept in mind in differential diagnosis in patient presented with sciataalgia clinical picture.

#7711 : What Is Hiding Behind “Unclear Problem” in Criteria Based Medical Dispatch?

Preferred format : ePoster

Authors:

Radmila Majhen Ujevic (1)

1. prehospital, Institute for emergency medicine split-dalmatian county, Split, CROATIA

Keywords: Index, MDU,EMS, unclear,death, training

Abstract :

What Is Hiding Behind “Unclear Problem” in Criteria Based Medical Dispatch?

Introduction: Institute for Emergency Medicine Split-Dalmatian County provides emergency care for 178000 inhabitants of Split. Medical Dispatch Unit (MDU) receives calls according to symptoms presented by a caller, assesses a criteria and dispatches adequate response - red, yellow, green. Croatian Index for Emergency Call Admissions consists of symptoms divided into36 chapters. We wanted to find out which final diagnosis was made by physician in the field (Team 1) after he had been dispatched to the red criteria A05 - unclear problem.

Methods: retrospective quantitative and qualitative analysis of eRinels (programme support) database of calls and medical records of Split unit in one-year period (2015). We counted total number of calls which resulted with EMS alert, with special consideration on A05 - unclear problem. We wanted to see what diagnosis according to International Classification of Disease, especially the share of R96 - sudden death of unknown origin as well as diagnosis concerning acute coronary syndrome were set in the field. Only primary missions were included.

Results: There were totally 10036 calls to MDU in 2015 year with consequent EMS response, 3753 were red criteria. There were 1063 calls taken as A05 - unclear problem(28,32%). There were 17 diagnosis I21 - acute myocardial infarction (1,6%). There were 38 of R07 - pain in throat and chest (3,57%). Syncopa (R55) was established in 198 cases (18,63%). There were 59 diagnosis R96 (sudden death of unknown origin - 5,55%) and 8 diagnosis I46 (sudden death of cardiac origin).

Conclusion: Re-listening of calls in purpose of qualitative feedback and more thorough asking additional questions should lessen the share of “unclear problems” in total criteria assessment. Special attention is needed in assessing possible out- of- hospital cardiac arrest (OHCA) that was present in 6,3% cases of unclear problem. Regular training through re-listening of phone calls is crucial in recognizing agonal breathing. Recognizing of possible OHCA might “ clear the problem” and provide telephone CPR instructions according to latest guidelines in strengthening the role of MDU in survival of OHCA.

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dispatch codes of medical complaints to predict ALS prehospital interventions.

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#7712 : Unusual localization of vitamin-K antagonists overcoagulation

Preferred format : ePoster

Authors:

Houda Nasri (1), Hamed Rym (1), Sarra Jouini (1), Ryef Ammar (1), Asma Aloui (1), Sirine Jaouani (1), Bouhajja Béchir (1)

1. Emergency Department Charles Nicolle Hospital , tunisia, tunis, TUNISIA

Keywords: coagulation, drug-related events, hematoma, emergency

Abstract :

Introduction:

The increased aging of the population and the high prevalence of cardiovascular diseases account for the high number of patients treated with oral anticoagulants by vitamin K antagonist (VKA). Several major bleeding events were associated to the use of those medications. Ureteral hematoma were described in polytrauma, whereas spontaneous hematoma are much more rare and can be misdiagnosed especially in the context of emergency.

Observation :

We report a case of a 72-year old men treated by vitamin K-antagonist (VKA) therapy for a medical history of atrial fibrillation with no screening of anticoagulation panel during the two previous months. The medical history taking did not noticed any use of new medications. Furthermore there were no history of recent trauma.

The patient presented to the emergency department for abrupt spontaneous abdominal pain. On examination : Patient was conscious with stable blood pressure = 120/70 mmhg and irregular pulse rate = 78/min. The abdominal examination showed a hypogastric tenderness. Prothrombin Time and international Normalised ratio (INR) levels were indosable. Other biological analysis did not noticed anemia. Abdominal Computerized tomography revealed ureteral hematoma without signs of compression nor extravasation. Conservative treatment was attempted and the patient was admitted to the emergency ward for observation analgesia and specific antagonisation by Vitamin K. Favorable evolution was noticed after clinical correction of the haemostasis disorder.

Conclusion :

Overcoagulation is the more frequent adverse-drug related events. Co-existence of multiple comorbidities and polypharmacy makes the poor prognosis of these events especially in elderly. Various bleeding complications are commonly associated with VKA use and consequences may be potentially fatal. Ureteral sponatenous bleeding is a rare condition but needs observation and reevaluation.

#7713 : Carbon monoxide poisoning in children during the years 2006-2015

Preferred format : ePoster

Authors:

Ulle Uustalu (1), Triin Perkson (2), Gleb Denissov (3)

1. pediatrician, Tallinn Children's Hospital, Tallinn, ESTONIA
2. student, Tartu University, Tartu, ESTONIA
3. Head of Estonian Causes of Death Registry, National Institute for Health Development, Tallinn, ESTONIA

Keywords: Carbon Monoxide Poisoning epidemiology, Carbon Monoxide Poisoning etiology, Child, Estonia/epidemiology

Abstract :

Background: Carbon monoxide is an important cause of poisoning in children. We performed this study to clarify the epidemiology and clinical characteristics of patients with CO poisoning.

Methods: Retrospective analysis of medical records of patients hospitalised into Tallinn Children’s Hospital with suspected CO poisoning from 2006 -2015.

For the same time period, data of paediatric deaths from CO poisoning was acquired from Estonian Causes of Death Registry.

Epidemiological and clinical data were collected and analysed.

Results: A total of 97 children with suspected CO poisoning were admitted during the years 2006-2015.

Patient ages ranged from 1 month to 17 years. House fires were the most common cause of intoxication (46%), improper wood stove heating caused 27% of the cases, improperly ventilated exhaust produced by gas-fired water boilers caused 8%, inadequately ventilated motor vehicle exhaust caused 7%, and 12% of the sources of the poisoning remained unknown.

62% of the events occurred during cool season.

Severe poisonings with loss of consciousness made up 11% of the cases. From other symptoms, the most common were nausea and vomiting (37%), headache (30%), dizziness (28%), and vertigo 11%.

Of the children admitted, 7.8% had CoHb levels over 20%, which is considered high. These high intoxication levels were mainly found to be caused by improperly ventilated gas-fired hot water boilers. None of the patients received hyperbaric oxygen therapy.

No mortality was seen in these hospitalised children. No neurological sequelae or pneumonitis were detected.

During these years, according to Estonian Causes of Death Registry data, 22 children died from carbon monoxide poisoning in Estonia, all of them were due to fires.

Conclusion: Children with CO poisoning had good outcomes in this series. Although improperly ventilated gas-fired hot water heaters were not the most common factor of carbon monoxide poisoning in children, it caused the most severe CO poisoning seen during that time.

#7714 : What is the added-value of McGrath video laryngoscope in prehospital setting?

Preferred format : Oral presentation

Authors:

Margot Cassuto (1), Armelle SEVERIN (1), Anna Ozguler (1), Michel Baer (1), Thomas Loeb (1)

1. SAMU92, AP-HP, Garches, FRANCE

Keywords: McGrath videolaryngoscope, prehospital, manikins

Abstract :

Introduction:

Several controlled clinical trials showed McGrath® video laryngoscope (McG) utility in operating room, but this has not been evaluated in pre-hospital setting. Tracheal intubation in pre-hospital setting is considered as more complicated than in-hospital one, due to operating conditions (cervical spine immobilization, trapped victims, poor patient positioning...), non-fasting patients and operator's isolation. The objective of this study was to evaluate whether McG may be an alternative to direct laryngoscopy (DL) in the prehospital setting.

Material and Methods:

29 physicians, residents and nurse anesthetists were recruited; they each performed one DL (Macintosh blade) followed by a series of 5 McG in two different scenarios with an adult manikin model: easy airway and difficult airway (immobilized cervical spine) management and one scenario with a pediatric manikin.

The primary endpoint was mean intubation time (IT) per procedure, and users' learning curve. Glottis views with Comack-Lehane grade (CLG), number of intubation attempts, optimizing maneuvers and success rate (defined as lT lower or equal to 90 seconds) were considered as secondary endpoints.

Results:

Our study showed a rapid learning curve: reduced IT from 1st to 5th attempt with the 3 scenarios (mean time: 10 seconds), with few differences from 3rd to 5th attempts.

In adult manikin scenarios, McG enabled improved glottis view compared with DL: gain of 1 CLG with easy airway, and gain of 1 to 2 CLG with difficult airway scenario.

It also reduced moderately the number of intubation attempts. The success rate was not modified during the different attempts. When compared with DL intubation time, for both adult manikin scenarios there was a gain of 4 seconds in easy airway and a loss of 11 seconds in the difficult airway scenario.

In pediatric manikin scenario, McG improved IT (71 seconds) from DL to McG 5th attempt, improved glottic view (1 to 2 CLG), and allowed a lower number of intubation attempts and a higher success rate.

Conclusion:

Use of McG showed a rapid learning curve on the 3 tested scenarios. McG brought a real added value in pediatric manikin scenario for IT, number of intubation attempts and success rate.

For adult manikin scenarios, apart from an improved glottis view, there was no argument for an added-value of McG in prehospital setting.

#7715 : Atmed eTriage System, new model of EMS triage in the structure of the Smart City.

Preferred format : ePoster

Authors:

Arkadiusz Trzos (1), Katarzyna Długosz (2)

1. Assistant professor, Head of Department , Jagiellonian University Medical College Department of Disaster and Emergency Care, Kraków, POLAND
2. Assistant, Jagiellonian University Medical College Department of Disaster and Emergency Care, Kraków, POLAND

Keywords: etriage, Smart City, emergency management, disaster management, ICT

Abstract :

Study/ objective

Worldwide, Information and Communication Technologies (ICT) and telemedicine have been used more often in prehospital emergency care and emergency and disaster medicine. In Poland, the use of ICT in routine emergency practice does not raise any concerns, but its application in mass casualty incidents and disasters is still being discussed. The development of intelligent management systems in particular “SMART CITY” project requires an adequately intelligent medical emergency management system for EMS. Atmed eTriage System (AeTS) is a new concept of triage for routine emergency care and disasters.

Methods

The study was conducted based on the analyses of the Kraków EMS database and field simulations of mass casualty incidents (MCI). The study measured the following aspects: the kind of management and decision-making model, the effectiveness of EMS (the response time and the appropriate management medical staff), the effectiveness of triage, the information flow to/from the command and control center, the criteria deciding on a patient transport mode and the adequate allocation of patients in hospitals. The observation concerned the period 2009-2016.

Results

Within the scope of research, ICT monitoring emergency medical care proved greater effectiveness of the ICT model rather than the traditional one. Moreover, ICT lets take decisions that could not be taken within the traditional model due to lack of current feedback from the incident analysis and hospital database. ICT provides new management possibilities.

Conclusion

The use of etriage based on ICT in EMS contributes to more effective management. The initial research results allow to define new directions for development of intelligent EMS management systems.

#7716 : Learning Outcomes of Basic Life Support in Schoolchildren (RAMAkids club)

Preferred format : ePoster

Authors:

Kasamon Aramvanitch (1), Yuwares Sittichanbuncha (2), Patcharaporn Klongklaew (3), Krisana Nilsai (4)

1. Emergency Physician staff, Department of Emergency Medicine, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND
2. Associate Professor in Emergency Medicine, Department of Emergency Medicine, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND
3. Resident, Emergency Medicine, Department of Emergency Medicine, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND
4. RAMAkids club staff, Sport center staff, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND

Keywords: Basic Life Support, Primary schoolchildren, Learning outcome

Abstract :

Background : Out-of-hospital cardiac arrest (OHCA) is a leading cause of death among adults in worldwide. Rapid initiation of basic life support (BLS) significantly associate with return of spontaneous circulation (ROSC). Thailand, layperson BLS is performed in 15.8%. Most of Thai people unknown about basic life support and fear to do. BLS training in primary-school could be establish because children are keen to learn, accept new things and not afraid to making mistakes.

Objective : To study learning outcome in basic life support of primary school children.

Method : A observational study using data from the teaching of basic life support (RAMA kids club) in summer. Participants are primary-school children of hospital personnel. Using a pretest then an instructional video clip and trial practice. Posttest and skill are quizzed after learning. Descriptive and analytic statistics were used to analyze abilities in learning and performance in BLS.

Result : All 63 students who have completed all the steps. 26 boys. Mostly students are studying in grade 1-4 and normal weight by age. Tests before and after learning students can correctly only 61.6% and 89.9%, respectively. From the practice students keen to help and to see the response of 98.4% and make compressions immediately 88.9%. They can call emergency numbers correctly 87.3% and use an AED 81%. The effectiveness of chest compressions can have average in depth and speed of 3.3 cm. and 106.9 time/minute, respectively.

Conclusion : Children can learn step of BLS as check response, call for help, call for AED and quick start chest compression. The depth can’t reach gold in quality of chest compression may be the weight of children and power are’t the same adult. The study reveals that primary-school children are able to learn about the basic life support. The earlier in the course of learning BLS instruction begins can increase amount of rescuer.

#7717 : Suicide and suicidal behaviour at adults in a Romanian ED

Preferred format : ePoster

Authors:

Tiulica Gabriela (1), MIHAELA CORLADE (2), DIANA CIMPOESU (3)

1. Emergency Department, Sf. Spiridon Clinical Emergency County Hospital, Iasi, ROMANIA
2. Département d'urgence, UPU - SMURD, Hôpital Clinique Universitaire « St. Spiridon » Iasi, UMF « Gr.T.Popa » Iasi , Iasi, ROMANIA
3. Département d'urgence, UPU - SMURD, Hôpital Clinique Universitaire « St. Spiridon » Iasi, UMF « Gr.T.Popa » Iasi, Iasi, ROMANIA

Keywords: Suicide, ED, Romania, Method, Risk factors

Abstract :

Introduction:

Suicide is a complex public health problem of global importance. Suicidal behaviour differs from sex, age group, geographic region, and socio-political settings, and variably associates with different risk factors, suggesting aetiological heterogeneity.

Objective:

The study was performed to analyze the profile and to identify the frequency, nature, and contributing factors of suicides .

Method:

This study included all pacients who wanted to commit suicide and were admitted in the ED of Saint Spiridon Hospital Iasi, Romania, in 2015. Patients who died in pre-hospital were not included in our study. The patients were analyzed according to their sex, age, residence, suicid method, associated pathology, potential risk factors and interventions.

Results:

Data from 368 patients with suicidal behaviour were included in the final analyses.

Sex distribution was approximately equal (52.44% female and 47.56% male) . According to our statistics most of the suicidal attempts were associated with rural residence and the most frequent age was between 18 and 30 years old.

72.82% of the patients were brought to the hospital by ambulance, from their home (81.79%) in stable hemodynamic condition (95.65%). Most emergencies were recorded during holiday, in winter, around Christmas and Valentine's Day (38,5%).

63.58% were admitted in ED for drug ingestion, 14.13% for ingestion of organophosphorus, raticides, herbicide and corrosive substances and 21.13% were represented by other suicidal methods. The most frecvently suicidal method used was drug ingestion with benzodiazepines (20,10%) folowed by autolytic cut wounds (13,85%) and corrosive substances ingestion (6,52%). It seems that women are more theatrical and prefer drug ingestion (42,11%) while male prefered autolytic cut wounds (14,94%) and corrosive substances ingestion(8,42%).

At the admission in ED, 31,52% of patients were under current psychiatric treatment and 65,48% were at the first suicidal attempt, 5,97% at the second and 7,60% were with multiple autolytic attempts. For 16,57%, the trigger was a family conflict.

The majority of patients were admitted in ED, on average, 4 hours after attempted suicide and the clinical picture was dominated by sleepiness, heartburn, dysphagia and nausea. On ecg we detected with a high frequency respiratory arrhytmias and sinus tachycardia.

All the patients received treatment- i.v. fluids, oxygen, gastric lavage (if time from ingestion was less than two hours), charcoal, antidotes (after toxicity has been identified), maintenance of respiratory and circulatory functions, blood glucose correction, symptomatic treatment.

The time spend in ED was between 2 - 10 h, the admission rate was 57%. The mortality rate was 0.27%. All the patients with voluntary suicidal behavior were orientated to psychological counseling.

Conclusions:

Psychotherapeutic, pharmacological, or neuromodulatory treatments of mental disorders can often prevent suicidal behaviour; additionally, regular follow-up of people who attempt suicide by mental health services is key to prevent future suicidal behaviour.

#7718 : The time, place and ambulance characteristics of medical transportations by 112 Emergency Health Services of Çanakkale from islands of Gökçeada and Bozcaada

Preferred format : Oral presentation

Authors:

Cüneyt Caliskan (1), Hakan Altıntaş (2)

1. Health of School, Department of Emergency and Disaster Management, Canakkale Onsekiz Mart University, Canakkale, TURKEY
2. Faculty of Medicine, Department of Public Health, Hacettepe University, Ankara, TURKEY

Keywords: Key Words: 112 Emergency Health Services, Ambulance Times, Ambulance Type, Bozcaada, Çanakkale, Gökçeada, Island, Medical Transfer, Place

Abstract :

Objective: The study was carried out in order to evaluate the time, place and ambulance characteristics of medical transportations by 112 Emergency Health Services (EHS) of Çanakkale from islands of Gökçeada and Bozcaada from 2009 to 2013.

Materials and Methods: The study is a descriptive-cross sectional epidemiological study. The universe of the study was consisted of all of the patient registration forms which were completed for the patients transferred in ambulances from Bozcaada and Gökçeada islands between the dates of 01.01.2009 and 31.12.2013. A total of 1,144 forms were analyzed. The data of the study were obtained from the electronic database of Çanakkale EHS which was based on these registration forms. SPSS 15.0 program was used to compute the descriptive statistics, one-way ANOVA and chi-square statistics. The variables were time (year, season, month, hour, ambulance times), place (ambulance station/region) and ambulance type. Official permissions were obtained from the relevant institutions to conduct the study.

Results: Of the medical transportations (patient transfers), 28.1% were in the year of 2012; 39.5% were in summer; 16.6% were in July; 37.1% were in between 12:00-17:59 p.m.; and 61.5% were transfers from Gökçeada island. In regard to the ambulance type in the transfers from these two islands, ground ambulances (via ferries) were the most preferred one. The findings indicated that while the ground ambulances were dispatched more for the transfers from Bozcaada island, the sea and air ambulances were dispatched more for the transfers from Gökçeada island. The use of the air ambulance service had an inverse impact on the use of the sea and ground ambulances. In regard to the ambulance types used during the transfers, a maximum of three-ambulance types (ground-sea-ground and ground-air-ground ambulances) were dispatched. The time of transfers from Bozcaada island was found to be shorter (The average of total transfer time is 57 minutes [S=26, min-max. 28-140 minutes] and the median is 45 minutes). The harbor most commonly used as an intermediate transfer hub was the harbor of Çanakkale during the transfers carried out by sea ambulances from both islands. It was concluded that there were more transfers from Bozcaada island than Gökçeada island in between 00.00-05.59 a.m. ($p<0,001$) and more transfers by ground ambulances than any other ambulance type in between 6 p.m.-05.59 a.m. ($p<0,001$). The air ambulance use in the transfers from the islands of Çanakkale was more in the year of 2010 than the other years ($p<0,001$). Among the transfer routes from the islands, the transfer route involving the types of Ground-Air-Ground ambulances was found to be used more than other types [$F(4-768) =77,488$; $p<0,001$].

Conclusion: The ground ambulances were mostly dispatched from Bozcaada island, whereas the sea and air ambulances were mostly dispatched from Gökçeada island. While the use of air ambulances increased, the use of sea and ground ambulances decreased. The ambulance times other than helicopter ambulances made us think that many of the transfers were not emergency cases.

#7719 : Analysis of the 12-Year Search and Rescue and Medical Evacuation Activities of Turkey Main Search and Rescue Coordination Centre

Preferred format : Oral presentation

Authors:

Hüseyin Koçak (1), Kerim Hakan Altıntaş (2)

1. Department of Emergency and Disaster Management, School of Health, Çanakkale Onsekiz Mart University, Çanakkale, TURKEY
2. Department of Public Health, Faculty of Medicine, Hacettepe University, Ankara, TURKEY

Keywords: Maritime Accident, Maritime Incident, Medical Evacuation, Search and Rescue, Turkey

Abstract :

Introduction and Purpose

Turkey is a peninsula surrounded on three sides by the seas and that has Dardanelle and Bosporus, which have a strategic importance on the world. In this respect, Turkey is in the transit country position in marine transportation and marine trade. Therefore, she is a risky country for marine accidents. In order to efficiently, fast and actively intervene in marine accidents, national and international coordination are vital. This complementary study was made for determining the features of marine accident/incident and medical evacuations that were coordinated by Main Search and Rescue Coordination Centre between the years 2001 and 2012.

Material and Method

This research is a descriptive epidemiological study. The population of study includes Main Search and Rescue Coordination Centre's all accident/incident and medical evacuation reports between the dates 01.01.2001 and 31.12.2012. In this research, 1796 forms have been examined. The data in the registration forms have been input into a data base that was created in SPSS 15.0 programme and these data are evaluated statistically. In statistical evaluation, Frequency Distribution, Univariate and Bivariate Poisson Regression and non-metric Multidimensional Scaling Analysis are used. In frequency analysis, variables such as accident year, accident month, accident types, accident causes, accident area; the numbers of patients, people who were injured, dead, missing and evacuated, presence of environmental pollution and the units that joined the rescue operation have been examined. The research was performed between October 2012 and March 2014.

Results

In inspected reports as part of the research, 2010 has the highest percentage of cases on year basis with an incidence ratio of 12.7% (228 accident/incident/medical evacuation), autumn is the first in distribution among the seasons with 22.7% (497 accident/incident/medical evacuation), between the hours 12:00 and 17:59 has the highest percentage according to occurrence hours with 30.0% (538 accident/incident/medical evacuation), Istanbul region is the region where the most accident happens with a ratio of 44,3% (795 accident/incident/medical evacuation). 58.7% of the cases (1054 accident/incident/medical evacuation) were responded by Coast Guard Command. Inspected reports as part of research between the years 2001 and 2012, total number of people injured is 150, the number of people saved is 6042, total loss of life is 311, missing persons is 202 and the number of patients is 73. It has been stated in the reports inspected as part of research that the number of the people affected in marine accident/incident and medical evacuations in 12 years is 6778. 70,6% (n=48 hospital) of the patients and the injured were taken to public hospitals. The number of accident/incident that caused injuries is significantly more in the international area in comparison with Istanbul (8.5 times more, 95% confidence limits 4.5-15.8).

Conclusion

In this research, it has been found that overturning, fire and explosion are the most seen types of accidents, comparing to others. Fire and explosion risks, in the tankers that carry petrol, gas and chemicals should be considered both for the people in the ship and the people near the ship must be considered.

#7720 : Impact of traffic conditions on time management of acute coronary syndrome with ST elevation myocardial infarction.

Preferred format : Oral presentation

Authors:

Frédéric Lapostolle (1), Jimmy Robert (2), Alexandre Allonneau (3), Sophie Bataille (4), Aurélie Loyeau (4), Thévy Boche (5), Mireille Mapouata (6), Virginie Pirès (7), Jonathan Gonzva (8), Gaelle Le Bail (9), François Dupas (10), Yves Lambert (11)

1. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE
2. Service médical d'urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
3. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
4. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
5. Services des Urgences, SAMU 94, Hôpital Henri Mondor, Créteil, FRANCE
6. Service des registres ARS Ile de France, ARS Ile-de-France, APHP, Paris, FRANCE
7. SAMU 77, Centre hospitalier Marc Jacquet, Melun, FRANCE
8. Service Médical d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
9. Services des Urgences, SAMU 92, Hôpital Raymond Poincaré, Garches, FRANCE
10. Services des Urgences, SAMU 95, Centre Hospitalier de Pontoise, Pontoise, FRANCE
11. Services des Urgences, SAMU 78, Centre Hospitalier de Versailles, Versailles, FRANCE

Keywords: STEMI, road traffic, emergency, pre-hospital, Medical intensive care unit

Abstract :

Introduction: Dealys for taking over are the key determinants of the prognosis of acute coronary syndrome with ST elevation myocardial infarction (STEMI). Diverse criteria that can influence these deadlines were studied including the day of the week or the on-call period. The impact of the traffic conditions was not specifically studied. However, in highly-urbanized cities, such as a European capital, it could lengthen the response time.

Objective: To assess the impact of the traffic conditions over the delay for STEMI management. The regional traffic data analysis identified two critical periods: from 8 to 9am and from 6 to 7pm (average speed < 60 $km.h^{-1}$) and calm periods from 1 to 2pm (average speed > 80 $km.h^{-1}$). Inclusion: primary care of patients with incoming call during one of these periods. The primary endpoint: delay between 112 call and first medical contact was considered as directly connected to traffic conditions. Statistics: data obtained were analyzed using Kruskal-Wallis test.

Results: 19.658 delays were analyzed from 2003 to 2014. The traffic conditions did not impact the delays.

Conclusion: the traffic conditions had no impacts on traffic delays. Obviously, the “urgent” traffic modalities allow overcoming traffic difficulties.

#7721 : Patient, emergency call and treatment characteristics of medical transportations by 112 Emergency Health Services of Çanakkale from islands of Gökçeada and Bozcaada O

Preferred format : Oral presentation

Authors:

Cüneyt Caliskan (1), Hakan Altıntaş (2)

1. Health of School, Department of Emergency and Disaster Management, Canakkale Onsekiz Mart University, Canakkale, TURKEY
2. Faculty of Medicine, Department of Public Health, Hacettepe University, Ankara, TURKEY

Keywords: Key Words: 112 Emergency Health Services, Bozcaada, Çanakkale, Emergency Call, Gökçeada, Island, Patient Characteristics, Treatment, Medical Transfer

Abstract :

Objective: The study was carried out in order to evaluate patient, emergency call and treatment characteristics of medical transportations by 112 Emergency Health Services (EHS) of Çanakkale from islands of Gökçeada and Bozcaada from 2009 to 2013.

Materials and Methods: The study is a descriptive-cross sectional epidemiological study. The universe of the study was consisted of all of the patient registration forms which were completed for the patients transferred in ambulances from Bozcaada and Gökçeada islands between the dates of 01.01.2009 and 31.12.2013. A total of 1,144 forms were analyzed. The data of the study were obtained from the electronic database of Çanakkale EHS which was based on these registration forms. SPSS 15.0 program was used to compute the descriptive statistics and the chi-square statistics. The variables were patient characteristics (gender, age, social insurance), call type, reasons to call, first medical examination findings, Glasgow Coma Score (GCS), receiving hospital, preliminary diagnosis and treatment procedures. Official permissions were obtained from the relevant institutions to conduct the study.

Results: Of the patients transferred from the islands, 62.7% of them (n=703) were male; 18.6% (n=199) were in the age group of 20-29. The average of age was 46.9 (S=24,363, min-max. 0-95, median: 46 years old). 44% of the transfers (n=458) were insured by social security authority. 83.9% of the transfer system (N=889) were activated by 112 emergency call system. Of the transfers, 64.1% (n= 676) were recorded as medical calls; 66.7% (n=748) were treated as inter-hospital transfers; 80.3% (n=892) were referred to as the transfer to the State Hospital of Çanakkale. In regard to the preliminary diagnosis of the medical cases transferred, trauma was the most common by 33.5% (n=370), followed by cardiovascular system (CVS) problems (19.2%, n=212) and gastrointestinal (GIS) problems (11.4%, n=126). The most common types of trauma were fracture (29.7%, n=110), head trauma (27.8%, n=103) and general body trauma (14.6%, n=54). The most common causes of CVS problems were myocardial infarction (44.1%, n=94), angina pectoris (14.6%, n=31) and others (12.7%, n=27). The most common causes of GIS problems were acute abdomen (47.7%, n=61), bleeding (19.5%, n=25) and stomach ache (7.8%, n=10). The most common cases were trauma patients (65.3%, n=242) in the age group of 0-49 and CVS diseases (68.9%, n=146) in the age group of 50-79. Furthermore, in regard to the seasonal distribution of the preliminary diagnosis, 45.4% of the trauma cases (n=168) and 39.0% of the CVS diseases (n=83) were reported in summer. The four most common medical interventions were establishing vascular access, administering intravenous drugs, using a cervical collar and spinal board. Occupational accidents, traffic accidents and injuries were more common among the male patients compared to female patients ($p<0,05$).

Conclusion: The male patients, patients aged between 20-29, trauma patients were mainly transferred from the islands. Medical treatment and stabilization of fractures prevailed during the transports. The findings on the transfers may be instrumental in the improvement of the entire system by initiating a transfer chain and allocating a separate telephone line.

#7722 : Priority LIFE. First emergency maneuvers on head trauma

Preferred format : ePoster

Authors:

Marius Smarandoiu (1), Adriana Stanila (2), Alin Canciu (1), Dan Mircea Stanila (2), Daniela Taran (3)

1. SMURD, SMURD Sibiu, Sibiu, ROMANIA
2. Ophtalmology, Department of Ophthalmology, Emergency Clinical Hospital Sibiu, Sibiu, ROMANIA
3. , SMURD, Sibiu, ROMANIA

Keywords: head trauma, emergency, visual

Abstract :

BACKGROUND

Today, world is characterized by new activities that put people at great trauma risk like driving, sports etc. Most head trauma involves injuries that are minor and don't require medical specialized attention.

However, even minor injuries may cause persistent chronic symptoms, such as headache or difficulty concentrating, and you may need to take some time away from many normal activities to get enough rest to ensure complete recovery. Recognizing the symptoms of these injuries is important, because the condition of someone with this injury can deteriorate without warning.

Careful observation and quick action can help identify head injuries that could evolve to an undesired state. The aim of this study is to evaluate the clinical profile of visual complications in patients hospitalized and managed for head injury in Sibiu.

METHODS

Source data for this retrospective study is Sibiu Emergency Hospital database, for a period of 2 years. A selection of all head injuries cases is done to analyze the complications and the first important maneuvers to asses this injury.

RESULTS

Facial, neurological and visual complications occurred in most of the cases with a greater degree in incidence in males comparing with females. Main causes of complicated trauma cases are met in road accidents, work accidents, fights and other types of trauma. In road accidents pedestrians are more affected than drivers with more complications.

CONCLUSIONS:

Head injuries remain one of the most common cause of complex impairment on different systems, a life-long disability. An important number of them can be prevented or reduced implementing a prioritized trauma guide for all head injury patients in the first stages of advanced medical care. Our study highlights the need of such a protocol to be designed and implemented in Sibiu to reduce these unfortunate situations.

#7723 : Prehospital traumatic injuries: Are they unintentional or self-inflicted?

Preferred format : ePoster

Authors:

Diana-Paraschiva Loloiu (1), Alin-Nicolae Canciu (1), Claudia Ciora (1), Daniela MD Taran (2), Angela-Teodora Scrob (1)

1. SMURD Sibiu, Faculty of Medicine, ULBS Sibiu, Sibiu, ROMANIA
2. SMURD Sibiu, SMURD Sibiu, Sibiu, ROMANIA

Keywords: accidentally trauma, self inflicted injuries

Abstract :

Background

Injuries are the leading cause of death among individuals aged 1 to 30 years and the fourth leading cause of death overall. Beside road crashes, accidental trauma and self inflicted injuries started to grow in the last 3 years. The way that traumatic injuries are produced is important for the management and further evolution.

Our purpose was to study how injury rates vary by age, sex, rural-urban areas, and also an important goal was classification of injury mechanism and notice the severity of damages.

Methods and Participants

We used retrospective medical study based on the statistical data applied on SMURD Sibiu's database.

We analyzed 490 cases that were supposed to contain traumatic injuries, dispatched to SMURD-TIM Sibiu (Mobile Emergency Service for Resuscitation and Extraction - Mobile Intensive Care Unit) during the period between 01.01.2013-31.12.2015.

For processing the database and obtaining the final data Microsoft Excel has been used.

Results

Out of 490 cases, 303 were traumas out of which 73,60% was accidental trauma and 26,40% were self inflicted injuries.

We observe that both - accidental traumatic injuries and self inflicted injuries occur more frequently at males, age group 1-30 years is the most affected and rural populations exhibit high injury rates.

Falls from the same level, falls from heights and being struck by were the leading mechanism of injuries in unintentional trauma. Falls from the same level affect young children and adults over 60 years of age. Falls from heights and being struck by prevail in adults between 20-45 years old. Contusions and superficial injuries, open wounds, sprains and strains, and fractures are the leading first-listed diagnoses from Smurd requests.

Out of intentional self-harm injuries, prevail hanging followed by ingestion of drugs overdose. More often were affected males and the group age under 30 years was predominant.

Discussions

- In a substantial number of cases the abuse of alcohol lead to traumatic injuries, either by falling or occupational accidents, either in suicide purpose in association with drugs overdose or other suicide attempts.

- Rural population is more affected by traumatic injuries because of tough work and also the inadequate access to emergency medical services in that area rise the number of SMURD requests.

- Knowledge the mechanism and nature of injuries can be used in designing protective equipment, developing interventions for prevention of injury, and planning for rehabilitation when a specific event occurs.

- We usually find the patient in lateral safety position or not moved at all by relatives, so that no other damages will be done.

#7724 : Epidemiological analysis of elderly patients with trauma and detected fracture in Emergency Department

Preferred format : Oral presentation

Authors:

Mehmet Unaldi (1), Fırat Arslan (1), Onur Incealtın (1), Kurtulus Aciksari (1), Didem Ay (1), Soner Isik (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: elderly patients, fracture, trauma

Abstract :

AIM: In this study, elderly patients over 65 years with the diagnosis of trauma and detected fracture in radiological imaging who admitted to emergency medicine clinic of Istanbul Medeniyet University,Göztepe Training and Research Hospital in 1-year period will be scanned and evaluated retrospectively. Etiological factors of obtained results and preventable causes will be researched and data based on evidence will be obtained.

METHODS: The patients were evaluated according to age group, comorbid diseases, gender, resume, radiological images, history of fracture, additional organ injuries of fracture, chronic diseases, drugs used, number of drugs used, hours of arrival to the emergency room, trauma scoring of NACA, AIS and ISS. Patients whose file notes were inaccessible, who have been resuscitated in the emergency room and patients who admitted exincorporation were excluded from this study.

RESULTS: 300 patients over 65 years who had fracture on radiological imaging were evaluated. Most of them were female (75.7%). The most common cause of injuries in the elderly population was 95% falling(simple fall, fall from heights) while motor vehicle collision was 4,7%. 88%(n=264)of patients had chronic illnesses and were using drugs and 22%(n=36) of them have no chronic illnesses and using drugs.. Patients in were divided into age group as 45%(n=135) 65-75, 35%(n=105) 76-85 and 20% (n=60) over 86 years. The ratio of female, hospitalization, ISS and the rate of additional organ injury with increasing age was meaningfull higher($p<0.05$). The distribution of fracture femur and humerus was higher meaningfully ($p<0.05$) and the rate of fracture on hand and foot was lower meaningfully ($p<0.05$). The application hour, the mechanism of injury and the rate of extremity BT according to age had no significiant difference ($p<0.05$). 188 patients (62%) were discharged and 122 patients (37.3%) were hospitalized in the clinics.

CONCLUSION: In our study the most common cause of trauma depended on falling. We found out that the most common extremity trauma was fracture of femur and humerus. Because of the reduction of self protection of the elderly population while falling, fracture of humerus and femur has significantly increased but fracture of hands and wrists and feet has significantly decreased. However, the scores of ISS and NACA were not meaningfull in hospitalization. In geriatric population family members should be informed for protective measures as preventing the usage of multiple drugs, life comfort of patients after trauma care and preventing possible new cases.

#7725 : Effect of Acute Chest Pain Fast Track to Quality Improvement of Ramathibodi Emergency Department

Preferred format : ePoster

Authors:

Kasamon Aramvanitch (1), Yuwares Sittichanbuncha (2), Thidathit Prachanukool (1)

1. Emergency Physician staff, Department of Emergency Medicine, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND
2. Associate Professor in Emergency Medicine, Department of Emergency Medicine, Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok, THAILAND

Keywords: Acute chest pain fast track, Acute coronary syndrome, acute chest pain

Abstract :

Background : Acute coronary syndrome is one of the most common health problems worldwide, and is one of top five causes of death in Thailand from 2006-2010. American heart association recommends that immediate emergency department assessment of 12-leads EKG within 10 minutes. If STEMI is found, the patient must be treated with fibrinolytics within 30 minutes of arrival or perform PCI within 90 minutes of arrival. In Emergency department of Ramathibodi hospital has an acute chest pain fast track since 2010. This fast track guideline was implemented to improve the quality of treatment.

Objective : To assess the quality of acute chest pain fast track and study factors affecting and the incidence of major adverse cardiac event in the patients with acute coronary syndromes in Ramathibodi Hospital.

Method : This retrospective study included all patients age older than 20 who present with chest pain symptom, but with no history of accident in Ramathibodi emergency department between January to June 2013. Descriptive and analytic statistics were used to analyze quality of acute chest pain fast track service.

Result : A total of 620 patients were included this study. There were 352 patients went through the acute chest pain fast track, and 89.49% of them underwent 12-leads ECG assessment within first 10 minutes. Epigastric pain patient is the only statistically significant factor to be restrained from the fast track. 90.01% of the STEMI patients, who went through this fast track, had been sent to PCI within 90 minutes and no mortality after 30-day follow up.

Conclusion : Acute chest pain fast track guideline of Ramathibodi hospital is effective to improve the quality of suspected acute coronary syndrome treatment in emergency department.

#7726 : New venous blood gas guidelines for the emergency department

Preferred format : ePoster

Authors:

Helen Collyer-Merritt (1), Chisom Emecheta (1), Adam Woodman-Bailey (1), Craig Prentice (1), Kamal Veeramuthu (1)

1. NHS, NHS, Redhill, UK

Keywords: Venous blood gas, VBG, guidelines, emergency department

Abstract :

Venous blood gases (VBGs) are an invaluable tool in the assessment of the adult patient presenting to the emergency department (ED). The sample can be taken with the patient's admission bloods and its point of care capability means that results are ready within minutes. The information a VBG provides enables unwell patients to be identified, for tailored management to be commenced and assists decision making.

Within our district general hospital ED in the south east of England, we noticed that VBGs were performed inconsistently. In our department, the majority of adult patients have their bloods taken by a nurse or healthcare assistant (HCA) prior to being seen by a doctor. With no clear guideline of when this should include a VBG, we identified some problems: 1. VBG not performed but clinically indicated, 2. VBG performed but not clinically indicated, 3. Delay in VBG sampling.

We aimed to establish whether guidelines exist on this subject and, if not, to develop a set of clear evidence based guidelines for implementation in our ED.

We performed a comprehensive literature search using multiple databases and found that there are currently no published guidelines for when to perform VBGs in the emergency department.

Consequently, we formulated a list of patient groups to include in our new guideline based on literature searches and clinical experience. We identified the following groups: patients with high early warning score/in resus, abdominal pain, active bleeding/anaemia, diarrhoea & vomiting/dehydration, dialysis patient, overdose/poisoning, reduced GCS, sepsis, short of breath with normal oxygen saturations (including exacerbation of COPD), suspected diabetic ketoacidosis and trauma. The guidelines were produced in poster form with clear headings. A brief explanation of why a VBG is required for each patient group was included under each heading. We hoped that better understanding would aid adherence. The posters were displayed in triage, nurse assessment areas, resus and minors. They were also made available in the guidelines section on the ED intranet and were emailed to all ED staff.

We intend that if the guidelines are followed, VBGs will be taken when clinically necessary: unwell patients will be recognised sooner, clinical decisions can be made sooner and treatments can be tailored to the VBG results. The guidelines should also decrease the number of patients having a VBG taken on a separate occasion to the admission bloods thereby reducing patient discomfort. VBGs will not be taken unnecessarily which has time and cost implications. Lastly, they should decrease the time delay caused by nursing staff asking their seniors or doctors whether or not a VBG should be taken.

We intend to evaluate how well the guidelines are being adhered to, how they are affecting the workload of the nursing staff and whether they are decreasing the number of blood tests per patient. Most importantly, we will establish whether patient care is improved and whether significant efficiency improvements have been made by the implementation of the VBG guidelines.

#7727 : Kounis syndrome: allergic induced coronary artery spasm 2 cases report

Preferred format : ePoster

Authors:

Rym Kaddour (1), Hanen Ghazali (1), Anware Yahmadi (2), Mouna Gammoudi (1), farah riahi (3), Ahmed Souyah (4), Noura NGHACH (3), Sami Souissi (2)

1. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
2. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
3. emergency department, regional hospital of ben arous, ben arous, TUNISIA
4. service des urgences -SMUR , hôpital régional ben arous, ben arous, TUNISIA

Keywords: allergic reaction, chest pain, vasospasm

Abstract :

Introduction:

Kounis syndrome, also known as allergic angina syndrome, was described in 1991 by Kounis and Zafras as “the coincidental occurrence of chest pain and allergic reactions. Vasospasm of the coronary arteries has been suggested to be the main pathophysiologic mechanism.

We report here two cases of patients diagnosed with kounis syndrome.

Case 1:

A 53 year old man came to our emergency department (ED) with a cutaneous rash which occurs soon after he ate a tuna sandwich.

He was a heavy smoker, with a history of hypertension, diabetes mellitus, coronary artery disease but without previous history of allergy.

On arrival, he had a generalized erythematous rash over the face, neck and thorax accompanied by itching. His blood pressure (BP) was 100/60mm Hg and the pulse 100 beats/min. Examination of the heart, lungs, abdomen and central nervous system revealed no abnormalities. An electrocardiogram (ECG) performed initially was normal. An antihistamine and steroid therapy were given to the patient. During admission in the ED, he felt unwell, started sweating, became pale and complained of severe retrosternal pain radiating to both arms associated with nausea and vomiting. His BP fell to 70/40 mmHg and his pulse increased to 120 beats/min.

An ECG performed immediately revealed elevation of ST segment of 1 mm in leads I and aVL, with a specular reflection on leads II, III and aVF.

The diagnosis of ST-segment elevation acute myocardial infraction (STEMI) was made and the patient received a dual anti-platelet (aspirin and clopidogrel) and anti-caogulant medications. After administration of isotonic saline infusion (1000 ml) without epinephrine use, the patient became hemodynamically stable.

A coronary angiography was done immediately and showed a tight thrombotic stenosis of the anterior interventricular artery with a TIMI flow at 3. An intracoronary stent was implanted with good outcome.

Case 2:

A 40 years old female presented to the EDt with acute dyspnea after she inhaled a chlorinated product. She was a heavy smoker, with no history of allergy.

She was sweating and agitated but conscious, she had a cutaneous rush her respiratory rhythm was equal to 40 cycles per min, with the use of accessory muscle. Her blood pressure was 220/100, and the pulse 120 beats/min without signs or right cardiac impairment.

Arterial blood gas: PH=7.25, pCO2=54 mmHg, pO2=62 mmHg, lactate=1.9, HCO3=23.7, SaO2=87%. An electrocardiogram was performed, it showed a complete left bundle branch block.

The diagnoses of anaphylaxis stage was established. She received several nebulizations of Terbutaline and Ipratropium Bromure, in addition to antihistamin and corticosteroids with a good clinical outcome.

Another electrocardiogram was performed, it showed: an incomplete left bundle branch block with ST segment deviation.

Troponin was equal to 0.16 in admission and 0.20 after 6 hours.

She received and antiischemic and antithromboltic treatment and was transferred to a cardiology department. A coronagraphy was performed and it showed normal coronary artery.

Conclusion:

Kounis syndrome should be borne in mind when diagnosing patients with or without cardiovascular risk factors who experience acute coronary syndrome accompanied by symptoms of anaphylaxis.

#7728 : Multiple-rule out CT-screening of high-risk all cause patients in an emergency department

Preferred format : Oral presentation

Authors:

Mia Pries-Heje (1), Rasmus Hasselbalch (2), Henriette Raaschou (1), Michel Nèmery (3), Lisbet Ravn (4), Morten Lind (5), Thomas Boel (6), Peter Ulriksen (7), Kasper Iversen (8)

1. Department of Radiology, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
2. Department of Cardiology, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
3. M.D. Department of Radiology, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
4. M.D. Emergency Department, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
5. M.D. Emergency Department and Department of Anesthesia, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
6. M.D. Department of Gastrointestinal Surgery, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
7. M.D. Department of Cardiology, Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK
8. Assoc. Prof. M.D. PhD. Department of Cardiology and Emergency Department , Copenhagen University Hospital Herlev Gentofte, Herlev, DENMARK

Keywords: Computed Tomography, High-risk patients, Screening, Multiple-rule out

Abstract :

OBJECTIVE. To document the impact of screening with a multiple-rule out CT scan of high-risk patients presenting in an Emergency Department (ED).

BACKGROUND. Previous studies show that patients triaged as high risk (Red) or moderate-to-high risk (Orange) based on vital parameters, according to local triage algorithm (Danish Emergency Process Triage), have a high 30-day mortality rate (10-30%). For this group of patients, screening with a multiple-rule-out CT scan might be beneficial, but at the cost of radiation exposure and additional exams without diagnostic significance.

SUBJECTS AND METHODS. 100 patients were enrolled in this study. Patients triaged as Red or Orange on vital parameters using Danish Emergency Process Triage (DEPT) and 40 year or older were eligible for inclusion. Exclusion criteria included known kidney-disease (GFR<45), impaired cognitive function, circulatory unstable patients, patients with many previous CT-scans and patients where CT-scan would delay relevant acute treatment.

ER physicians filled out tentative diagnosis prior to the CT scan. Patients were scanned with an ECG-gated dual energy CT-scan of cerebrum, thorax and abdomen. The average radiation dose given was 16.3 mSv and all patients received 90 ml contrast. Results and findings of the scan were reported to ER physician by a radiologist immediately following the scan. The impact of the CT scan on patient diagnosis and treatment was examined prospectively by 2 physicians separately. Any disputes were settled by a third party.

RESULTS. *(*Preliminary results/final result available in October*) Data from 88 patients [52% female, 71yrs (43-94)] was available. The treating physician would have ordered an acute CT-scan in 15 (17%) of the included patients, and these patients were excluded in the following analyses. For the remaining 73 patients CT scan resulted in change in acute treatment for n=6 patients (8%). The scan resulted in further examinations for 7 patients (10%), of which 4 (60%) were diagnostically significant. In 5 (7%) of the patients, CT- scan lead to diagnosis of previously undiagnosed malignant tumor. The scan disproved primary diagnosis for 7 (10%) of patients. The 30-day mortality of the included patients was 8% (5 of 65 patients). The results of the CT-scan were given within an hour for 73% of patients.

CONCLUSION. Based on our results, it is likely that a screening with a multiple-rule out CT scan of high-risk patients in an ER would result in discovery of additional diagnoses and malignant tumors, but at the cost of higher radiation exposure and additional exams without diagnostic significance. Larger randomized studies are needed to further evaluate the clinical impact of these findings.

#7730 : Preoperative airway assessment-predictor for difficult intubation

Preferred format : ePoster

Authors:

Nicoleta Cretu (1), Florence Apaloo (1), Ben Teasdale (1)

1. Leicester Royal Infirmary Hospital , Leicester, UK, Leicester University Hospitals Trust, Leicester, UK, Leicester, UK

Keywords: Airway assessment documentation, failed intubation, difficult ventilation and intubation

Abstract :

OBJECTIVES

The objective of this study was to explore the preoperative airway assessment in order to quantify it as a predictor for difficult airway or difficult intubation in the perioperative period.

METHODS

We conducted a prospective study with data collected for 95 patients for one month in November 2015 in Anaesthesia in our hospital.

RESULTS

65.26% was reviewed by the same doctor that anaesthetized the patients, 33.68% was assessed by 2 doctors and 1.05% patients was assessed by 3 doctors.

66.32% patients had adequate documentation of preoperative airway assessment, 32.63% patients had incomplete documentation and 1.05% patients had no documentation.

5.26% patients had difficult ventilation, 2.11% patients had difficult intubation, 1.05% patients had failed intubation.

24.21% patients were overweight and 20% patients were obese.

15.79% patients were edentulous, 1.05% had history of snoring, a beard and Obstructive Sleep apnoea.

The inter-incisor gap was small in 1.05 patients, medium in 9.47% patients and normal in 56.84% patients.

The atlanto-occipital distance was normal in 62.11% patients.

Mallampati score was: one for 37.89% patients, two for 42.1% patients, three for 5.26% patients, four in 1.05% patients.

The number of patients predicted for difficult ventilation and intubation who actually had difficult ventilation and intubation was the same- 3.16% patients and 1.05% patients respectively.

1.05% patients had failed intubation.

No patient sustained “can’t intubate , can’t ventilate” scenario.

CONCLUSION

The proposed standard for the best practice for this audit was 100% of patients to be assessed and anaesthetized by the same doctor, of which we achieved 65.26%; 100% of airway to be assessed pre-operatively of which we achieved 98.95%; 100% to have adequate documentation for preoperative airway assessment, of which we achieved 66.32%.

Difficult ventilation and patients needing to be intubated were predicted by the pre-operative assessment.

The proposed standard for failed intubation was <0.1%, in our study 1.05% had difficult intubation, which will need improvement in the future.

There is room for improvement in the documentation for preoperative airway assessment, for which we will make suggestions for changes in the assessment chart; we will follow this with another audit after the implementation of the new chart.

Dr Nicoleta Cretu, ACCS ST1 Emergency Medicine trainee

Dr Florence Apaloo, Consultant in Anaesthesia

Dr Ben Teasdale, Consultant in Emergency Medicine

Leicester Royal Infirmary Hospital, Leicester,UK.

#7731 : Spontaneous reduction of ileoileal adult intussusception after blunt abdominal injury

Preferred format : ePoster

Authors:

Mucahit Emet (1), Abdullah Osman Kocak (1), Ilker Akbas (1), Adem Karaman (2), Sukru Arslan (3)

1. Department of Emergency Medicine, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
2. Department of Radiology, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
3. Department of General Surgery, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: intussusception, abdominal trauma, spontaneous reduction

Abstract :

Intussusception is common in early childhood. Intussusception due to blunt injury is rare and not predominant in the pediatric population but there are only a few adult cases

A 40-year-old man was brought to our emergency department by ground ambulance due to pounding and punching a few hours ago. He had no chronic illness and no drug or substance abuse. His vital signs were within reference range. Physical examination showed multiple dermabrasions on his face, abdomen, and lower extremities. All other examinations were unremarkable except that of mild abdominal pain. Laboratory results gave no clues. On abdominal x-ray, paucity of intestinal gas, pseudomass, and surrounding gas appearances were visible. Whole-body CT showed normal head and thorax findings, but there was a target sign in the axial view consistent with intussusception. In addition, coronal views demonstrated pseudokidney or the sandwich sign. The patient was taken to our trauma room; meticulous tertiary examinations were done. Two liters of normal saline was administered. No nausea or vomiting occurred during observation. His abdominal pain resolved gradually. On the 24th hour after admission, control CT showed that the findings of intussusception disappeared. He was discharged after 1 day of observation. Outpatient follow-up did not show any abnormality.

The telescoping of the proximal intestinal segment into the adjacent distal intestinal segment is described as intussusception. Although it is the most common cause of intestinal obstruction and the second most common cause of acute abdomen in pediatric age group, intussusception constitutes 1% to 5% of all intestinal obstructions of adulthood. In adults, 80% of the cases have an underlying etiology, being different from children. Tumors, polyps, edema and fibrosis of the intestinal wall due to surgical interventions, Meckel diverticulum, inflammation, postoperative adhesions, and intestinal sutures are the most frequently described causes in adults.Intussusception related to abdominal trauma is met very rarely. In published studies, abdominal trauma was found as the etiological factor in only 0.7% to 1.96% of all adult patients having intussusceptionThe risk of intussusception is higher in penetrating trauma when compared to the blunt injury. Intussusception is generally seen after trauma associated with high-energy and multiple injuries. However, in our case, it was observed as an isolated event, without any coexisting high-energy trauma or organ pathology.

In conclusion, we suggest that, in patients with mild to moderate trauma, even if the patient has mild abdominal pain, physicians should rule out invagination. CT is the suggested imaging modality. These patients should be kept in close follow-up. If symptoms resolve and intussusception findings disappear in CT, no further treatment is required.

(This case report is accepted in American Journal of Emergency Medicine with doi number as: doi:10.1016/j.ajem.2015.07.053)

#7732 : The use of ultrasound in Dutch Emergency Departments. Where are we now?

Preferred format : Oral presentation

Authors:

Anneloes Niesink (1), Ties Eikendal (2)

1. Resident Emergency Medicine, Radboudumc, Nijmegen, THE NETHERLANDS
2. Emergency Physician, Radboudumc, Nijmegen, THE NETHERLANDS

Keywords: Point of care ultrasonography, Netherlands, Emergency Departments, training program, evaluation.

Abstract :

Abstract

Background
Emergency medicine point-of-care ultrasonography has proven it's success in improving patient care and is now widely used internationally. Since 2011 a section has been active within the Dutch Society of Emergency Physicians to enhance the development of emergency ultrasound.
Point-of-care ultrasonography officially has become one of the competencies in the training program for Emergency Physicians in the Netherlands since 2014. An internship ultrasonography has been developed in three community emergency departments and one academic. However, at this point ultrasound experiences outside these 4 ED's are unknown and there is little consensus about the key terms of ultrasonography for residents.
Objective: the aim of this study was to evaluate the use of point-of-care ultrasonography in Dutch ED's and it's barriers.

Methods
We conducted an online questionnaire which was sent by email to all Emergency Physicians and Emergency Medicine Residents in the Netherlands. Data was collected from April till June 2016. We used descriptive statistics, paired student T test and multivariate regression models to analyze our data.

Results
At this moment the survey is still running and data is being collected.
Based on similar international literature we expect a response rate of 80%. Since ultrasonography is one of the competencies in the training program for Emergency Physicians we hope to see that every training clinic has an Ultrasound Machine available. We expect to see a difference in use of ultrasonography between academic, large community and small community hospitals. We also expect to see a difference in use between training clinic's and non-training clinics (difference in availability, difference in indications of usage). We assume that the use of ultrasonography is person dependent and that the year of residency is of less influence. Furthermore we expect to identify several barriers in the use of ultrasound, mainly for those working in small clinics where they are the only Emergency Physician available. We think there is a need to expand education and skills in order to further expand the use of Emergency medicine point-of-care ultrasonography.

Conclusion
Follows as soon as we have our data and results.

#7733 : Development and validation of The Copenhagen Triage Algorithm (CTA)

Preferred format : Oral presentation

Authors:

Rasmus Bo Hasselbalch (1), Mia Pries-Heje (1), Louis Lind Plesner (1), Lisbet Ravn (2), Morten Lind (2), Rasmus Greibe (3), Birgitte Nybo Jensen (4), Lars S. Rasmussen (5), Kasper Iversen (6)

1. The department of cardiology, None, Herlev-Gentofte Hospital, DENMARK
2. The emergency department, None, Herlev-Gentofte Hospital, DENMARK
3. The department of cardiology, None, Bispebjerg og Frederiksberg Hospital, DENMARK
4. The emergency department, None, Bispebjerg og Frederiksberg Hospital, DENMARK
5. Anæstesi- og operationsklinikken, None, Rigshospitalet, DENMARK
6. The department of cardiology and the emergency department, None, Herlev-Gentofte Hospital, DENMARK

Keywords: Triage, Emergency Department, Vital Parameters

Abstract :

Background

The aim of triage is to quickly identify the most urgent patients in the emergency department (ED) and to secure that they are treated first, thereby minimizing the risk of adverse outcomes. However, the triage models are time consuming and supported by limited evidence and could potentially be of more harm than benefit. Our aim is to develop a quicker triage model that is able to identify high risk patients.

Methods

The CTA was developed using datasets from two large cohorts of patients admitted to an ED. The first cohort (Triage I study) included 6005 admissions and the second cohort (Acute Admission Database) included 6279 patients) Triage I was used to construct the score, and the Acute Admission Database was used as the validation cohort. We used the vital signs as measured on admission in the ED, separating the normal values from the 10 % most extreme values of each vital sign. These were entered into a multiple logistic regression with backwards elimination to determine the significant risk factors of higher 30-day mortality. The odds ratios (OR) for each factor were rounded to construct a clinical risk score. The respective scores were divided into a 4-level score according to the patients' risk of 30-day mortality.

Results

The significant (all P <0.01) risk factors were: Treatment with oxygen (OR 4.3, corresponding to a score of 4 points), systolic blood pressure <100 mmHg (OR 3.3, 3 points), heart rate >110 beats per min (OR 2.1, 2 points), respiratory rate >22 per min (OR 2.7, 3 points), and arterial oxygen saturation < 94 % (OR 1.7, 2 points). On a Receiver Operating Characteristic curve the resulting score has an AUC of 0.78. That is significantly (P < 0.01) higher than DEPT for the same population (AUC 0.64). This significant improvement persisted in the validation cohort.

The resulting CTA stratifies patients in 4 acuity levels (patients with minor injuries (level 5) are excluded) and this is done in two steps. (1) A scoring chart based on vital signs is used to classify patients in a category, and (2) a clinical assessment by the ED nurse can alter the result suggested by the score up to two classes up or one down.

Conclusion

We have constructed and validated a new quicker triage model with a stronger ability to predict 30-day mortality than the existing DEPT model. CTA still needs prospective validation in a randomized controlled trial to evaluate the effect on mortality and flow in an ED.

#7734 : Iron bar injury to the groin

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Onur Incealtın (1), Kurtulus Aciksari (1), Didem Ay (1), Soner Isik (1), Hatice Eryigit (2), Cihan Buyuksutcu (1)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: groin, injury, iron bar

Abstract :

INTRODUCTION: High-velocity penetrating pelvic injury is one of the most difficult challenges to emergency physicians and trauma surgeons. The injury sites frequently include soft tissue, pelvis, genitourinary tract, vascular structures and intraabdominal viscera. We present an unusual case of a male patient suffering a collision with an iron bar penetrating into his left groin.
CASE: A 20-year-old male worker presented to the emergency department after suffering an accidental, self-inflicted iron bar injury to the left side of his groin. The vital signs of his were stable and general situation was good. A computed tomography (CT) of the pelvis with contrast noted the iron bar to be located within pelvic zone. The patient was taken to the operating room for removal of the iron bar under general anesthesia and exploration of the wound. The foreign body was located superficially and he had no damage to any organ.
CONCLUSION: Careful planning of the surgical approach is important before extracting the foreign body. It is possible multiorgan damage to intrapelvic structures such as colon, urinary bladder, vessels and nerves in such injury and frequently necessitates a multidisciplinary involvement and systematic approach. It was the chance for the patient with remained superficial intrapelvic foreign body in this case.

#7735 : Emergency 2D and CEUS ultrasound exam, a tool for triage the patients with acute severe pancreatitis

Preferred format : Oral presentation

Authors:

ADELA GOLEA (1), LACAN SORIN (1), ILEA CATALIN (1), EUGENIA MURESAN (1)

1. UNIVERSITY OF MEDICINE CLUJ, EMERGENCY COUNTY HOSPITAL, CLUJ NAPOCA, ROMANIA

Keywords: ultrasound 2D and CEUS exam, triage, acute severe pancreatitis, imaging decisions

Abstract :

Ultrasonography is a quick diagnosis method in the emergency department, allowing for the triage of patients. The management strategy in pancreatic emergencies requires a gradual assessment and an immediate and a subsequent management depending on the severity of the disease discovered during the emergency evaluation. The study group consisted of 95 patients with clinical picture of acute pancreatitis, admitted in ED between May 2010 – June 2015, with average age of 50.55 ± 14.20 years old. The severity analyze of acute pancreatitis were made using severity scores, ultrasound findings and the biochemical parameters. Highly statistically significant parameters were demonstrated (Fischer Test, p=0.0000): the presence of more than 2 fluid collections found on the ultrasound exam, more than 20 breaths/min, fever higher than 38^{0}C, SIRS – positive, pleural effusion found on the ultrasound exam, leukocytosis > 16000/mm3, ASAT > 250U/l. Contrast enhanced ultrasonography identified new collection in 20 % of the cases. The correlations between the percentage evaluation of necrotic area determined using CEUS exam and the number of collections showed a positive correlation, moderately statistically significant (S, p=0.0009). It was also noticed on CEUS exam that there is positive correlation between evolution severity, the total number of fluid collections (p=0.00001), the effusion aspect (p=0.00001) and the presence on pleural collections (p=0.00001) that is highly statistically significant. The assessment of the CEUS technique in diagnosing acute pancreatic necrosis found a sensitivity of 76%, a specificity of 100% and an accuracy of 100%. *A clinical-biochemical–ultrasonographic score was proposed for the emergency triage of severe acute pancreatitis (STCBUSC):* Clinical parameters**:** 1. breaths/min > 20 – 1 point; 2. fever > 38ºC - 1 point; 3.positive for SIRS – 1 point; Ultrasound 2D parameters**:** 4. the presence of 2 or more fluid collection found on US exam – 1 point; 5. ultrasound pleural fluid collection found on US exam - 1 point; Ultrasound parameters – CEUS exam**:** 6. pancreatic necrosis – 1-3 points (CT analogy: <30% - 1point.; 30-50% - 2 points.; >50% - 3points.); 7. peripancreatic and distance effusions – 1 point; Biochemical parameters**:** 6. leukocytosis > 16000/mm3 - 1 point; 7. ASAT > 250 UI/l - 1 point. For an accurate triage of severe cases of acute pancreatitis that require referral to a specialized centre on gastroenterology intensive care it is necessary to specify the presence of pancreatic necrosis visualized through contrast enhanced ultrasonography along other three parameters, with al least one biological parameter and one clinical parameter that proves the acute pancreatic changes. The lowest score mandatory for a patient’s referral to intensive care gastroenterology is 4. This score has to be validated and the perhaps the “cut-off” values have to be optimized on a larger number of patients.

#7737 : A self pacemaker

Preferred format : ePoster

Authors:

Fernando Constantino Briones Monteagudo (1), Francisco Javier Lucas Galán (1), Rafael Sánchez Iniesta (2), Nuria Sánchez Garrido-Lestache (3), Mónica López García (1), Maribel Prado Coste (1)

1. Emergency department, SESCAM, Albacete, SPAIN
2. Intensive Care Units, SESCAM, Albacete, SPAIN
3. Emergency department, Osakidetza, Vitoria, SPAIN

Keywords: AV-block, acute myocardial infarction, normal coronary arteries, endothelial dysfunction, thrombosis, vasospasm, fibrinolysis

Abstract :

The existence of myocardial infarction with “normal” coronary arteries (MINCA), was recognized more than 30 years ago, however the etiology is not clear. It is supposed that exists for a multiple pathogenetic mechanisms like coronary vasospasm, thrombosis, embolization and inflammation, alone or combined, in presence of infarction, for example, endothelial dysfunction and myocarditis superimposed to non angiographically evident atherosclerosis, may be an underlying common feature predisposing to the acute event. MINCA typically occurs in the under-50s and it is usually no history of angina or previous myocardial infarction, Symptoms and electrocardiographic (ECG) findings are similar MI with angiographic coronary disease.

Here is the case of a 50 years old woman, with unknown drug allergies, smoking to 7 cigars per day, from 16 years old, and drinking on weekends. Hipertension without phmacological treatment. She denied other drugs consume or medical or surgical dates. The patient consults in A&E (Emergency department) for servere crushing central chest pain radiating to the neck and jaw, associated to nausea, vomiting and diaphoresis of 3 hours of evolution that didn´t stop with first step´s painkillers. She didn´t present dyspnea or syncope.The physical examination (PE) revealed normal blood pressure, heart rate and oxygen saturation. On heart auscultation was rhytmic, heart murmurs were no listened to. The rest of PE was normal. In additional tests, no radiological findings on chest X-Ray.At first, ECG **complete AV block. ST 4 mm elevation in II, III and aVF leads. ST depression in V1 and V2.** Cardiac ultrasound: mediobasal posterior hypokinesia . Absence of valvular pathology. Given these dates, dual antiplatelet, GTN and analgesia therapy are started, getting pain free. Then, a new ECG was performed, it showing sinus rhythm with no repolarization abnormalities, and in blood test was alterated with T us-troponine from 139ng/dl initial to 1197 at 12 hours later. Also GOT from 29 to 68, CK from 223 to 655. At Coronary angiography: no significant lesions in epicardial coronary. Images of thrombus laminar non-occlusive in right middle coronary suggestive of spontaneous recanalization of the thrombus. The patient continued improving, and she was discharged home a few days later.

MINCA is usually diagnosed in patients under 50 years old and the prevalence of this condition is 1–12%. It is difficult to find a cause because of the multifactorial mechanism present in that. So is important to the physician recognice that the espontaneous revascularization is possible in STEMI, and also, we have to know that the presence of complete AV block with an inferior STEMI associated is still a relatively common complication, which usually appears early and frequently develop the dilemma of implementing or not a temporary pacemaker, which may involve a delay in the administration of fibrinolytic.

#7738 : The educational program for rescuers on medical emergency care in the mass casualty incidents involving children

Preferred format : Oral presentation

Authors:

Katarzyna Dlugosz (1), Arkadiusz Trzos (1), Karol Lyzinski (1)

1. Department of Disaster and Emergency Care, Jagiellonian University Medical College , Krakow, POLAND

Keywords: children, mass casualty incidents, pediatric triage algorithms, education

Abstract :

Study/ objective:

The aim of this study was to develop an educational program for rescue workers, who can assist during mass casualty incidents and disasters. Development of the training is based on factors that are difficult for officers of the emergency services.

Methods:

In the project were involved two groups of rescuers. The first group of rescuers were without work experience or with a small (up to 5 years), the other rescuers were worked much over 5 years. The first stage of this work was to create a list of the biggest problems that lifeguards have during saving pediatric's patients at mass events and disasters. Based on this list the theoretical part of the educational program were created.
Another part of the program was a simulation of mass casualty incident involving children. The third part of the educational program was debriefing. Then the rescuers who had participated in the simulation were watching a recording of rescue operations and were asked to make a list of pros and cons of their actions. Later jointly discussed and analyzed the most important issues and questions. After all stages there was a test of knowledge and self-esteem for rescuers who were trained. Currently, this training model is still improved.

Results:

During theoretical classes, participants of the educational program learned differences between pediatric and adults's triage, which are related to the physiology and anatomy of children. They learned pediatric triage algorithm and information that are most important in the transport of pediatric patients from the scene of mass casualty incident to the hospitals. After this section, test results were at a medium level. Another part was a simulation of mass events involving children where rescuers were trained pediatric triage and how to providing medical emergency care to children. Later on they viewed the recording and discussed it. After this part, verification test results were better.
Analysis of 3 tests showed that the biggest problem for the rescuers in the mass event which involves children is: the lack of knowledge of anatomy and physiology of children, ignorance of pediatric triage algorithm, psychological stress and emotions of lifeguards, access to special training on the topic of helping children in disasters.

Conclusion:

It is necessary to introduce a broad education for paramedics, who provides medical emergency care in the mass casualty incidents. Such training should includes topics to help pediatric patients during disasters. The classes should includes knowledge of both anatomy and physiology of children, pediatric triage, medical skills, transport of children as well as stress management.

#7739 : Herpes simplex encephalitis: report of a case

Preferred format : ePoster

Authors:

Carmen Adela Yago (1), Enrique Caro (1), Marina Buforn (1)

1. Critical care and Emergency Service, Andalusian Health Service, Málaga, SPAIN

Keywords: Stomach flu, encephalitis, Herpes simplex

Abstract :

Male patient, 24 years. No medical history. Presents with headache, fever, vomiting and diarrhea since 5 days. His family doctors diagnosed him stomach flu and prescribed him antypiretics (paracetamol) and antibiotic (ciprofloxacin); patient continued with fever, headache and disturbance of consciousness so he decided to come to our emergency.

Physical exam: Regular condition, conscious and disoriented, febrile,eupneic. BP 115/70, HR 85 bpm Tª38,1. Cardiopulmonary auscultation: Rhythmic no murmurs, preserved vesicular murmur; Abdomen: globular, blando, no masses or organ enlargement, blumberg - Murphy -; MMII:, no signs of DVT. NRL: PICNR, no findings cranial pairs, bradipsiquia language, motor dysphasia. Glasgow 14.

Additional tests on admission: Blood test: Leukocytes 10600, Hb 15,9% Platelets 320.000 TP 80 g, 109 glucose. EKG: sinus rhythm at 90 bpm without alterations of repolarization.Chest and abdomen x-ray: no findings of interes. Cranial CT showing hypodense area that affects white matter of the temporal lobe , insular area and left external capsule , with discrete mass effect and midline deviation (2.5 mm).

The patient was admitted to the observation area where a lumbar puncture was performed. Cerebrospinal fluid analysis showed: Leukocytes 460 (polymorphonuclears: 5%; monocytes 95%), glucose 57, proteíns 139,6; xanthochromia negative. To these results , the diagnosis of herpetic meningitis is made and treatment is initiated with acyclovir.

Evolution: Patient was transferred to the neurology care unit. During admission the neurology area a nuclear magnetic resonance was performed: hypointense signal on T1 images convolutions translating edema , and hyperintensity on T2 signal , DP , Flair. It affects the insular cortex including cortical and white matter, respecting the putamen.

CNS infections and meninges in recent years have increased their prevalence and have changed their appearance due to various factors such as increased immigration occurrence of infections that until recently were unknown in our environment, the development of resistance to treatment the existence of more patients with immunosuppression (HIV , transplant immunosuppressant drugs ...). All this means greater diagnostic difficulty for both the clinician and the radiologist.The herpes simplex encephalitis is the most common viral encephalitis and produces a hemorrhagic necrotizing meningoencephalitis and withering. The HSV type 1 affects infants, children and adults (in the latter is the result of reactivation of latent infection in the trigeminal ganglion nerve). The changes affect the limbic system (temporal lobes, insular cortex, subfrontal circonvoluciones area and cingulate). CT is frequently normal in early stages, later may show hypodensities in temporal lobe with mild mass effect, hemorrhage at the beginning is rare but very suggestive. Contrast administration can show poorly defined giriforme patched or enhancement. MRI shows changes in the first 48 hours: hypointense signal on T1 images convolutions translating edema, and hyperintensity on T2 signal, DP, Flair. It affects the insular cortex including cortical and white matter, respecting the putamen. Bilateralism is sequential feature: the involvement is usually initially unilateral but is typically followed by a less severe contralateral disease. Treatment is intravenous Acyclovir.

#7741 : the relation between mortality and bnp levels and pulmomary ct right-left ventricle diameter ratio in acute pulmonary embolism patients

Preferred format : Oral presentation

Authors:

aliye nur gökalp (1), basar cander (1), nazlı karakuş kenan (1), zerrin defne dundar (1), mehmet gül (1), sedat kocak (1)

1. , none, konya, TURKEY

Keywords: Acute pulmonary embolism, BNP levels, right-left ventricle diameter ratio on pulmonary CT

Abstract :

Purpose: In this study, we aimed to prospectively assess the relations between mortality, right-left ventricle diameter ratio on computed tomography pulmonary angiography (CTPA), serum brain natriuretic peptide (BNP) levels and demographic data in patients with definitive diagnosis of acute pulmonary embolism in emergency service.

Method: We included patients from Necmettin Erbakan University Meram Medical Faculty Emergency service between 01/2015-06/2015 that were over 18 years old adults, non-pregnant, with no congestive heart failure and definitively diagnosed as pulmonary embolism with pulmonary CT angiography.

A total of 80 patients were included to this study. 45 of whom were without congestive heart failure and had pulmonary embolism. The remaining 35 were the control group patients without congestive heart failure and did not have pulmonary embolism.

Computed tomography pulmonary angiography (CTPA) right-left ventricle diameter ratio measurements were done by the same radiologist with same measurement techniques on ENLIL-HIS version 3.0 hospital information management system (HIMS) PACS images.

Serum BNP (brain natriuretic peptide) levels were measured on the leftover serum (from routine investigations such as hemogram, glucose, urea, creatinin, alt, ast, sodium, potassium, blood gas, troponin, ck-mb, pt, ptt) diagnosed or not diagnosed as acute pulmonary embolism. Blood serum samples were centrifuged with Hettich Rotina 46R (Hettich Zentrifugen, Tuttlingen, Germany) cooling centrifuge device at 4000 rpm for 10 minutes to separate the serum and the serum samples were stored at -80 °C until they were used. Human BNP parameters were studied with ELISA method on serum samples. Blood samples were studied in Necmettin Erbakan University Meram Medical Faculty Biochemistry Laboratory by biochemistry specialists.

Findings: Mean BNP level of pulmonary embolism patients was observed as 14,2714,90 ng/L and this parameter was 10,713,78 ng/L for the control group patients. According to Mann-Whitney U test results; no statistically significant differences were found between BNP levels of pulmonary embolism patient group and control group (p=0,446>.

Mean right-left ventricle diameter ratio was 1,320,36 for pulmonary embolism patients and 0,840,18 for the control group. A statistical significance was found between right-left ventricle diameter ratios of pulmonary embolism patient group and control group.

Results: BNP plasma concentrations could be increased in patients with myocardial infarcts, dilated cardiomyopathy, valvular heart diseases, pre-dialysis kidney failure and almost all of the patients applied with dialysis and all of the patients with diseases causing cardiac dysfunction. When the pulmonary embolism patient group and control group was compared; no statistical significance were detected regarding to BNP levels. Therefore we established that BNP is not a specific hormone for acute pulmonary embolism.

In our study, we also detected a statistical significance between right-left ventricle diameter ratio parameters of control group and pulmonary embolism patient group.

#7742 : Ventricular fibrillation / asystole: is there hope of recovery?

Preferred format : ePoster

Authors:

Sorina-Madalina Podariu (1), Stefania Alexandra Polexa (1), Ioana Andrada Radu (1), Vlad-Alexandru Fisca (2), Ana-Daniela Taran (2)

1. SMURD, SMURD, Sibiu, ROMANIA
2. UPU-SMURD Department, Clinical Emergency Hospital Sibiu, Emergency, Sibiu, ROMANIA

Keywords: asystole, cardiac arrest, rhythm

Abstract :

Ventricular fibrillation / asystole: is there hope of recovery?

Podariu Sorina-Madalina (1), Radu Ioana Andrada (1), Polexa Stefania (1), Fisca Vlad-Alexandru (2), Taran Ana-Daniela (2)

1. Emergency department, SMURD Sibiu, Sibiu, Romania

2. Emergency department, UPU-SMURD Sibiu, Sibiu, Romania

Key words: asystole, cardiac arrest, rhythm

Speaker: Podariu Sorina-Madalina

BACKGROUND

Cardiac arrest is one of the most common reasons emergency departments are contacted for. Over a period of three years, SMURD (Mobile Emergency Service for Resuscitation and Extrication) Sibiu has been called to act on numerous cases related to cardiac arrests, all initially reported as unconsciousness. It is of utmost importance to arrive quickly, as cardiac arrest patients need to be administrated resuscitation techniques in the first few minutes after collapsing. An efficient resuscitation requires a well-trained team, the availability of adequate equipment, and dispatching an appropriate ambulance to site. During this study, we have evaluated cases of unconsciousness reported in the last 3 years and have focused on identifying areas of our protocol and techniques that can be improved upon with the aim to provide effective solutions.

METHODS

We have prepared a retrospective study by examining the files of 774 patients reported as unconscious to SMURD Sibiu (Mobile Emergency Service for Resuscitation and Extrication) between 2013 until 2015.

RESULTS

From a total number of 774 patients, only 327 were diagnosed with cardiac arrest. Out of these, 219 were male and 108 females.

A total of 254 were found is asystole, of which 38 were resuscitated successfully whilst in 98 cases resuscitation was ineffective. Unfortunately, the rest of 118 patients have not been attempted resuscitation on, as they were found presenting “rigor mortis”.

A number of 39 patients were found in ventricular fibrillation. In 24 cases the patients developed constant sinus rhythm, however a further 15 patients have deceased.

CONCLUSIONS

After evaluating the data we have collected, we conclude that the most cases of cardiac arrest display asystole. There have been twice as many male than female patients, and the highest risk age group is between 65 and 80 years of age.

Considering the resuscitation rate in ventricular fibrillation, we must emphasize the importance of correct assignment of emergency teams, either a type B or C ambulance, depending on case requirements. We have observed that the low recovery rate from asystole can be attributed to the fact that there are a small number of type C ambulances in the region, not enough for them to arrive while the patient is still is ventricular fibrillation.

#7743 : Those emergency room doctors are always asking for X-rays!

Preferred format : ePoster

Authors:

ANA ESTEBAN VILLACAMPA (1), CARLES GREOLES ROYO (1), JORGE ALCALA ANIENTO (1), GABRIELA MADALINA GRECU (1), JOSEP MONTESINOS COTS (1), CLAUDIA ROMERO RAMIREZ (1), SALVADOR SARRA MORETO (1)

1. EMERGENCY, FUNDACIO HOSPITAL SANT PAU I SANTA TECLA, EL VENDRELL, SPAIN

Keywords: osteomyelitis

Abstract :

24-year-old patient with no relevant medical history. The patient reported pain in the right quadriceps at distal third level, of a month’s duration and having started while going up the stairs, with no previous trauma.

Upon physical exploration, no apparent muscle tears were uncovered. There were no skin lesions observed and no signs of inflammation. The joint at the knee was observed to be normal with no crepitus, stable and with no limitations to the scope of movement.

When an X-ray of the knee was requested, the radiologist expressed concerns and called into question the need to irradiate the patient. The X-ray showed an intramedullary lytic bone lesion, with a secondary lesion close to the right femur’s diaphysis that presented a case of associated periosteal reaction.

No relevant alterations were shown in the blood tests.

A consultation was made to the traumatology department, resulting in an urgent ambulatory nuclear magnetic resonance. At this point possible diagnoses of osteomyelitis or malignant neoplasm were considered and, on the same day, the analysis was completed with a gammagraphy with labeled leukocytes and a bone tomogammagraphy with technetium. The results indicated a possible osteomyelitis.

The patient was referenced to the hospital for a lumbar puncture biopsy guided by CAT scan. The recovered bone tissue along with pus-infected blood liquid confirmed the suspected diagnosis.

The patient was admitted for treatment with intravenous antibiotics with vancomycin and gentamicin, with said treatment being changed after the antibiogram showed a positive result for *staphylococcus aureus*.

During his hospitalisation, the patient showed feverish peaks and lab results were obtained indicating a negative result for malignant cells. The patient was finally transferred to the referencing hospital’s infection unit for surgical treatment.

Conclusions

- An X-ray should be requested as a differential diagnosis tool in cases where the patient reports a long-evolving pain in the extremities.
- Indication for radiography should not be questioned if a clinical reasoning belies the request by the assisting doctor.
- Diagnostic circuits that are coordinated and supervise can help in avoiding unnecessary hospitalisations. This has socio-economic implications: a greater comfort for the patient and a correct management and allocation of resources. These circuits can also accelerate the diagnosis and treatment in cases where a grave pathology exists.

#7744 : Complications of Rapid Sequence Intubation in Emergency Department: A Propensity-matched Analysis

Preferred format : Oral presentation

Authors:

Winchana Srivilaithon (1)

1. Emergency physician, Thammasat University, Bangkok, THAILAND

Keywords: Rapid sequence intubation, complication, emergency airway management, sedation-only-intubation, propensity score analysis

Abstract :

Background and Objectives

Rapid sequence intubation (RSI) was used to facilitate emergency intubation. However, concerning about complications prevents its general used. This study aimed to compare the acute major complications between RSI and other methods of intubation.

Methods

Retrospective cohort study was done in emergency department of Thammasat hospital, from 2012-2015. Acute major complications after intubation were observed, included; cardiac arrest, airway injury, dysrhythmia, hypotension, laryngospasm, malignant hyperthermia, pneumothorax, and aspiration. We excluded patients presented with cardiac arrest before intubation, age below 15-year-olds, severe maxillofacial injury, contraindication to RSI medications, and failed intubation. We compared the complications between RSI vs Sedation-only intubation and RSI vs No-medication-assisted intubation. Propensity score matched one-to-one analysis were used for adjusting baseline characteristics. Regression analysis were used for adjusting confounders.

Results

For RSI (N=380) vs Sedation-only-intubation (N=502), 343 patients intubated with RSI were matched to 343 patients with Sedation-only intubation. A total of 60 complications were observed. After adjusted with glottic exposure, numbers of attempt, and experience of intubator, RSI had lower risk of acute major complication compared with Sedation-only intubation (6.41% vs 11.08%; risk difference, 4.24%; 95% confidence interval (CI), 0.05,8.44; P=0.04). For RSI (N=380) vs No-medication-assisted intubation (N=324), 182 patients intubated with RSI were matched to 182 patients with No-medication-assisted intubation. A total of 28 complications were observed. After adjusted with regression analysis, RSI had lower risk of acute major complication, but insignificantly (4.95% vs 10.44%; risk difference, 5.35%; 95% CI, -10.99,2.92; P=0.06).

Conclusions

The risk of complication after intubations from RSI method was lower than other methods of emergency intubation. As the standard for emergency airway management, emergency physicians should have expertize with this method.

#7745 : The Tako-Tsubo Syndrome

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), LOREA DE UNAMUNO LUMBRERAS (2), JUAN MANUEL GARCIA LOPEZ (1)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: Ventricular Dysfunction, Chest Pain, Takotsubo Cardiomyopathy.

Abstract :

Background & Aim

68 years old woman attend our emergency department in the Health Care center referring strong family discussion and after a central chest pain getting to the left shoulder, accompanied by important vegetative symptoms.

Method

Physical examination revealed dyspnea, pale and sweaty skin. Blood pressure 100/65 mm Hg, hearth rate 107. The electrocardiograma showed sinus rhythm with ST-segment elevation 2 mm in V2-V5 that supports anterolateral infarct.

Results

In the area of observation of the Emergency department in our Regional Hospital fibrinolytic therapy regimen and she was refered to Intensive Care Unit.

Two hours later she was moved to the Hemodynamics Unit for urgent treatment PTCA that shows no lesions.

In the blood analyse troponin I 4.8 ng / ml is obtained and creatine-MB fraction (CPKMB) of 19 ng / ml.

The subsequent clinical course was favorable, all alterations spontaneously resolved without sequelae.

The Tako-Tsubo syndrome (TKS), or transient ventricular dysfunction is a condition characterized by clinical that is indistinguishable from acute coronary syndrome with elevated enzymes and extensive anterior akinesia, but without significant alterations in the coronary arteries.

A transient left ventricular apical dysfunction or ballooning accompanied by electrocardiographic (ECG) T wave inversions. This abnormality is associated with high levels of cathecolamines, either administered or endogenously secreted from a tumor or during extreme stress.

CONCLUSIONS

But most importantly differentiated from ischemic heart disease, which is essential to make an early cardiac catheterization, to avoid the risk of fibrinolytic therapy.

Overall, and although the TKS carries a good prognosis in general, and usually, heart failure is a complication (30%). This situation is more common in patients with more comorbidities and worst previous functional class associated with more adverse events.

#7746 : HOSPITAL DEATHS DUE TO ACUTE POISONING DURING A DECADE

Preferred format : ePoster

Authors:

Pilar Miranda Arto (1), Patricia Boned Blas (2), Ana Ferrer Dufol (3), Francisco Jose Ruiz Ruiz (4), Teresa De Fernando Gros (2), Teresa Pardo Vintanel (2)

1. CS ALAGON, SECTOR III. SERVICIO ARAGONES DE SALUD, Zaragoza, SPAIN
2. Emergency Department, Hospital Royo Villanova, Zaragoza, SPAIN
3. Toxicology Unit, Hospital Clinico Universitario de Zaragoza, Zaragoza, SPAIN
4. Emergency Department, Hospital Clinico Universitario de Zaragoza, Zaragoza, SPAIN

Keywords: Acute poisoning, Death,

Abstract :

Introduction:
Acute poisoning is a frequent complaint in Emergency Services but studies on deaths from acute poisonings are limited. The aim of this study is to analyze the epidemiological characteristics of patient deaths due to acute poisoning.
Method:
Retrospective descriptive study of patients treated for suspected clinical exposure to a toxic substance in Emergency Service and in the UCI of the Hospital Clinico Universitario of Zaragoza between the years of 2004-2013, and who died as a consequence of said poisoning. The data was obtained from the files of our clinical toxicology unit for the ten years being evaluated.
Results
Out of a total of 11764 patients admitted for acute poisoning during those 10 years, including pediatric emergencies, 17 (0,14%) of deaths recorded were selected for the study. Their mean age was 63 (SD ±16) and 12 (70,6%) were male. The means of transportation most commonly used was an ambulance in 13 cases (75,4%). Oral was the most common route of exposure with 13 cases (76,5%). 7 (41,2%) cases involved a suicide attempt, followed by drug overdose with 4 (23,5%). 8 (47,1%) cases had previous psychiatric disease, and for 15 (88,2%) of cases it was their first poisoning. The involved agents were caustics in 6 cases (36,5%), a combination of alcohol and drugs of abuse in 3 (17,6%) cases, a combination of alcohol and benzodiacepines in 2 (11,8%) cases, solvents in 2 (11,8%) of cases, and CO , pesticides , antiarrhythmics drugs and opiates 1 case each (5,9%). The relationship between the poisoning and the cause of death was undoubted in 14 (82,35%) cases.
CONCLUSION
Death by acute poisoning is a rare event despite the drama of the situation. In our study they are most frequently first oral poisoings in males due to a suicide by means of a caustic substance, arriving to the emergency room by ambulance.

#7747 : Headache unresponsive analgesics:Cerebral abscess

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Ersen Gunduz (1), Cihan Buyuksutcu (1), Unsal Karahaliloglu (1), Meltem Collu (1), Onur Incealtın (1), Kurtulus Aciksari (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: abcess, cerebral, headache

Abstract :

INTRODUCTION: A brain abcess is a focal pyogenic infection. It is a pathologic response typical of a relatively compotent immune system against a bacterial invader. Presenting features of brain abcess are nonspesific. In this case, we present to the patient with still ongoing headache despite having taken analgesics.

CASE: 34-year-old female patient admitted ER with headache unresponsived the analgesics. She had complaints of nausea, vomiting. In history, she had migraine and had taken analgesics because of lasting headache. The radyologic imaging demonstrated a focal abcess about 17 milimeter in diameter with peripheral hyperdense, central hipodense and around edematous areas, forming mild pressure to third ventricule in the right lateral talamus. The patient was interned to neurosurgery clinic.

CONCLUSION: These patients rarely appear acutely ill, and the classic triad of headache, fever, and focal neurologic deficit is present in less than one third of all patients. As a result the diagnosis is often delayed. The most common symptom is headache,which is a complaint in almost all cases. It is diagnosed by imaging studies. The differential diagnosis of headche must be done even in patients with migraine as in the case we presented.

#7748 : A rare type of fracture in a traffic accident: A case of isolated fracture of the hyoid bone

Preferred format : ePoster

Authors:

Mustafa Ozturk (1), Ozgur Sogut (1), Tuba Evran (1), Demet Tas (1)

1. Emergency Medicine, Haseki Training and Research Hospital, Istanbul, Turkey, Istanbul, TURKEY

Keywords: hyoid bone fracture, traffic accident, cervical computed tomography, conservative management

Abstract :

Background: Excluding hyoid bone fracture during strangulation and hanging injuries, this type of fracture caused by blunt trauma is rare. In light of this, it may go unseen during physical examination, causing life-threatening airway obstruction. Thus, appropriate measures should be taken to carefully examine patients with blunt trauma. To date, few cases of hyoid bone fractures caused by trauma have been reported. In this study, we report the case of a young male with an isolated fracture of the hyoid bone as a result of blunt trauma.

Case Report: A 21-year-old male was admitted to our emergency department by an emergency ambulance crew following a traffic accident. At the time of the accident, he was sitting in the back seat of an automobile with his seat belt unfastened. As a result, he hit his neck on the edge of the front seat. On physical examination, his vital signs were stable and neck movements were unrestricted and painless. However, his right cricoid bone was tender during palpation.No pathology was detected from the anteroposterior or lateral cervical film. A cervical computed tomography (CT) scan revealed a fracture within the right arch of the hyoid bone. Consequently, the patient was referred to the otorhinolaryngology department. Indirect transoral laryngoscopy was performed, but failed to detect any airway edema or laceration. The patient’s oral intake was stopped, and he was monitored for airway obstruction in the emergency department. In addition, he was treated with head elevation and a cold compress applied to his neck. His vital signs remained stable and he was discharged after 24 h, returning to the otorhinolaryngology department for a follow-up exam.

Conclusions: A hyoid bone fracture should be suspected upon the detection of neck tenderness and pain following blunt trauma to the neck region. A delay in diagnosis may result in life-threatening airway narrowing. For diagnosis, CT examination of the neck is the modality of choice due to its high diagnostic accuracy. It is of great importance to closely monitor patients with an isolated closed fracture of the hyoid bone for a prolonged period to prevent airway obstruction. Patients who have no airway obstruction and a normal hyoid bone following indirect laryngoscopy can be conservatively managed.

#7749 : Recurrent headache, it is not always a trivial cause for Emergencies

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), MARIA DEL MAR BECERRA MAYOR (1), LOREA DE UNAMUNO LUMBRERAS (2), JUAN MANUEL GARCIA LOPEZ (1)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: Stroke, Thrombocytopenia, Paroxysmal nocturnal hemoglobinuria

Abstract :

Young patient being treated at the Health Care center becasuse of a headache 15 days of evolution, the patient went three times by same cause with no apparent reason that justified it.

Clinic History:

Patient 21 years of age born in Argentina, with a history of hemolytic uremic syndrome when he was 7 years old. No other background information significant. He Has 15 days of whole head intense headache, that does not yield to analgesics. On the last visit he went to the emergency room with headache, dizzying. We decided to make a blodd analyse and we can see hemoglobin 5g / dl with platelets 25 x10e9 and other normal figures.

With these findings and with this clinical neurological findings TAC is done and it observe an extensive bleeding right temporo occipital with no evidence of aneurysm or venous malformation.

We consult with neurosurgery rejecting intervention and subsequently cause microangiopathic was discarded in the emergency department.

He was valued for neurology to study him and stabilization of the current situation. After 2 days the patient is diagnosed of Paroxysmal Nocturnal Hemoglobinuria (PNH), responsible of the pancytopenia and the hemorrhagic / thrombotic causes.

CONCLUSIONS:

Patients who come to the Health Care Center and the Emergency room with severe headaches require a total physical examination with a complete history. This patient with extreme pancytopenia and neurological clinic raises the differential diagnosis with hemorrhagic / thrombotic causes. PNH present complications as thrombotic in atypical location, and the possibility of hemorragia, caused of the aplasias that PNH can develop.

#7750 : Acute liver failure, a diagnosis from Emergency Department.

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), MARIA ISABEL CORREA ROSALES (1), MARIA DEL MAR BECERRA MAYOR (1), LOREA DE UNAMUNO LUMBRERAS (2)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: Acute Liver failure, Linphoma non-Hodgkin, transplant

Abstract :

Male 25 years old attended the Emergency Department because of 10 days with fatigue, debility, abdominal swelling, fever and jaundice.

No epidemiological, food contact, history risk, travel abroad or consumption of toxic substances or drugs.

In the blood analyse we saw acute liver failure. The ultrasound of his abdomen not found any pathology. Hospitalisation on Digestive service is advised and general supportive measures should be employed.

During his stay in the service of Emergency he suffers repeated episodes of hypoglycemia with clinical deterioration and signs of hepatic encephalopathy.

Exploration: Normotensive, jaundice skin and mucous membranes. Eupneic. Bleeding active in areas venipuncture. Abdomen painful with hepatomegaly.

We decide to call to the ICU, “zero code transplant” was activated and a successful liver transplant performed at 5 days after admission.

Additional tests to filial the origin of failure were all negative (positive serology, toxic, Wilson disease, autoimmunity, liver biopsy, negative bone marrow puncture).

At 20 days after discharge came to the emergency by fever without any focus of it. On blood analyse we could see pancytopenia. And we look for the liver biopsy results, it was non-Hodgkin's B-cell lymphoma, Immediately we contact with hematologist who comes to treat starting QMT.After several cycles of QMT now he is free of disease.

CONCLUSION:

NHL as a cause of fulminant liver failure is a rare presentation. Clinically the suspects of it is difficult because of the rapid and aggressive course. Also in this case show an atypical presentation, without lymphadenopathy or B symptoms except fever. Would he have been transplanted if he had NHL diagnosed before?

#7751 : Both renal infarction and renal colic

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Ersen Gunduz (1), Umit Olmez (1), Cihan Buyuksutcu (1), Onur Incealtın (1), Kurtulus Aciksari (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: colic, infarct, renal

Abstract :

INTRODUCTION: Acute renal infarction is a serious medical emergency. The diagnosis is often delayed or missed as it is not common.Hence, the exact incidence of acute renal infarction is not known. Failure to consider renal infarction in the initial differential diagnosis results in a delay in diagnosis and treatment, which in turn leads to permanent loss of renal function. We present a case of acute kidney infarction that was initially treated as renal colic.
CASE: A 45-year-old man presented to the emergency department with left flank pain and right lower quadrant abdominal pain. In his medical history, left side renal stone and suffered cerebrovascular accident were detected. Physical examination revealed right costavertebral angle tenderness. His pain continued despite NSAID and narcotic drugs. The CT scan revealed wedge style cortical and medullar hypodens areas accordance with renal infarct on level of the central and upper pole of the right kidney. Renal angiogram confirmed to infarct. He was interned to interventional radyology.
CONCLUSION: Acute embolic renal infarction is an entity that is often misdiagnosed as a renal calculus because of similar presenting symptoms. This leads to delay in the initiation of treatment and to increased morbidity.

#7753 : Use Of Bedside Ultrasound To Diagnose Appendicular Mass in Emergency Department

Preferred format : ePoster

Authors:

Lubna Ghali Amin Andraous (1)

1. Emergency Department, Hamad General Hospital, Doha, QATAR

Keywords: Acute Appendicitis, Appendicular mass, Appendicular abscess, Bedside Ultrasound, Computed Tomography (CT)

Abstract :

Introduction:

Appendicitis is the most common acute surgical abdominal disorder presenting to emergency departments(ED).[1-2] Diagnosis is usually made by a combination of history, physical examination, laboratory tests, and imaging studies. Since this diagnostic approach often takes place in serial steps, patients suspected of Acute Appendicitis tend to be delayed and stay for prolonged periods of time in ED, requiring considerable staff and physical resources.[1-2] This delay in diagnosis may raise safety concerns, since it can increase chances of complications like Gangrenous Appendix or even perforation.

Methods

We report a case of a male patient, where an emergency ultrasound fellow, utilized Bedside abdominal ultrasound to diagnose Acute Appendicitis and to identify complicated Appendicular Mass and abscess, inspite of atypical presentation, clinical findings and labrotary results. Findings were confirmed by CT scan.

Case

62-year old male patient, known case of Type 2 Diabetes Mellitus on (Metformin 500mg Three times daily). Presented to, Emergency Department at Hamad General Hospital, with history of right loin & suprapubic pain for five days. Patient had low grade fever & dysuria for three days, nausea & anorexia for one day. Patient denied history of vomiting, change in bowel habbits or previous similar attacks. Patient visited a private clinic five days ago and was started on Diclofenac tablets 100 mg once daily. His workup diagnosis by the General physician was Right Renal Colic. His pain improved with medication.

On examination, Looked well,not in acute distress & Visual Analogue Scale for pain (VAS) of 3. He had right loin, suprapubic & right iliac fossa abdominal tenderness. (BP130/60),(HR88bpm),(Temp36.5C), (RBS12mmol/dL), (Spo2 97%). Working diagnosis was Pyelonephritis.Patient received 2 grams IV Ceftriaxone & analgesia. Investigations showed (WBC 8,200),(Hb12.1g/dL), urine microscopy 2 + WBC, 1+ RBC, Nitrite negative. Formal Ultrasound abdomen was requested.

After 4 hours, Bedside ultrasound was done by emergency physician, showed a non-compressible tubular structure in the RIF measuring 14mm in maximum transverse diameter with fat stranding & surrounding free fluid suggestive of inflamed Appendix. There is an area of mixed echogenicity at the tip of the Appendix measuring 40X35mm. Findings were suggestive of a complicated Appendicular mass & small abscess. Accordingly, departmental ultrasound was cancelled and CT abdomen was ordered. Patient was started on IV Metronidazole 500mg and general surgeon was informed. CT abdomen confirmed the diagnosis of a **Complicated Appendicular mass with small abscess**. Patient was admitted for conservative treatment & discharged in good condition after 5 days.

Conclusion:

Bedside ultrasound by trained emergency physicians, can diagnose, in a timely manner multiple abdominal emergencies, including Acute Appendicitis, hence facilitating appropriate treatment, consultation, shorter length of stay and better patient outcome.

Aknowledgement:

The author declares no conflict of interest.

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related to prevalence of disease. *Radiology*. 2008;249:97-106.

#7754 : Facial Eritema, a diagnosis of a systemic pathology from Primary Care to Emergency department

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), MARIA DEL MAR BECERRA MAYOR (1), LOREA DE UNAMUNO LUMBRERAS (2), MARIA ISABEL CORREA ROSALES (1)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: Lupus, facial eritema, glomerulonephritis

Abstract :

Clinic History:

19 year old patient with a history of urinary infections in infancy cause of vesicoureteral reflux.

He came to the Emergency Primary Care department because of a facial rash. The diagnosis was an Urticarial Reaction, treated symptomatically with antihistamines.

He came a 3rd time, having such facial and abdominal rush but it was accompanied by abdominal pain.

We study the patient with a blood analyse, and it presented neutrophilic leukocytosis, normal renal function with proteinuria and hematuria in urine.

The patient was admitted in Nephrology Service for the study of nephrotic syndrome. Finally he was diagnosed in hospital with lupus glomerulonephritis.

CONCLUSION:

Although urticarial reactions are a common pathology in our emergency services (Primary Care or Hospital), we have to discuss differential diagnoses with more complex medical conditions, such is the case of our patient. The reason for consultation were the injuries that produce a systemic disease like lupus.

#7755 : The wolf is coming!

Preferred format : ePoster

Authors:

ANA ESTEBAN VILLACAMPA (1), JORGE ALCALA ANIENTO (1), GABRIELA MADALINA GRECU (1), CARLES GREOLES ROYO (1), CLAUDIA ROMERO RAMIREZ (1), JOSEP MONTESINOS COTS (1), SALVADOR SARRA MORETO (1)

1. EMERGENCY, FUNDACIO HOSPITAL SANT PAU I SANTA TECLA, EL VENDRELL, SPAIN

Keywords: Paraneoplastic syndrome, polyneuropathy, carcinoma

Abstract :

54-year-old patient presenting a history of chronic pain in the extremities, having been evaluated in 2011 with vascular surgery, traumatology and rheumatology, and with a diagnosis of lumbar spondylosis associated to fibromyalgia and degenerative discopathy.

During a period of two months the patient had visited several hospitals in the area, reporting cramp-like shooting pains in both the lower and upper extremities, mainly in the hands and feet, with paresthesia in said areas. A physical examination was normal, with no neurological focus, and no evidence of deficit at a motor or sensitive level. Osteotendinous reflexes were normal; pulses were palpable and symmetric; there were no skin alterations and no changes in colour or distal cyanosis.

A number of analytics were performed including an ionogram, CPK and glucose test, all of them casting normal results. A full spine X-ray showed no alteration.

The patient had been persistently diagnosed with neuropathic pain and the treatment prescribed had included different anti-inflammatory drugs and pain-killers such as amitriptyline and gabapentin, with no improvement being observed. Thus, the patient was referred for external consultations in neurology.

Finally, the patient was admitted to the emergency room presenting hypotension, hallucinations, intermittent incoherent speech, persistent constipation and acute urine retention. The examination at the emergency room showed normal results. Radiological tests (cranial CAT-scan and X-ray of the thorax and abdomen) showed no acute pathology. The patient was admitted to the department of internal medicine where a lumbar puncture was performed as well as a cranial magnetic resonance and an electromyogram, all casting normal results. Upon performance of a CAT-scan of the abdominal thorax a tumour was observed in the left lobule area. The analysis was completed with an examination resulting in a final diagnosis of small cells carcinoma with no extension, associated to the appearance of paraneoplastic syndrome presenting as sensitive autonomic polyneuropathy. During the patient’s hospitalisation symptoms progressed to include unstable walking, hypoesthesia and global hyporeflexia that improved with corticotherapy. The patient is currently being treated with chemotherapy and radiotherapy.

Conclusions

Paraneoplastic syndrome affects between 1% to 6% of patients with cancer. Nevertheless, this rarely comes to mind at the emergency room. In our case the patient presented all the typical clinical characteristics for this syndrome and had we suspected it earlier, oncological treatment could have been administered at an early stage.

Each time a patient comes to the emergency room they must be evaluated exhaustively and as if it was the first time said patient is examined, paying no regard to labels such as chronic pain, fibromyalgia, depression, repeat user… etc. Failure to do so may result in the wolf finally coming.

#7756 : Pediatric Emergency in Sport. A case report

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), LOREA DE UNAMUNO LUMBRERAS (2), JUAN MANUEL GARCIA LOPEZ (1), MARIA DEL MAR BECERRA MAYOR (1), MARIA ISABEL CORREA ROSALES (1)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: Commotio cordis, RCP.

Abstract :

Background

12 years patient arrive at our health center for syncope while playing handball at 50m.

During the game he gets hit in the chest by the ball, after that he falls immediately unconscious. At his arrival cardiopulmonary arrest is diagnosed, and we start CPR ,we send someone to search Automated external defibrillator (AED) in the sports center. Resuscitation was initiated and the desfibrilator provides 2 desfibrillatons. He was transferred to the hospital. The electrocardiogram on admission shows Ventricular Fibrillation so he gets the tirad desfibrillation. It appears sinus rhythm.

He get hemodynamically stable without arrhythmias. Color echocardiogram shows no cardiac structural alterations and ECG-Holter 24 h was normal too.

Family and Community Focus: Study of family and community: Any patient with a history of sudden death should make a genetic family study.

Results

Sudden death due to cardiac shock is caused by a direct hit to the chest, in the absence of underlying cardiovascular disease, and it is an event known as ***commotio cordis*** , one of the most frequent causes of sudden death in young jóvenes. In USA most victims are men (95%) and ethnic "white" (78%). 50% of events take place in Sports in the high competition. It must be a hit in the chest by a blunt object, a ball or body contact with another player, directly on the heart, and it has to take place in the electrically vulnerable period of the cardiac cycle (rising part of the T wave, just before its peak).

Treatment . The treatment was desfibrillation. There is no evidence that survivors of commotio cordis event present new high risk of arrhythmic events, so secondary prevention is not indicated.

CONCLUSIONS

Family physicians and emergency doctors engaged in health care centres or other services near sports centres, and they must have a Automated external defibrillator. Now in our country, Spain, this kind of sport center must have. They can save lives and in our case.

#7757 : Hepatotoxicity caused Cassia angustofolia (Senna)

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Ersen Gunduz (1), Ismet Dogan (1), Tuce Duzkel (1), Onur Incealtın (1), Kurtulus Aciksari (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: AST, ALT, Cassia, hepatotoxicity,

Abstract :

Cassia angustifolia (Senna), used as a laxative, is a plant from the Fabaceae family. It includes hydroxyanthracene glycosides, also known as Senna Sennoside. These glycosides stimulate the peristalsis of the colon and alter colonic absorption and secretion resulting in fluid accumulation and expulsion.We report in this case that hepatotoxicity related to drinking tea contained Cassia angustofolia only once (as a cup of tea).

A 72-year-old man was admitted to the ED with six hours history of worsening abdominal pain. He not reported nausea and vomiting.In history,he sufferred from biliary pancreatitis eight months ago.Blood samples revealed AST:364 U/L, ALT:274 U/L, LDH:540 U/L. Hepatobiliary ultrasonografic scanning detected multibl milimeter calculs and minimal sludge in gall bladder.We implemented fluid replacement initially. He was interned to general surgery clinic.

The cause of senna-related hepatotoxicity is unclear but could be explained by the exposure of the liver to unusual amounts of toxic metabolites of anthraquinone glycosides. In the literature, there are reports illustrating the hepatotoxic effects of Cassia angustifolia with long-term usage but hepatotoxicity caused use Senna only once is rare.

#7758 : Eating disorders and diagnosis in Emergency department

Preferred format : ePoster

Authors:

VERONICA PARENT MATHIAS (1), LOREA DE UNAMUNO LUMBRERAS (2), JUAN MANUEL GARCIA LOPEZ (1), MARIA DEL MAR BECERRA MAYOR (1), MARIA ISABEL CORREA ROSALES (1)

1. Emergency Department Regional Hospital, Málaga, Spain., SAS, MALAGA, SPAIN
2. Andalusian Health Public Service, Spain, SAS, MALAGA, SPAIN

Keywords: eating disorder, anorexia.

Abstract :

Background & Aim

16 year old brought to the emergency department of AP by unconsciousness while she was dancing. Before she comments her partners dizziness, but not palpitations or visual disturbances.

She Refer cramps and headache in the past two weeks. Six months ago presented an episode of abdominal and precordial pain .5/30 menstrual cycle, but 8 months ago it dissapear. Very good student, above average ratings. She has many friends and social relationships. Recent divorce of parents. Good student in the dance academy which since seven years ago, she loves dance and she refers the mother to be a professional.

Method

We conducted a clinical interview when she arrive at our Emergency Department. In the physical examination was highlighted a pale skin, thinness and The body mass index16.Tanner 3.

Asymptomatic when she arrived, we decided to refer the following analitic dates to her Family Physician because we suspect a disorder in her Eating behaviour.

Results:

Potassium 2.5 mEq / L

CO2: 29 mEq / L

Calcium: 8.2 mEq / L

Phosphorus: 4.2 mEq / L

A history of chest and abdominal pain can be able to a possible esophagitis, which may be secondary to vomiting . Amenorrhea by excessive exercise, caloric restriction and loss weight. La hypokalemia and / or low levels of ionized calcium can be the cause of cramps, headache, dizziness and heart rhythm disturbances.

Treatment and Action Plan

Requires family education, nutritional counseling and psychiatric treatment. It is derived endocrinology and to our Mental Health Unit.

CONCLUSIONS

Eating disorders appears in adolescents above 14-18 years. Clinics and a good doctor-patient relationship is essential to reach the diagnosis. The goal of the therapy in patients with Ealing disorders is to get weight regain and the own awareness of the disease.

#7759 : Minor traumatic brain injury revealing dermoïd cerebral cyst

Preferred format : ePoster

Authors:

Imen Mekki (1), Hamed Rym (1), Hana Hedhli (1), Alaa Zammiti (1), Salwa Mansouri (1), Saloua Amri (1), Wided Derouiche (1), Bouhajja Béchir (1)

1. Emergency Department Charles Nicolle Hospital , tunisia, tunis, TUNISIA

Keywords: Traumatic, brain , injury, accidental, tumor, emergency

Abstract :

INTRODUCTION :

Cerebral dermoid cysts are a rare congenital benign tumor formations of slow growth. They represent approximately 1% of all intracranial tumors, and occur equally in both sexes. The clinical presentation depends on the tumor location. Headaches and epilepsy are the most common symptoms, they can also be discovered following a complication. Some of incidental findings have been described. Rupture of an intracranial dermoid cyst is a rare event wich may be associated to morbidity and potential mortality.

OBSERVATION:

We report a case of a 21-year-old man with no medical history who suffered a high-velocity traffic accident resulting in minimal traumatic brain injury .The medical taking history noticed an initial loss of consciousness during few minutes. On examination: The patient was conscious with a Glasgow coma scale of 15 and no neurological signs of localization. No visible trauma above the clavicle was found. The blood pressure was = 140/70 mmHg with a regular pulse rate of 70 bpm. Biological tools was normal. A computerized cranial tomography was conducted after six hours of observation based on guidelines of Traumatic brain injury and revealed an intraventricular multiloculed left lateral expansive process, , with heterogeneous density exerting a mass effect with dilatation of the left lateral ventricle and controlateral deviation of the interventricular septum. It combines multiple fat density of punctate pictures localized at the base of the tank, left parietal cortical grooves and realizing a lipid supernatant at the frontal and temporal horn of the left lateral ventricle. There were no traumatic bone injury associated. The Diagnosis of intraventricular dermoid cyst rupture was made with a spread Subarachnoid lipid droplets. The patient was admitted for observation in the emergency ward and neurosurgeons dit not indicate an urgent need of neurosurgical act. The patient remains asymptomatic after the observational period and was referred to the neurosurgery ward for further explorations and decision making.

CONCLUSION:

Dermoid cysts are benign formations of slow growth, which explains the late diagnosis, usually to 30 years in 66% of cases. Occasionally they are incidental findings discovered on brain computed tomography (CT) or magnetic resonance imaging (MRI).

#7760 : Cellulitis Audit

Preferred format : ePoster

Authors:

Maria Angela Canas Barranco (1), Enrique Caro Vazquez (2), Maria del Carmen Rodriguez Casimiro (3)

1. Emergency, VHI Swiftcare Clinic, Malaga, SPAIN
2. Emergency , Hospital Virgen de la Victoria, Malaga, SPAIN
3. Emergency, Hospital Virgen de la Victoria, Malaga, SPAIN

Keywords: Cellulitis, Treatment, Antibiotics

Abstract :

In our clinic We use to treat patients with cellulitis. It is important that every Doctor follows the same criteria in every pathology.

The aim of this audit is to establish the current standard of treatment provided to patients with cellulitis.

*Method

This is a retrospective audit of patients with cellulitis coming to the clinic from 11th to 30th September 2015.

*Criteria

1-If patient afebrile and otherwise healthy, flucoxacillin 500mg QDS 7-14 days may be used as single drug treatment.

-Number of patients including in audit without fever.

2-If febrile and ill send to Hospital for IV Treatment.

3-In facial cellulitis use co-amoxiclav 625mg TDS 7-14 days.

4-If penicillin allergic. Clarithromycin 500mg BD 7-14 days or Clindamycin 450mg QDS 7-14 days.

*Initial Standard Setting

-At least a minimum 80% of patients afebrile and cellulitis will have flucoxacillin treatment 500mg QDS 7-14 Days.

-At least a minimum 90% of patients febrile and ill send to Hospital for IV Treatment.

-At least a minimum 90% of patients with facial cellulitis use co-amoxiclav 625mg TDS 7-14 days.

-At least a minimum 90% of patients with penicillin allergic, Clarithromycin 500mg BD 7-14 days or Clindamycin 450mg QDS 7-14 days.

*Analysis and Findings

There were 23 patients aged 1-89 years old diagnosed with Cellulitis, and 2 patients excluded because, one of them had Pilonidal Abscess and the second one had an infected wound.

In 6 cases of 21 the temperature were not in the records.

1.- Criteria:In regards to the chosen antibiotic, patient afebrile and otherwise healthy, flucoxacillin 500mg QDS 7-14 days ,12 patients (71%) were prescribed with Flucoxacillin, only 1(6%)was prescribe with 2 antibiotics:flucoxacillin and calvapen.

But 4 patient, that flucoxacillin was prescribed the temperature is not in the records.

2.-Criteria:In febrile and ill, send to Hospital for IV Treatment.

Only 2 patients were sent to A&E(28%), one of them was ill and without temperature in the records and the other one had fever.

But, I included 5 patients in which the temperature was not checked, because we do not know if they had fever or not(72%)

3.-Criteria:In facial cellulitis use co-amoxiclav 625mg TDS 7-14 days.

Only one case of facial cellulitis was reported and treated with co-amoxiclav

4.-Criteria:If penicillin allergic. Clarithromycin 500mg BD 7-14 days or Clindamycin 450mg QDS 7-14 days.

The are no patients penicillin allergic treated with Clarithromycin or Clindamycin. (0%) There is only one patient penicillin allergic treated with Erythromycin.

It´s always necessary to check temperature if there is a cellulitis because depends on this we will send patients for iv antivibiotics to A&E.

In the audit there are 6 patients without checked the temperature and then we don´t know how it is.

We need to see in the records that the patient is allergic to penicillinIf we have to give other antibiotic.

*Conclusions and Reflections

- In cellulitis we need to check vitals and temperature.

- If temperature is normal, no penicillin allergic : flucoxacillin 500 mg QDS 7/14 days

- If fever/ill :send to A&E for iv antibiotics

#7761 : Reapprasal of the tourniquet in severe trauma patients

Preferred format : Oral presentation

Authors:

Tom Van Waelem (1), Wim Raeymaekers (1), Nick Vermeersch (1)

1. Emergency Department, AZ Sint-Maria Halle, Brussels, BELGIUM

Keywords: trauma , pre-hospital , disaster medicine

Abstract :

In the civil setting, the use of tourniquets is currently not endorsed by European practice guidelines for the initial management of trauma victims with severed or severely injured limbs. In an military setting however, its use is considered standard of care. By simply applying a constricting or compressing device, specifically a bandage, temporary control of severe venous and arterial bleeding can be achieved in a timely and simple manner. The main reason of its reluctant use in the civil context is the fear of eventual nerve lesions, pain, etc. Furthermore, alternative methods to control major bleedings like haemostatic bandages further make its use less frequent. The terrorist attacks in Brussels airport on March 22nd 2016 demonstrated in a very painful way the potential benefits of tourniquets. By mere chance, due to the presence of soldiers on site, Combat Application Tourniquets® (CATs) were applied to injured casualties with extensive limb injury. We hypothesize that the use of tourniquets can mitigate the detrimental outcome in trauma victims suffering from catastrophic bleeding. To evaluate this, we propose a retrospective analysis by means of a questionnaire of the severely injured of Brussels airport.

#7762 : Identification of septic patients at risk of complications in emergency department

Preferred format : Oral presentation

Authors:

aymen zoubli (1), Hanen Ghazali (2), wided Bousselmi (1), Rania Jebri (3), Anware Yahmadi (4), Ahmed Souyah (3), farah riahi (1), wided bahria (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA
3. service des urgences -SMUR , hôpital régional ben arous, ben arous, TUNISIA
4. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, Ben Arous, TUNISIA

Keywords: sepsis, outcome, emergency department

Abstract :

Introduction

Early identification of septic patients at risk of developping severe sepsis syndrome (SSS) is crucial. An intensive care unit (ICU) cohort study identified simple clinical criteria to predict patients requiring immediately intensive care management (Am J Respir Crit Care Med 2005).

Objective

To identify factors associated with the occurrence of a SSS (severe sepsis or septic shock) in patients with non complicated documented infection in the emergency department (ED).

Methods:

Prospective study conducted over six months. Were included: patients aged ≥18 years with suspected infection associated with two or more criteria of the systemic inflammatory response syndrome (temperature ≥38 ° C or ≤36 ° C, heart rate> 90 bpm / min, Respiratory Rate > 20 / min or PaCO2 <32 mm Hg or WBC > 12,000 cel / mm3 or <4,000 / mm3), with a systolic blood pressure (SBP) > 90 mmHg and a lactate levels < 4 mmol / L. Epidemiological, clinical, therapeutic and outcome criteria were collected. APACHE 2 score was calculated. Occurrence of organ failure define severe sepsis, Persistent hypotension (SBP <90 mmHg) or signs of hypoperfusion (lactate ≥4 mmol / l, oliguria) despite fluid resuscitation define septic shock. Multivariate analysis to identify factors associated with the occurrence of the SSS was performed.

Results : Inclusion of 120 patients. SSS: n = 41, 34%. Mean age = 62 ± 18 years.

Sex ratio = 0.85. Site of infection: intra-abdominal (45%) and respiratory (32%). Mean APACHE 2 score = 13 ± 11. Multivariable logistic regression identified the following parameters as associated with occurrence of SSS: a SBP <110 mmHg, an SpO2 <90% in ambient air (AA) and a lactate level ≥3 mmol / l with Odds Ratio (OR) and confidence interval (CI) 95% respectively to 5,54 [2,37-12,92], 2,2[1,67-5,7] and 2,6 [1,54-4,71].

conclusion:

A SBP <110 mmHg, a SpO2 <90% in AA and a lactate level ≥3 mmol / l were associated with the occurrence of a SSS. Early identification of patients with SSS may help the emergency physicians for better management and better outcome.

#7763 : Saved by the rash? An unusual case of a myocardial infarction

Preferred format : ePoster

Authors:

Sergio Cardoso (1), Demeyer Ignace (1), Pedro Semedo (2)

1. Emergency Department, Onze-Lieve-Vrouw Ziekenhuis, Aalst, BELGIUM
2. Cardiology Department, Hospital Espírito Santo, Évora, PORTUGAL

Keywords: anaphylaxis, infarction

Abstract :

Myocardial infarction can assume a plethora of atypical presentations. Posterior infarcts are notoriously difficult to diagnose. We present the unusual case of a patient who visited the emergency department for an acute neck pain, believed to be of muscular origin. After an intravenous analgesic was given, she was promptly discharged, only to return one hour later with an exuberant rash and hemodynamic instability, suggestive of anaphylactic shock. Furthermore, an EKG, not previously performed, documented a postero-inferior myocardial infarction, retrospectively believed to be the cause of the cervical pain. After hemodynamic stabilisation, the patient underwent PTCA and recovered uneventfully. We discuss some considerations related to the management of anaphylaxis and the pitfalls inherent to the diagnosis of postero-inferior myocardial infarction.

#7764 : Wolf-Parkinson-White syndrome with paroxysmal atrial fibrillation diagnosed in emergency department

Preferred format : ePoster

Authors:

Héla Manaï (1), Hamed Rym (1), feten Amira (1), Maaref Amel (1), Jebali Amina (1), Zied Guermazi (1), Bouhajja Béchir (1)

1. Emergency Department Charles Nicolle Hospital , tunisia, tunis, TUNISIA

Keywords: wpw, emergency , atrial fibrillation

Abstract :

Introduction :

Wolf-parkinson-White (WPW) Syndrome is a rare condition in population estimated between 0,1% to 3%. In 30% of cases, paroxysmal nonsustained atrial fibrillation is associated with risk of ventricular fibrillation and can be a life-threatening condition if misdiagnosed. Differential diagnosis and adequate therapeutic choice are the challenges for emergency physicians in the management of this condition.

Case report :

A 23-year-old female with no medical history presented to the emergency department complaining of palpitations with brutal onset at rest and 2 episodes of vomiting beginning 2 hours before. On examination, she was awake, presented an irregular rapid pulse with no hemodynamic instability neither respiratory distress. A 12-lead ECG showed an irregular wide polymorphic QRS complexes tachycardia of 300/min. The diagnosis of WPW with paroxysmal AF was made and a pharmacological cardioversion with intravenous amiodarone was attempted with success. The patient was transferred to a cardiologic unit for further assessment.

Discussion :

In WPW with AF, ECG shows typically irregular tachycardia with rapid ventricular response often > 200 per min and widened polymorphic QRS. Although its good prognosis when nonsustained , AF with WPW may degenere in 1% of cases to ventricular fibrillation with risk of sudden cardiac death. Emergency physician must recongnize because of possible critical evolution and therapeutic implications. Treatment must be careful. Electrical cardioversion is indicated in unstable patients. When pharmacological cardioversion is indicated, drugs may not impede the AV conduction.

Conclusion:

WPW syndrome associated to paroxysmal AF is a rare but life-threatening condition. Emergency physician may be exposed to recognize and treat without any delay this pathology.

#7766 : QRS amplitude for predicting recent or chronic atrial fibrillation in emergency practice

Preferred format : ePoster

Authors:

houda ben salah (1), rim youssef (1), mounir naija (2), asma zorgati (1), naouefel chebili (1), riadh boukef (1)

1. service des urgences sahloul, CHU Sahloul Sousse, sousse, TUNISIA
2. SAMU03, CHU Sahloul Sousse, sousse, TUNISIA

Keywords: atrial fibrillation, emergency department, QRS morphology.

Abstract :

Atrial fibrillation is the arrhythmia most commonly encountered in emergency practice. Serious complications can include congestive heart failure, myocardial infarction, and thromboembolism. Initial treatment is directed at controlling the ventricular rate. Medical or electrical cardioversion can be necessary in some cases especially when the diagnosis of recent atrial fibrillation is certainly established. Clinical history and electrocardiographic characteristics can help to diagnosis. It is admitted that variation of QRS morphology is an indirect sign of chronic atrial fibrillation. In Our study we analysed ECG of patients consulting for atrial fibrillation and tried to objective a relationship between variable aspect and amplitude of ventricular depolarization and chronicity of atrial fibrillation.

We performed an analytic prospective study within a period of one year and a half. We used our local atrial fibrillation registry. We collected specific informations about the FA. We analyzed the ECGs aspects of 2 groups of patients: newly and previously diagnosed FA. We calculated Rmax (the maximal R wave amplitude in the ECG derivations), Rmin(the minimal R wave in the same derivation), deltaR(Rmax- Rmin)and the ratio deltaR/ Rmax.

We enrolled 100 patients who had an ED visit for atrial fibrillation. The sex ratio was 0,49. The middle age was around 65 years (from 29 to 92 years).

In the first group with previously diagnosed FA, we included 60 patients and only 40 patients in the group of newly diagnosed FA. The study showed that the deltaR/Rmax is very various and ranged between 0,062 and 0,610. For a ratio deltaR/Rmax between 0,062 and 0,203 ; 3 patients with chronic FA and 22 recently diagnosed FA. For a ratio deltaR/Rmax between 0,204 and 0,300 ; 9 patients with chronic FA and 14 recently diagnosed FA. For a ratio deltaR/Rmax upper than 0,301 ; 48 patients chronic FA and 4 recently diagnosed FA.

From those results we can note that more the ratio deltaR/Rmax grows more the FA is likely to be chronic, with a sensitivity of 86% and a specificity of 90% for values of ratio deltaR/Rmax upper than 0,300.

The diagnosis of recent atrial fibrillation in the current practice is essential for its management. In the light of our results we can conclude that the ratio deltaR/Rmax can be a predictif criteria of a previously diagnosed FA for a value upper than 0,300.

#7767 : Bad mood after a long flight

Preferred format : ePoster

Authors:

Luz Tamara Vázquez (1), María Cuadrado (1), Luis Yubero (1), Isabel Fernández (1), Luis Pérez (1), Santiago Bermejo (1), Francisco Jiménez (1), Manuel Gil (1)

1. Emergency Department, Hospital Universitario 12 de Octubre, Madrid, SPAIN

Keywords: Ischemia, Carotid, Dissection

Abstract :

We present the case of a 27 year-old woman with no relevant medical history

The symptoms began 8 hours before admission to the Emergency Department. After landing from a ten hours flight, she began with malaise, weakness, nausea, vomiting and strange behavior.

She is taken to the Hospital by her husband, who tells that during the holidays and flight her behaviour was totally normal and that most of the time in the flight back to Spain she was sleeping with her head over his shoulder.

They have stayed in Cuba for a week celebrating their honey moon. Her husband said she did not consume any type of drugs during the holidays or the flight.

At the general examination no fever, normal blood pressure and no tachycardia, but although she had a Glasgow Score of 15, the neurological exploration showed some abnormalities: she was in an unlike mood, with unmotivated laughter, disoriented with inappropiated answers to the doctor's questions. No visual problems, no loss of strength or sensitive afection. Reflex exploration was also normal. She could walk properlly and no signs of meningeal or cerebellum disorders were found at the first examination.

Laboratory tests were taken, including chest and abdominal radiography, pregnancy test and study of different types of toxics , being all of them normal and negative.

A Computerized Axial Tomography of the brain was taken that showed an hypodense lession in the frontal right part of the brain, suggesting ischemia in the territory of the right anterior cerebral artery

Just five hours after admission, her clinical condition got worsed, decreasing her level of consciousness, vomiting, and with more abnormalities in the neurological examintaion as dysphasia, paresis of the right central facial nerve and right hemianopia. As time went by also paresia of the right hemisphere with positive Babinski appeared, so treatment with intravenous anticoagulation was prescribed suspecting a progressive ischaemic stroke.

She was admitted to the Stoke Unit. During admission, a Magnetic Resonance Imaging was performed, reported a stenosis of the cervical segment in the left internal carotid due to a dissection with also affection in both frontal hemispheres.

The final Diagnosis was Bifrontal and Left parietal ischaemia with spontaneous dissection of left carotid artery.

She continued with anticoagulation treatment, with progressive improvement of the neurological condition and after thirty-two days of admission, she had a nearly complete resolution of symptoms, remaining just some attention problems.

A month later, she could manage to do normal life without any help.

As always in Medicine, the most important thing to do is a good clinical history and physical examination before jump into wrong conclusions.

As in this case, we must ruled out potentially serious illness, before attributing the cause of the wrong behaviour to a toxic or psychiatric origin.

#7768 : Glasgow Coma Score in trauma cases

Preferred format : ePoster

Authors:

Smarandoiu Marius (1), Canciu Alin (1)

1. SMURD Sibiu, SMURD Sibiu, sibiu, ROMANIA

Keywords: Glasgow Coma Score; trauma

Abstract :

Background: Glasgow Coma Score are different patterns in each type of trauma. The aim of this study is to define certain patterns of GCS in some type of trauma: fire incidents, road accidents, falls, work accidents, drawing and electrocution.

Methods: Retrospective medical study based on statistical analysis of SMURD national database on a period of 4 years (2010-2013).

Results: Although the frequency of car accidents and falls from height is higher than other types of trauma, the incidence of seriously altered GCS caused by electrocution and drowning is 4 times higher.

#7769 : The emergency dispatch system- order versus chaos

Preferred format : ePoster

Authors:

ALEXANDRA-STEFANIA POLEXA (1), SORINA MADALINA PODARIU (1), IOANA RADU (1), VLAD-ALEXANDRU FISCA (2), ANA-DANIELA TARAN (2)

1. SMURD SIBIU, SMURD , SIBIU, ROMANIA
2. UPU-SMURD SIBIU, CLINICAL EMERGENCY HOSPITAL SIBIU, SIBIU, ROMANIA

Keywords: dispatcher, optimize, triage

Abstract :

The emergency dispatch system- order versus chaos.

Polexa Alexandra Stefania (1), Podariu Sorina Madalina(1), Radu Ioana(1), Taran Ana-Daniela(2), Fisca Vlad-Alexandru(2)

1. Emergency department, SMURD Sibiu, Sibiu, Romania

2. Emergency department, UPU-SMURD Sibiu, Sibiu, Romania

Key words: dispatcher, optimize, triage

Background

Calls to 112, the emergency telephone number, allows European citizens in distress to contact the emergency services. These are transferred to a dispatcher or a dispatching software able to allocate appropriate human resources and equipment to anyone who urgently asks for medical help. Furthermore, EMD also includes the provision of accurate instructions to the caller (for example, CPR) or in case of disaster the necessary coordination. The aim of this study is to analyze and acknowledge the performance of the emergency dispatch system, to highlight the flaws and to provide proper solutions and alternatives.

Methods

We conducted a retrospective study based on the last three years SMURD (Mobile Emergency Service for Resuscitation and Extrication) database. In order to exemplify our standpoint, we included 774 calls given as cases of unconsciousness. Out of this, 327 turned out to be in cardiac arrest, whereas 447 of this total of emergency cases proved to be of other etiologies. Our study focuses on the complex classification of these 447 cases by final diagnosis, gender, conscious state, etc.

Results

Therefore, we have included a great variety of cases: hypoglycemia(10 cases), lipothymia(52 cases), inebriated(56 cases), epileptic seizures(101 cases), cranio- cerebral injury(54 cases), neoplasm(27 cases), heart rhythm disorders(26 cases) , hypertension(34 cases), ischemic transient attacks(21 cases), cerebral vascular accidents(77 cases), combined drug intoxication(25 cases), death by hanging(9 cases), coronary heart disease, pulmonary oedema(7 cases), aggression(2 cases), angina pectoris(9 cases), respiratory distress(29 cases) which proved to be the real etiology for the cases given by the dispatcher. Besides final diagnosis classification criteria we also classified the cases in groups by GCS(Glasgow Coma Score), gender, age groups, pre-hospital parameters.

Conclusions

We are trying to magnify the importance of a well-trained dispatching system. While some of the cases observed required a type c ambulance and the assistance of a doctor, some of them could be conducted by first aid team, thus allowing type c ambulance to intervene in trully life threathenig situations. It is well known what couple of minutes or a very well trained team can do for a life, so we have to take into consideration all the variables before dispatching a unit or other. The true aim of this study is to emphasize the true necessity of a good dispatching system and to really advocate for a better training for dispatchers all around the world.

#7770 : Does the use of The Copenhagen Triage Algorithm (CTA) change the triage level of patients in the emergency department

Preferred format : Oral presentation

Authors:

Rasmus Bo Hasselbalch (1), Mia Pries-Heje (1), Louis Lind Plesner (1), Lisbet Ravn (2), Morten Lind (2), Rasmus Greibe (3), Birgitte Nybo Jensen (4), Lars S. Rasmussen (5), Kasper Iversen (6)

1. The department of cardiology, None, Herlev-Gentofte Hospital, DENMARK
2. The emergency department, None, Herlev-Gentofte Hospital, DENMARK
3. The department of cardiology, None, Bispebjerg og Frederiksberg Hospital, DENMARK
4. The emergency department, None, Bispebjerg og Frederiksberg Hospital, DENMARK
5. Anæstesi- og operationsklinikken, None, Rigshospitalet, DENMARK
6. The department of cardiology and the emergency department, None, Herlev-Gentofte Hospital, DENMARK

Keywords: Triage, Emergency Department, Vital Parameters

Abstract :

Background

The goal of triage in the emergency department (ED) is to identify the sickest and most urgent patients for treatment as well as identifying patients at a low risk of mortality and adverse outcomes were treatment can be postponed without risk.

Existing systematic triage models have a well-documented problem with over-triage – overestimating the risk of low risk patients. Our goal was to see if The Copenhagen Triage Algorithm has a lower rate of patients classified as resuscitation, emergent, and urgent compared to the standard Danish Emergency Process Triage (DEPT).

Methods

The Copenhagen Triage Algorithm (CTA) study is a prospective two-center, cluster-randomized, cross-over, non-inferiority trial comparing a newly developed triage system (CTA) to Danish Emergency Process Triage (DEPT). All emergency department admissions of patients ≥17 years (n=45.000) at two large acute hospitals are included. Centers are randomly assigned to perform either CTA or DEPT triage until half of the sample size is included and subsequently cross-over. Both models stratify patients in 4 acuity levels: Red (resuscitation – seen by doctor immediately), orange (emergent – seen by doctor within 15 min), yellow (urgent – seen by doctor within 60 min), and green (non-urgent – seen by doctor within 180 min) (patients with minor injuries (level 5) are excluded).

Results

As of May, all patients are included and over 90 % are registered in the CTA database. Of 45379 patients, 24835 (54.7 %) were triaged using DEPT and 20544 (45.3 %) were triaged using CTA. Among the patients triaged using DEPT 7146 (28.8 %) were classified as green, 9651 (38.9 %) as yellow, 7240 (29.2 %) as orange, and 798 (3.2 %) as red. Among the patients triaged using CTA 7855 (38.2 %) were classified as green, 8309 (40.4 %) as yellow, 8319 (18.6 %) as orange, and 561 (2.7 %) as red. Patients triaged using CTA were triaged significantly lower than patients triaged using DEPT ($P<0.001$).

Conclusion

Patients randomized to CTA triage have a lower frequency of red and orange triage. This might reduce waiting time for the patients at highest risk and thereby potentially reduce the risk of adverse events.

#7771 : Emergency rooms in Germany: better than their reputation? Why do patients with lower treatment urgency visit emergency rooms (ER)? Results of a patient survey in central emergency department/unit at a specialized hospital

Preferred format : Oral presentation

Authors:

Bernadett Erdmann (1)

1. Emergency Department, Klinikum Wolfsburg, Wolfsburg, GERMANY

Keywords: motives of patients for visiting the ED, quantitative research

Abstract :

Every year, about 20 million patients in Germany visit emergency units or are transferred to emergency units by emergency services and general practitioners. The reasons why patients prefer ER as first touch point are diverse and have not been investigated systematically from the patient's perspective so far. As numerous studies have shown, a majority of patients visiting the emergency units required only outpatient emergency treatment. Moreover, the costs incurred in the ER are not covered. Apparently, the system of physician’s emergency care established in Germany is not accepted by patients as intended.

In a hospital focusing on specialized care with 36,300 emergency patients per year, a patient survey was carried out in the central emergency department to investigate the reasons why patients visit the ER and do not use the provided outpatient care structures.

Study Design:
In the Central Emergency Department, an initial assessment by MTS (Manchester Triage System) was carried out with all patients who did not have an immediate doctor contact.
The survey period lasted 4 months, the questionnaires were issued to each patient with MTS category green or blue. The survey was anonymous and participation was voluntary.

In addition to the reasons for the idea and sociodemographic data were collected on a voluntary basis. The return rate of questionnaires was 10.7%.

Results:
57.5% of respondents were older than 40 years. From all respondents of MTS categories green and blue, 40.6% rated themselves a minimum to average life-threatening emergency. 52.7% of respondents had not been previously treated by a doctor. 70.1% have presented themselves in the ER. The 3 main reasons which led the patient to visit the emergency department:
1. "I think I'm getting better care in the ER (get all necessary investigations)" - 39.4%;
2. "I think the first point is the hospital" - 19.1%;
3. "The period when domestic / Specialist by a deadline takes too long" - 17.1%.

The survey results clearly express the view of the patients and can lead to a better understanding of the reasons why ER are visited in hospitals. Despite long waiting times, particularly for patients with low treatment urgencies, patients place the hospital emergency first in 60% of the cases. The own feeling as an emergency is more pronounced in the patients, as it is expected by the triage level. The statements of the patient in the survey can be regarded a representative sample as usual sociodemographic factors of the survey (age distribution, presentation days / times / Education) reflect the usual clientele of patients in the ZNA.
Thus, the expectation of the patients should be taken care of, and the in-hospital emergency care in Germany should be strengthened. It remains open to what extent, for example, information campaigns on the supply system in Germany can lead to a reduction of the treatments of patients in emergency rooms.

For the patient, a timely and customized emergency care appears to be important. Professional societies and politics in Germany will need to take care of this.

#7772 : Normal pressure in pseudotumor cerebri

Preferred format : ePoster

Authors:

Maria del Carmen Rodriguez Casimiro (1), Angelica Canas Barranco (1), Enrique Caro Vazquez (2)

1. Emergency, Hospital Universitario Virgen de la Victoria, Malaga, SPAIN
2. Emergency, Hospital Universitario Virgen de la Victoria, MALAGA, SPAIN

Keywords: pseudotumor cerebri, intracranial pressure

Abstract :

Introduction

Pseudotumor cerebri (PTC), or Idiopathic intracranial hypertension (IIH), is a disorder defined by clinical criteria characterized by elevated intracranial pressure in the absence of a space-occupying lesion.

However, some cases have been described in which all diagnostic criteria are not met so far defined. We present a case report of a patient with clinical features suggestive of pseudotumor cerebri, whitout a document elevated measurement of intracranial pressure.

Case report

An 27-year-old woman, smoker, and with an mildly overweight body habitus, was admitted to our hospital with a history of headhache for one week. Also, her symptoms included nausea, pain eye, and diplopia binocular and horizontal. She denied traumatism, infections o drugs. On examination, pupils were normal, but exists sixth nerve palsy. Fundus examination revealed bilateral disc elevation. Study TC was normal. A lumbar puncture revealed an opening pressure CSF of 170 mmH2O, with a normal composition. She was admitted to Neurology, and she was begun acetazolamide (250mg / 8 h) and steroids (60mg prednison / 24 h). The patien’s visual fields and headache declined. In their reviews so far remained asymptomatic.

Conclusions

PTC is the term use to describe a syndrome characterized by elevated intracranial pressure (ICP), without a space-occupying lesion. Generally has a self-limiting and benign course. Affects primarily obese women of childbearing age. The incidence is increasing as the obesity epidemic continues to expand worldwide.

The pathogenesis is still uncertain. The most widely accepted theory postulates impaired CSF absorption at the level of the arachnoid granulations.

It has been associated with various medical conditions, but recent weight gain and obesity are the only risk factors that have been demonstrated in case-control studies. Others associated conditions are: exogenous agents (vitamin A), obstructive sleep apnea, endocrine disorders, obstruction to venous drainage..

Headache is the most common symptom (present in over 90% of patients), and bilateral papilledema. Other symptoms include pulsatile tinnitus, transient visual obscurations, diplopia, and develop some degree of vision loss, that is severe and blinding in 10%.

The current criteria for diagnosis of PTC syndrome require: elevated opening pressure (>250 mmH2O CSF in adults, normal neurological examination except sixth nerve palsy, papilledema bilateral, essentially normal neuroimaging, and normal CSF composition.

Some cases, if opening pressure is too low to meet definite criteria, but all the other criteria are met, the diagnosis of ‘probable’ PTC has been proposed, or has been called too ‘normal pressure PTC’. If this happens, we believe that a patient should undergo more agressive evaluation requiring extra vigilance to avoid misdiagnosis of other causes of optic nerve swelling. We believe that our patient represents this variation of PTC.

The goal is to treat the symptoms and the visual function. Treatments include treating the secondary cause, weight loss, medications (diuretics, particularly acetazolamide, corticosteroids) and occasionally repeated lumbar punctures. If vision is failing despite medical treatment, rapid surgical intervention is necessary.

#7773 : Pre-hospital evolution in acute myocardial infarction cases

Preferred format : ePoster

Authors:

Canciu Alin (1), Smarandoiu Marius (1), Ciora Claudia (2), Loloiu Diana (2)

1. SMURD Sibiu, SMURD Sibiu, sibiu, ROMANIA
2. SMURD Sibiu, SMURD Sibiu, Sibiu, ROMANIA

Keywords: Pre-hospital; acute myocardial infarction

Abstract :

Background: Acute myocardial infarction require elaborated actions, fast diagnosis and proper management. The aim of this study is to evaluate the evolution of patients with acute myocardial infarction in pre-hospital ICU.

Methods: Retrospective medical study based on statistical analysis of SMURD Sibiu database on a period of 2 years.

Results: From the total number of cases diagnosed as AMI (acute myocardial infarction), 25% of them are better, 65% are stationary, 3% are worse and 7% are deceaded.

Reducing the delay from symptom onset to first medical contact and targeted treatment started in the early out-of-hospital phase increase to have a good chance for patients.

#7774 : Low level of consciousness in a psychiatric patient

Preferred format : ePoster

Authors:

Luz Tamara Vázquez (1), María Cuadrado (1), Santiago Bermejo (1), Luis Pérez (1), Francisco Jiménez (1), Manuel Gil (1), Luis Yubero (1), Ana Sánchez (1)

1. Emergency Department, Hospital Universitario 12 de Octubre, Madrid, SPAIN

Keywords: Bipolar Disorder, Headache,Hematoma

Abstract :

This is a case about a 35- year- old woman, under treatment because of a Bipolar Disorder, with two previous admissions because of trying to commit suicide.
She is admitted to the Emergency Department because that morning her mother could not waking her up from bed.

When she arrives to the Emergency Room, she is in a bad condition, with a Glasgow Score (GSC) of 12, no fever or tachycardia, normal blood pressure and blood sugar. She kept her eyes closed only opening them after vigorous stimulation and complained about headache and assured not having taken pills or any other type of drug.

Just after ten minutes, her level of consciousness falls quickly to a GSC of 9 so she is taking quickly to the Computerized Tomography (CT) room. Meanwhile the Intensive Care Unit (ICU) is under advise just to be prepare.

The CT scan showed right frontal hematoma extending throughout the ventricular system.

She went under Neurosurgery, an intraventricular drain device is placed and after performing a new one CT that showed no complications after the surgery, an Arteriography was performed that showed and arteriovenous malformation in the right lenticular artery. Embolize procedure was performed with excellent result.

In the ICU they were able to remove the tube just 48 hours after with satisfactory evolution and leaving the Unit just four days after that.

During the rest of admission, she was recovering well and finally leaved hospital four weeks after admission, with no neurological sequels.

Two months later, she was feeling good and living normally and independetly.

A decreament in the level of consciousness is a common a potentially serious condition in the Emergency Department. We must act quickly in order to begin the treatment as soon as possible. And above all we do not have to assume previous diagnosis nor stigmatize our patients, especially those with a history of psychiatric condition. There are many other causes of low level of consciousness, as we have just seen in this case.

#7775 : Takotsubo syndrome. Chest pain in absence on cardiovascular risk factors but emotional stressor . A Case Report.

Preferred format : ePoster

Authors:

Josep Montesinos Cots (1), Madalina Gabriela Grecu (1), Carles Greoles Royo (1), Claudia Romero Ramírez (1), Ana Esteban Villacampa (2), Maria Arenas Prat (1), Salvador Sarrà Moretó (1)

1. Emergency Department, Xarxa Santa Tecla, El Vendrell, SPAIN
2. Emergency Department, Xarxa Santa Tecla., El Vendrell, SPAIN

Keywords: Takotsubo syndrome, stress induce myocardiopathy, stress conditions

Abstract :

Stress induced cardiomyopathy also known as Takotsubo syndrome was first described in 1990 in Japan. Since Then increasingly diagnosed around the world. Conservative treatment and resolution of the physical or emotional stress result in a radpid resolution of symptoms although some patients develop acute complications such as heart failure and shock.

A case of 24 years old male is reoprted. Abrupt onset of opressive chest pain started 1 hour before arriving in Emergency Department (ED). He was driving a kart during his single party,so had to marry next week. Non smoker, non alcohol abuse, no personal nor family risk factors for cardiovascular disease.

At the moment of admitance in ED pain was heavy opressive , elevated heart rate, cold sweating but with no signs of shock. Electrocardiogram revealed tachycardia and ST segment elevation in V1 to V3. Pain relieved after oral Nitroglicerine amb intravenous morfine. Elevated cardiac biomarkers (I Troponine and CPK) wew found elevated at 6 to 12 hours from pain onset.

Patient were moved to local Intensive Care Unit where further studies were done,those included. Ecocardiography with regional apical left Ventricular (LV) diskinesis, cardiaca catheterization where no significant coronary disease was found and Cardiovascular Magnetic Resonance (CMR) where myocardial edena corresponded to areas of wall motion abnormailty was found.

Other medical conditions as Pheochromocitoma were finally asseses. Brain natriuretic Peptide(BNP) was not available.

Takotsubo syndrome diagnosis was done following Mayo Clinic diagnostic criteria: Transient Left ventricular systolic disfunction, absence of obstructive coronary disease, new electrocardiographic abnornalities, absence of pheochromoitoma or myocarditis

The signos of myocarditis in CMR are commonly seen in stress cardiomyopathy , these signos corresponded to areas of wall motion abnormality, Different pattern is seen in myocardial infarction (MI) and Myocarditis .

Among 1759 patients in the International Takotsubo Registry study 26 % had a physical trigger (such as acute respiratory failure, central nervous System condition or infection) 27,7% reported a emotional trigger (such as grief, loss panic, fear, anxiety, frustration, financial or employment problem)

Physical as stress conditions may also cause heart disease as conventional cardiovascular risk factors . Heart conditions in young people without those conventional risk factorns may be infradiagnosed ,ST segment in routine ECG may guide us to Takotsubo syndrome.

#7776 : Quantifying expert versus novice skill to intubate with McGrath video laryngoscope in prehospital setting

Preferred format : Oral presentation

Authors:

Margot Cassuto (1), Armelle SEVERIN (1), Anna Ozguler (1), Michel Baer (1), Thomas Loeb (1)

1. SAMU92, AP-HP, Garches, FRANCE

Keywords: McGrath videolaryngoscope, novice, expert, prehospital, manikins

Abstract :

Introduction:

Several controlled clinical trials showed McGrath® video laryngoscope (McG) utility in operating room, but this has not been evaluated in pre-hospital setting. Tracheal intubation in pre-hospital setting is considered as more complicated than in-hospital one, due to operating conditions (cervical spine immobilization, trapped victims, poor patient positioning...), non-fasting patients and operator's isolation. One other factor is the few number of tracheal intubations (4.5% of patients in our area), less than once a month per operator. The objective of this study was to compare expert (certified registered nurse anesthetists and physicians with more than 2 years of experience in prehospital setting) versus novice operators' skills to intubate with the McG.

Material and Methods:

A group of 22 expert and 7 novice operators were recruited; they each performed one direct laryngoscopy (DL) with a Macintosh blade followed by a series of 5 McG in two different scenarios with an adult manikin model: easy airway and difficult airway (immobilized cervical spine) management and one scenario with a pediatric manikin.

Collected data were socio-demographic data and mean intubation time (IT) per procedure. Data were described as means and percentages, Wilcoxon test was used to compare the training effect for each group, with a threshold for statistical significance of 5%.

Results:

Novices were younger (mean age 31 years old versus 44 for experts ($p<10^{-3}$) and more often women (85% versus 41% ($p=0.05$).

In adult easy airway management scenario, when using DL, mean IT was twice longer with novices (35.28 sec) compared with experts (17.77 sec), $p=0.01$. Novices could perform intubation faster than experts at first McG attempt, but IT was similar for both groups at 5^{th} attempt.

In adult difficult airway management scenario, experts intubated faster than novices with DL (41.27 sec versus 68.14 sec), as well as with McG: at first attempt (64.23sec versus 82.14 sec), with a significant difference at 4^{th} attempt ($p=0.025$).

Use of McG delayed intubation time for experts compared with DL in both airway management scenarios and only in the difficult scenario for novices. There was a reduced time delay of 5 sec in the easy airway management scenario for novice.

In pediatric manikin scenario, there was no difference between the two groups whether with LD or with McG. Use of McG allowed a gain of more than 1 minute for both groups.

Conclusion :

Experts intubated faster than novices and the results showed no time gain with McG when performed on adult manikins. However, in pediatric manikin scenario there is a real time gain for all operators, this might be due to the low number of pediatric interventions in this prehospital department.

#7778 : Syncope and right-ventricular dysfunction in pulmonary embolism

Preferred format : ePoster

Authors:

Wojciech Rojewski-Rojas (1), Alicia Alvarez-Galarraga (2)

1. Emergency Service, Hospital Universitari Sant Joan, Reus, SPAIN
2. Emergency Service, Hospital Universitari Sant Joan, reus, SPAIN

Keywords: Syncope, pulmonary embolism, right-ventricule dysfunction, PE, biomarkers,

Abstract :

BACKGROUND: Clinical presentation of pulmonary embolism (PE) comprises a wide range of clinical presentations, from asymptomatic incidental findings to typical symptons like dyspnea, chest pain, and syncope. We aimed to investigate theassociation between syncope as presentation of pulmonary embolism and right-ventricular dysfunction.

METHODS: This is a retrospective study of consecutive PE patients who were admitted at Emergency Service in a third-level hospital. Patients with or without syncope were compared. Regression models for associations between syncope and blood pressure, heart rate, high-sensitive troponine T at admission, and presence of increase of right-ventricle were calculated.

RESULTS: One hundred forty-one confirmed-PE patients (56% male, mean age 65,92 ± 12,41 years) were included in this study. Thirty-one patients (22%) showed syncope. Eight patients (3%) died in-hospital. Logistic regression models revealed association between syncope and in-hospital death ($p = 0,06$), and syncope and right-ventricular dysfunction ($p = 0,073$).

CONCLUSION: In our series, syncope was associated to in-hospital death and right ventricule dysfunction.

#7779 : Characteristics of First time seizure in adults presenting to the emergency department

Preferred format : Oral presentation

Authors:

rania jebri (1), anware yahmadi (2), aymen zoubli (2), hanane ghazali (1), mohamed ali gharbi (3), hayet melki (4), mohamed mguidich (1), sami souissi (1)

1. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , ben arous, TUNISIA
4. Service d'Accueil des Urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA

Keywords: First time seizure, emergency department, prognosis

Abstract :

Seizures are a common pattern for seeking care in the Emergency Department (ED). Up to 5% of the population will experience at least 1 nonfebrile seizure at some point during their lifetime (Emerg Med Clin North Am. 2011). The management of a patient who has had a first-time seizure is driven by the history and physical examination and can be a challenge for the emergency physician.

Objective: to identify the epidemiological, clinical and prognostic factors of adult patients presenting to the ED with first time seizure.

Methods and design:

A prospective observational study, conducted over two years. Were included all patients aged>18 years old who presented to the ED with first time seizure. The epidemiological, clinical, biological, therapeutic, and evolution criteria were collected. The prognosis was evaluated on day 7, day 30 and 6 months. Multivariate analysis by multiple logistic regression was performed.

Results:

During the study period, 272 patients with seizures were admitted in the ED. Among them 155 presented with first time seizure and were included in the study. Mean age 48±20 years. Sex-ratio 1.38. Comorbidities: diabetes N = 30 (19%), history of systemic disease N = 8 (5.2 %), history of neonatal pain N = 3 (1%) history of Alzheimer's disease n = 2 (1.2%), psychiatric disease n = 4 (2.5%), stroke N = 12 (7.7%), hypertension n = 19 (12%), heart disease n = 4 (2.5%), thyroid dysfunction n = 2 (1.2%), chronic renal failure n = 4 (2.5%), history of neoplasia n = 2 (1.2%), and one patient with drug addiction. 135 (87%) had generalized tonic-clonic crisis. 31 (20%) patients had neurological deficits. Mean lactate level was 5,4 ± 3,9. The diagnosis of accompanied seizures was made in 103 (66%) patients. In 51 (44%) patients the diagnostic of simple attack was made. Etiology of seizures: 16 patients (10%) had a head injury, 5 (3.2%) had a documented infection, 11 (7%) had intoxication. stroke was found in 33 patients (14 hemorrhagic and ischemic 19). 7 cases of intra cranial expansive process have been identified, 2 cases of hydrocephalus, and a case of cerebral thrombophlebitis. No obvious cause found in 51% of cases. Eight percent had poor prognosis and were admitted to the ICU. The overall mortality was 9%. The recurrence of seizures was 7% at day 7, 22% at day 30 and 20% at 6 months.

Conclusion: the First time adult seizure is a challenge for the emergency physician. He should seek for reversible causes and epileptogenic lesion that can have an impact on the diagnosis, prognosis, and treatment of new-onset seizures

#7780 : Experience and representation of interactions with Emergency Medical Service: A qualitative study among general practitioners

Preferred format : Oral presentation

Authors:

Julie Mayer (1), Anne-Laure Feral-Pierssens (1), Philippe Juvin (1)

1. Emergency Department, Georges Pompidou European Hospital, Paris, FRANCE

Keywords: Qualitative study, Emergency Medical Service, Emergency Medical Dispatcher

Abstract :

Introduction:General practitioners (GP) are sometimes confronted to medical emergencies in their office. There have been few evaluations of the interactions between GPs and Emergency Medical Dispatcher when a call is made from the office. Our aim was to investigate GPs representations of Emergency Medical Dispatcher (EMD) and Emergency Medical Service (EMS) through their experience of joined management of emergencies.

Method:We conducted a qualitative study through semi-structured interviews by maximum variation sampling from july 2015 to april 2016 in our region. We developed themes concerning GPs medical experience and training, personal histories of patients needing emergency care, experience of calls with EMD and interactions with EMS.

Results:We conducted 13 interviews with GPs. Analysis showed different GPs reactions and experiences while calling EMD and in front of EMS while in the office:

- Collaboration: based on trust, confidence and acknowledgement of each other skills
- Cooperation: based on the acceptance of GPs own needs of specialized help and skills and respect of practical standards.
- Negation: based on the lack of relationship and interactions and sometimes competitive feelings.
- Distrust: based on avoidance strategies

Cooperation is the model mainly developed. GPs are keen to apprehend and better understand EMS and EMD specialty and would like to see deeper links and interactions between general practice and hospital.

Conclusion:This qualitative study shows the heterogeneity of GPs experiences while taking care in their office of urgent patients. Inter-professional interactions between GPs and EMD/EMS should be emphasized in order to increase the quality and efficiency of emergency care in general practice.

#7781 : Epidemiology of infection in elderly patients admitted to the emergency

Preferred format : Oral presentation

Authors:

KAMEL MAJED (1), boubaker radhia (2), NEILA MGHAIETH (3), BACCOUCHE RAMLA (2), khelil mohamed hassen (2), KHEDIJA ZAOUCHE (3), HAMIDA MAGHRAOUI (3), MOHAMED MODHAFFER (3), CHOKRI HAMOUDA (3), NEBIHA BORSALI FALFOUL (3)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA

Keywords: eldery, infection, emergency department

Abstract :

Objective

The study aim was to describe clinical features of severe infection in old patients admitted in the emergency department.

Patients and methods

Descriptive retrospective study including old patients, admitted in the emergency department with severe infection presenting with an infection associated with systemic inflammatory response syndrome and an organ dysfunction.

Results

Sixty one patients were enrolled. The average age was 77 ± 8 years,37 patients were males. Most patients had a past history of diabetes (52%), stroke (31%), chronic pulmonary disease (18%), pulmonary neoplasm (13%) and chronic renal failure (8%). The most frequent complaint was dyspnea (40%). Fever was found in 34% of cases, cough in 25% and sputum in 20%. Coma and confusion were found respectively in 21% and 7% of cases. Sepsis was found in 77% of cases and septic shock in 15%. Pneumonia was the first infection (53%), urinary tract infections was diagnosed in 31%, gastrointestinal infection in 10% and skin infection in 5%. The consultation reason was correlated with the diagnosis in 44% of cases. In cases of pneumonia, respiratory signs were found in only 36% of cases, urinary symptoms were found in 10.5% of urinary tract infections.

In hospital mortality was 36%. The causes of death were a refractory shock in 62% of cases and acute respiratory failure in 38% of cases.

Conclusion

Sepsis related mortality is high in elderly in emergencies, about 36%. It’s partially explained by the atypical infectious symptoms reaching 56% with a significant treatment.

#7782 : Bleeding in anticoagulated patient: report of a rare case.

Preferred format : ePoster

Authors:

Marina Buforn (1), Enrique Caro (1), Carmen Adela Yago (1), Andrés Buforn (1)

1. Critical care and Emergency Service, Andalusian Health Service, Málaga, SPAIN

Keywords: Vomiting, torsades de pointes , parenchymal hematoma.

Abstract :

79 year old woman patient, diabetic, hypertension, ischemic heart disease with triple bypass and pacemaker carrier, treated with acenocoumarol, atorvastatin, enalapril and metformin. Go to emergency room for nausea, vomiting and abdominal pain 12 hours of evolution, previously serviced by ambulance and treated coin antiemetics and sulpiride, without improvement. Not refer other symptoms.
Physical examination: neurological examination, abdominal and cardiorespiratory auscuktation within normal limits.
Blood tests, urine and abdominal radiographs are requested. Sulpiride is intramuscular regimen, without improvement.
results:
- Analytical discrete neutrophilia, PCR <1, INR 2'3. Rest within normal limits.
- Urine: neutrophilic leukocytosis.
- Radiography abdomen without pathological images.
During the stay in the ER, suffers clinical worsening, with dizziness and convulsion, why is serviced in Box CPR.
Immediately, the patient is monitored, stabilized and ECG and CT scan are requested. While performing cranial CT suffers ventricular fibrillation episode objectified in monitor, so electric shock is applied with 150 J and permeability of the airway is maintained with self-inflating bag and oropharyngeal cannula.

Results cranial CT: acute parenchymal hematoma in left cerebellar hemisphere of 2.5 x 2.5 cm, with perilesional edema without mass effect on the fourth ventricle or other infratentorial parenchyma.
It warns Intensive Care Unit and the neurosurgeon. Vitamin K and prothrombin complex are administered. Analytical requested magnesium levels.
Neurosurgery discarded surgical approach. Intensive Care indicates tell if clinical worsening. The patient remains in watching ER. It is reported relatives of the patient.
Analytical stands glucose 288 mg / dL, magnesium 1'1 mg / dL.
After the replacement of magnesium, neurological patient monitoring and maintaining the Glasgow score 15 without objectified hemodynamic deterioration, it is admitted by Neurology.

Conclusion:
Faced with a suggestive picture of vertigo resistant to treatment, we must suspect a central source. In this case, since the patient is anticoagulated, it is important to perform a CT scan to rule out bleeding. We know the management of hemorrhage in the anticoagulated patient, since the reversal of INR help control bleeding and therefore clinical worsening. It is also important to know the classification of bleeding in anticoagulated patients: minor bleeding, severe bleeding and severe bleeding with life-threatening. In our case, this is a hemorrhage of the third kind, since it is symptomatic intracranial hemorrhage (debuting with vomiting, dizziness and seizure). In severe bleeding in anticoagulated patient with acenocumarol we must administer vitamin K and prothrombin complex to reverse the anticoagulant effect of the drug as soon as possible.

#7783 : Systemic inflammatory response syndrome (SIRS) in infected elderly patients in emergencies department

Preferred format : Oral presentation

Authors:

KAMEL MAJED (1), boubaker radhia (2), abdelwaheb mghirbi (2), BACCOUCHE RAMLA (2), KILANI MOHAMED (2), KHEDIJA ZAOUCHE (3), HAMIDA MAGHRAOUI (3), MOHAMED MODHAFFER (3), CHOKRI HAMOUDA (3), NEBIHA BORSALI FALFOUL (3)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA

Keywords: SIRS, elderly, emergency department

Abstract :

Objective

The study aim was to assess the diagnostic and prognostic value of systemic inflammatory response syndrome (SIRS) in infected elderly patients in emergencies.

Patients and methods:

Descriptive retrospective study including patients aged more than 65 years, who were admitted to the emergency department for a proven infection during two months (December 2014 and July 2015).

Results:

61 patients were included. The average age was 77 ± 8 years with 37 patients were males. 52% of patients had diabetes, 31% stroke, 18% chronic pulmonary disease, 13% active cancer and 8% chronic renal failure. The initial presentation was consistent with severe sepsis in 77% of cases and septic shock in 15%. 83.6% of patients had SIRS on admission (2 criteria in 42.6% and 3 criteria in 26.2% of cases). The average length of stay was 3 days. The mortality rate was 39.2% in patients with SIRS at admission versus 20% in patients without SIRS ($p < 0.01$).

Conclusion

The presence of SIRS at admission may be considered as a significant prognostic factor in infected elderly patients presenting to the emergency department.

#7784 : Traumatic injuries in horse cart accidents in an emergency department in North-East Romania

Preferred format : ePoster

Authors:

DIANA CIMPOESU (1), PAUL - LUCIAN NEDELEA (2), ANDREI HINCU (3), MIHAELA DUMEA (1), GIORGIANA MATEI (4), TUDOR OVIDIU POPA (5)

1. Emergency Department "St.Spiridon", Iasi, Romania, UMF "Gr.T.Popa" Iasi, Romania, Iasi, ROMANIA
2. Emergency Department , none, Iasi, ROMANIA
3. Emergency Department "St.Spiridon", Iasi, Romania, none, Iasi, ROMANIA
4. Emergency Department "St.Spiridon", Iasi, Romania, none, IASI, ROMANIA
5. Emergency Department "St.Spiridon", Iasi, Romania, UMF "Gr.T.Popa" Iasi, Romania, IASI, ROMANIA

Keywords: trauma, horse cart

Abstract :

Purpose of the study: Horse cart accidents are characterisc at countryside where this vehicles are still the main way of making agriculture for people. In this study we wish to illustrate the main traumatic mechanisms and the management in the Emergency Department of this type of patients.
Materials and methods: A descripve retrospective study made in Emergency Department of Saint Spiridon Hospital in Iasi, between 1st of June 2015 and 31st of March 2016. There were registered patients with horsecart accidents as presenting complaint, regardless the mechanism involved: fall down from the horse cart, impact/crush, impact with an vehicle/car. We rated general demographic data, environmental origin, the mechanism they were produced, investigations and treatments made in emergency department. The data obtained were processed in SPSS, version 19.
Results: There were recorded 157 patients with trauma produced by falling down from horse cart, ages between 18-83 years. 88% (139 patients) came from country side, 73% (115 patients) were male. Most accidents were produced in summer (31%) and autumn (41%). The main producing mechanism was falling down from horsecart (69%), followed by the impact with an vehicle (14%), crush (11%) or people/pedestrians crushed by the horse cart (6%). In 13% of cases, patients presented themselves at the hospital and in 84% of cases the patients were hemodynamic and respiratory stable. Regarding the presented injuries, prevailed arms or legs fractures at 27 patients (17,19%), followed by cranio-cerebral injuries (10,19%) and thoracic-abdominal injuries (8,28%). There were made X-rays in 22,9% of cases, abdominal ultrasound (63,69%), CT (6,36%), only 8 patients (5,09%) required investigations. There were performed chest drainage in case of 7 patients (4,45%) and there were reduced scapula-humeral dislocations at 12,1% patients, most of them requiring hemodynamic stabilization and painkillers (86,4%). After the investigations made in emergency department, 15,28% of patients were hospitalized at orthopedics, 11,46% at general surgery, ENT 5,09%, maxillofacial 3,82% and thoracic surgery 10,82%. The others patients were sent at the neurosurgery or discharged to their homes (51,59%).
Conclusions: The pathology of the patients determinated by falling down from the horse cart represents a distinct part of trauma patients that presents in Emergency Room, specific for countryside. Alcohol ingestion is a favorable factor of producing accidents. Most of injuries produced in this accidents are minor and they did not require hospitalization but they benefited of multiple investigations inEmergency Department (X-rays, ultrasound, CT, blood tests).

#7785 : Opioids and Emergency: is it an alternative?

Preferred format : ePoster

Authors:

MARTA MERLO (1), MERCEDES CUESTA (1), FRANCISCO SALAS (1), CÉSAR VERGARA (2)

1. A&E, HOSPITAL UNIVERSITARIO GETAFE-MADRID, MADRID, SPAIN
2. PRIMARY CARE, SESCAM, TOLEDO, SPAIN

Keywords: Pain, Emergency; Opioids

Abstract :

INTRODUCTION

Up to 50 % of E&A visits are for pain, either acute or chronic exacerbations. Proper diagnosis , treatment and control significantly influences the care overload of these services.

OBJECTIVES

¥ To analyze the epidemiological characteristics and management in the emergency department of patients with severe acute or chronic pain, exacerbated or poorly controlled, noncancer (VAS> 8), which is administered therapy with inhaled quick-release fentanyl (IQF).

¥ To Check the discharge treatment and evolution in the next week.

METODS

Descriptive study, without intervention, retrospective of patients presenting to the emergency department of a tertiary hospital for pain of the features described, from 1 to 31 March 2015. The data obtained from clinical history program and we analyzed using SPSS program.

RESULTS

During the study period it was prescribed IQF to twelve patients presenting with acute or exacerbated pain, with mixed characteristics .

Women predominated (58%) with mean age 65 ± 13 years. The sample was characterized by high Charlson comorbidity index (75%). 17% consulted for acute pain less than a day of evolution and the rest (73%) by poor control of chronic or acute pain, the average time duration of symptoms was 22 ± 12 days.

Except for two patients , all taking analgesic treatment before his visit to the emergency room , the most used paracetamol and anti-inflammatory . None took strong opioids. The most frequent reason for consultation was musculoskeletal pain 67 % (8) followed by visceral pain. The average intensity according to the numerical visual scale (VAS) was 9.

They were given IQF getting a good pain control in all cases within 30 minutes with VAS < 6. This value was maintained or decreased to thirty minutes in all patients . (VAS average 2-60 minutes) .

All patients were discharged with analgesic treatment (strong opioids 83%). Only one patient was admitted to complete inpatient study and two were assessed again at 48 hours : one for persistent pain (VAS 5-6) that was resolved by adjusting the dose of fentanyl without specifying income and another for a reason different it is having to do with an underlying disease.

CONCLUSIONS

IQF administration get good control of pain of moderate to severe intensity, helping to reduce the stay and revisits, and promoting quality of care in the E&A.

#7786 : Thrombolytic Therapy on acute coronary syndrome with ST segment elevation in emergency department : Predictors of TIMI 3 coronary flow.

Preferred format : Oral presentation

Authors:

aymen zoubli (1), sami souissi (2), rania jebri (2), wided bahria (3), anware yahmadi (1), farah riahi (3), mohamed mguidich (2), hanane ghazali (2)

1. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
2. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , ben arous, TUNISIA

Keywords: Thrombolytic Therapy, acute coronary syndrome with ST segment elevation, emergency department, TIMI 3 coronary flow

Abstract :

Introduction :

Thrombolytic therapy of acute coronary syndromes with ST segment elevation (STEMI) helped ahieve better outcome especially in hospitals without cath-lab department .

Objetive :

The purpose of this study was to identify patient characteristics that are a priori predictors of early infarct related artery patency following thrombolytic therapy in patients presenting to the emergency department (ED) with STEMI.

Materiel and method:

Prospective study over a period of 5 years. Were included all the patients admitted to the emergency department with STEMI within less than 12 hours, which were thrombolysed and for whom the results of coronary angiography was collected. Anamnestic, clinical features, treatment and outcome characteristic were collected. The success of lysis was defined by a TIMI III coronary flow.

Results:

During a period of 5 years, 193 patients were included, mean age 58 +/- 11 years, the sex ratio was 6.4. Comorbidities: N (%) : history of smoking 153 (79), Diabetes 63 (32), hypertension 60 (31), dyslipidemia 23 (12%), coronaropathy 8 (4%). The mean time of ED visit was 179 +/- 158 min, with a mean first-time medical thrombolysis contact 32 min +/- 22, and a mean hospital stay of 231 minutes (+/- 325).

In univariate analysis, time of visit to the ED, SBP, history of smoking, diabetes and inferior infraction were identified as predictive factors of success.

In multivariate analysis, only the inferior infraction was identified as predictor of thrombolysis success with OR 1.4, 95% CI [1.04 to 1.89], p = 0.02.

Conclusion :

STEMI in the lower territory have better outcomes after thrombolysis in the ED.

#7787 : Emergency Medical Services Triage based on Manchester Triage System: Is it feasible and reliable?

Preferred format : Oral presentation

Authors:

Bernd A. LEIDEL (1), Angela ALE ABAEI (1), André BAUMANN (2), Jaqueline D. LEE (1), Birgit LIEHR (1), Stefan POLOCZEK (3), Lan Houng TIMM (1), Rajan SOMASUNDARAM (1)

1. Department of Emergency Medicine, Charité - Universitätsmedizin Berlin, Campus Benjamin Franklin, Berlin, GERMANY
2. Berlin Fire and Rescue Academy, Berlin Fire Department, Berlin, GERMANY
3. Medical Board of EMS, Berlin Fire Department, Berlin, GERMANY

Keywords: Emergency medical services; Manchester Triage System; Prehospital triage; Triage; Emergency department

Abstract :

Introduction: Established triage methods in hospitals for systemic prioritizing of patients also in the prehospital setting may improve patient transfer from emergency medical services (EMS) to emergency departments (EDs) by efficient communication between EMS and EDs. Therefore we evaluated the feasibility and reliability of EMS triage based on Manchester Triage System (MTS).

Methods: This prospective, observational study evaluated the feasibility and reliability of EMS triage based on MTS. EMS providers were trained to use MTS with 11 out of the original 52 flowcharts based on patient complaints. Discriminators indicative of severity of complaints were maintained. EMS personnel assigned triage scores to patients independent of ED assignments by registered nurses. All EMS and ED assignments were audited regarding correct triage category. Feasibility, differences of EMS versus ED triage assignments and reliability were evaluated.

Results: Overall 208 blinded triages assignments were available for evaluation. Audition revealed no significant difference in triage assignments, with 31/208 (15%) incorrect EMS and 29/208 (14%) incorrect ED triage assignments (Chi-square test p=0.896). All incorrect assignments were errors of application, in majority with 41/59 (69%) wrong discriminators were chosen.

Conclusions: Prehospital triage based on MTS is feasible and reliable with good concordance between EMS and ED triage based on MTS. Most incorrect assignments were due to application errors. Additional research to validate our results are warranted.

#7788 : The catastrophic complication of an old lady infected by swH1N1--acute disseminated encephalomyelitis(ADEM)

Preferred format : ePoster

Authors:

Hou-wen Chen (1), Shu-ping tung (2)

1. Emergency Attending Physician , Taoyuan General Hospital, Ministry of Health and Welfare, Taoyuan, TAIWAN
2. Chief of Emergency department, Taoyuan General Hospital, Ministry of Health and Welfare, taipei, TAIWAN

Keywords: swH1N1, Empty sella, Pleocytosis, ADEM

Abstract :

Introduction:Flu virus attacks patients of all generations. But post-flu infection has different presentations-through minor to lethal. It depends according to the host immunity and uncontrolled post-infection cytokine storm. High amount of patient-care in emergency department (ED) always happens during the Chinese Lunar New Year with long vacation and failure to service with the regular outpatient clinic follow-up. Meanwhile heavy burden of patient care happened in our ED, no matter flu infection or other medical and trauma emergency cases. We present a case with swH1N1 infection complicated with ADEM at our ED.

Material and Methods:A 61-year-old female was robust in the past. Unconscious with hypoglycemia developed after 3 days of URI s/s. She was sent to our ED for help where stable vital sign with E3V2M2. Then a series of exams deployed and carbon dioxide retention with metabolic acidosis was noted. Influenza A infection was also confirmed through rapid test. At our ED, endotracheal tube insertion for airway secure and control of lower lung pneumonia was performed. Brain images included computed tomography and MRI were arranged and the disposition of poor conscious patient was the intensive care unit. After detailed neurological and labratory exams, pleocytosis from central nerve system was detected through the procedure of lumbar puncture. Acute disseminated encephalomyelitis (ADEM) was highly suspected after the survey of brain images, lumbar puncture, autoimmune markers. Unfortunately, central failure with deep coma developed in the following days and she was expired about 3 weeks later. The genetic virus identification of PCR test with sputum specimen showed swine H1N1 virus.

Discussion and Conclusion:H1N1 flu is a new virus that has been detected throughout the world since 2009 April. After World Health Organization (WHO) confirmed the pandemic of swine H1N1, several sporadic neurological complications, including speculated as a precedential event in diseases such as Reye’s syndrome, Guillain-Barré syndrome (GBS), Kleine-Levine syndrome, and post-encephalitic Parkinsonism. But our case is the third case of the fulminant and fatal neurological complication after swine flu infection through reviewing published literatures. We emphasize the early warning, necessary rapid test, liberality usage of advanced images about altered mental status patients post URI s/s in ED.

#7790 : The relationship between systolic blood pressure at admission and LVEF in acute heart failure syndromes in the emergency department

Preferred format : Oral presentation

Authors:

rania jebri (1), rania jebri (1), olfa Djebbi (2), houaida Mahfoudhi (3), mounir Haggui (2), mehdi Ben lassoued (2), Khaled Lamine (2)

1. emergency department , military hospital of tunisia, Ben Arous, TUNISIA
2. emergency department , military hospital of tunisia, tunis, TUNISIA
3. cardiology department, military hospital of tunisia, tunis, TUNISIA

Keywords: systolic blood pressure, LVEF, acute heart failure, emergency

Abstract :

Introduction: Acute heart failure syndrome (AHFS) are a common pattern in the emergency department (ED). It has been reported that patients with a reduced left ventricular ejection fraction (LVEF) tend to be normotensive or hypotensive, while those with preserved LVEF were more likely to be hypertensive. However, it is unclear if the systolic blood pressure (SBP) is associated with LVEF in SICA.

Objective: To study the relationship between SBP at admission and LVEF in patients hospitalized in the ED with AHFS.

Design and methods: A prospective descriptive study conducted over seven months. Were included all patients who presented to the ED with dyspnea and in whom the diagnosis of acute heart failure was made. All patients underwent echocardiography by the same operator within 24 hours. Were noted the demographics, clinical, biological, and evolutionary criteria. The patients were divided according to the systolic blood pressure (≤90mmhg between 90 and 140 mmHg, and ≥140mmhg), and the LVEF was compared between the different sub groups. ROC curves were created to establish the values of optimal cut-off and multiple logistic regression was performed.

Results: One hundred and seven patients were enrolled. The mean age was 65 ± 12 years. The sex ratio was 2.34. For the group of patients who had SBP at admission ≥ 140 mmHg, 16% had a reduced LVEF and 22% a preserved LVEF, the difference was statistically significant. For the group of patients who had a SBP between 90 and 140 mmHg, 46% had a reduced LVEF and only 8% had preserved LVEF, the difference was also statistically significant. For the group of patients who had a SBP <90mmHg, 7% had a low LVEF, and no patient had a preserved LVEF.

The ROC curve has shown a cut-off to 122mmhg to differentiate between the reduced and LVEF preserved, with an area under the curve 0.59. The sensitivity was 85%, specificity of 67% and an LR + 2.57.

Conclusion: There is a relationship between SBP at admission and LVEF in patients hospitalized for an emergency SICA.

#7791 : Follicular debris in the diagnosis of ovarian torsion

Preferred format : ePoster

Authors:

Gerardo Chiricolo (1), Christopher Raio (2)

1. Emergency Medicine, NY Methodist Hospital, Brooklyn, USA
2. Emergency Medicine, Good Samaritan Hospital Medical Center, Dix Hills, USA

Keywords: ultrasound, ovarian torsion

Abstract :

Objective

This study set out to examine the presence of fluid debris in patients diagnosed with ovarian torsion. A secondary aim is to identify and correlate FFD to the presence of cysts, ovary size, and arterial resistive index (RI).

Methods

A retrospective chart review was done of all patients that presented to the emergency department (ED) at NY Methodist Hospital with the confirmed diagnosis of ovarian torsion from January 1, 2011 to July 1, 2015, who had an ultrasound available for review. RIs were obtained directly from the point of care ultrasound (POCUS) or comprehensive ultrasound (CUS).

Results

56 had ovarian torsion and 48 ultrasounds reviewed for the presence of FFD in the torsed ovary. Of those 48, 21 had POCUS. all others had CUS. 63.8% (30) had FFD present in the affected ovary. Of those with FFD, 83.3% (25) had ovarian cysts. Also 53.3% (16) had an RI calculated and 23.3% (7) of those had an elevated RI; 9 had no RI due to lack of arterial flow or poor image quality.

Conclusion

The majority of the torsion patients demonstrated FFD, however the value of this is not yet clear. A larger study combining other findings of torsion with the presence of fluid debris should be conducted. Lastly, a larger retrospective or prospective study is required to evaluate the utility of the presence of FFD in POCUS.

#7793 : Review of ectopic pregnancies diagnosed by emergency department point-of-care ultrasound

Preferred format : ePoster

Authors:

Gerardo Chiricolo (1), Christopher Raio (2)

1. Emergency Medicine, NY Methodist Hospital, Brooklyn, USA
2. Emergency Medicine, Good Samaritan Hospital Medical Center, Dix Hills, USA

Keywords: ultrasound, ectopic pregnancy

Abstract :

Background

Ectopic pregnancy is a high-risk condition that occurs in only 1.9 % of reported pregnancies. However, as high as 20% of pregnant patients presenting to the emergency department with abdominal pain will have ectopic pregnancy (1). Both clinician performed point of care ultrasound (POCUS) performed by emergency physicians or consultative ultrasound by the radiology department (RADUS) has been used in the diagnosis of ectopic pregnancy.

Objective

To assess whether POCUS reduces time to ED disposition (ED LOS), time to operating room (OR), and hospital length of stay (LOS) in ectopic pregnancies.

Method

A retrospective chart review was performed on patients presenting to the ED from January 1, 2014 to August 1, 2015 with a diagnoses of ectopic pregnancy. Patient charts that utilized RADUS were compared to patient charts that used POCUS. The time to disposition, OR, and hospital LOS were reviewed.

Results

From 2014-2015 there were 133 patients diagnosed with ectopic pregnancy. 41% of patients received POCUS, 68% received RADUS, and 12 patients (9%) received both. 92% were admitted and 63 (47%) went to OR. Of the OR patients, 29 had POCUS alone and 5 (8%) had both POCUS and RADUS. On average, ED LOS for POCUS was 300 minutes vs 360 minutes for RADUS (p=0.11); Time to OR for POCUS was 519 minutes vs 545 minutes for RADUS (p=0.78). Hospital LOS was 1.02 days for patients that received POCUS vs 1.13 days for patients that had RADUS (p=0.53). During RADUS hours of operation, 32% had POCUS compared to 74% RADUS. When RADUS was unavailable, 100% had POCUS, but 31% also had RADUS conducted by an on-call technician. Time to OR was 431 minutes when RADUS was unavailable and diagnoses was made by POCUS alone vs 543 minutes in other cases (p=0.48).

Conclusion

POCUS is often used in suspected ectopic pregnancies. Temporal outcomes for diagnosed ectopic pregnancies with POCUS are not inferior to that of RADUS. POCUS may allow for faster decision making and earlier implementation of treatment in patients diagnosed with ectopic pregnancies.

#7794 : A prospective feasibility trial of accucath™ 2.25” blood control intravascular catheter system with retractable coiled tip guidewire placed in difficult access patients in the emergency department

Preferred format : ePoster

Authors:

Christopher Raio (1), Gerardo Chiricolo (2)

1. Emergency Medicine, Good Samaritan Hospital Medical Center, Dix Hills, USA
2. Emergency Medicine, NY Methodist Hospital, Brooklyn, USA

Keywords: ultrasound, vascular access

Abstract :

Objective:

The primary study objective is to evaluate insertion success rates. Secondary objectives include user preference, patient satisfaction, complications, completion of therapy and dwell time of the novel AccuCath™ 2.25” BC Catheter System (FDA approved) placed in difficult access patients.

Methods:

This is a single-arm feasibility trial evaluating the novel AccuCath™ 2.25” BC Catheter System in a convenience sample of difficult intravenous access patients defined as at least 2 failed initial attempts or a history of difficult access plus the inability to directly visualize or palpate a target vein. The retractable coiled tip guidewire device is placed under dynamic ultrasound guidance after identification in the ED using a modified Seldinger technique. All catheters are placed by EM physicians after a 30-minute training session which includes simulated procedures on ultrasound phantoms. Patients are followed daily until catheter removal. Subject’s demographic (age, race, gender); admitting diagnosis, past medical history, baseline information (height, weight, systolic/diastolic blood pressure); and primary indication for intravenous line will be documented.

The following information is recorded for each subject enrolled:

- AccuCath™ 2.25” BC catheter device gauge
- Date, Time and Location of First IV Placement Attempt
- Time and Location of Each Subsequent IV Placement Attempt
- Use of USG With Each Catheter Attempt
- Observation of Flashback With Each Catheter Attempt
- Total Number of Venipuncture Attempts (each catheter insertion attempt)
- IV Rating Scale with Factors Contributing to Insertion Difficulty for Each Catheter Attempt
- Date, Time of Successful Catheter Placement
- Patient Satisfaction at initial placement and upon removal using a 5 Point Likert Scale
- Clinician Satisfaction at completion of study using a 5 Point Likert Scale
- Safety outcomes anticipated to be similar to conventional catheters (Number and Severity of AEs)

Device Description

- The AccuCath BC Intravascular Catheter System is designed to reduce blood exposure once at insertion. The catheter system consists of a radiopaque catheter with a valve mechanism delivered over a guidewire with atraumatic tip design; a notched needle to enhance flashback visualization, and a safety container that prevents sharp injuries.

Results:

120 patients enrolled and completed the study. These patients had an average of 3.7 (95% CI 3.0-4.0) and median of 3 prior attempts at vascular access prior to Accucath placement by the ED registered nursing team. Successful access was gained in 100% of the patients, 77% on 1st attempt and all within 3 attempts. 84% of patients completed therapy with no moderate or major complications in the other subjects. The average patient satisfaction score upon removal on a 5-point Likert scale was highly positive at 4.6.

Conclusion:

The AccuCath™ 2.25” BC Catheter System has excellent success rates in gaining vascular access in an extremely difficult patient population. The device thus far has not led to any significant complications. Patients are also very satisfied with the procedure.

#7795 : A new point-of-care ultrasound workflow removing the middle man

Preferred format : ePoster

Authors:

Christopher Raio (1), Gerardo Chiricolo (2)

1. Emergency Medicine, Good Samaritan Hospital Medical Center, Dix Hills, USA
2. Emergency Medicine, NY Methodist Hospital, Brooklyn, USA

Keywords: ultrasound, workflow

Abstract :

Objectives

Developing a seamless point-of-care (POC) ultrasound workflow has challenged frontline providers for years. Ideally, it would contain the fewest number of steps, allow for rapid examination performance and interpretation and perhaps most importantly become integrated into the electronic medical record (EMR).

Previously reports of workflow solutions have typically involved third-party “middle-ware.” These products add cost to the process and institution.

We developed a solution utilizing the EPIC EMR existing infrastructure to allow seamless order entry, worklist population and demographic entry, PACS integration, EMR results reporting and medical record billing. Prior to this implementation emergency department ultrasound images were not permanently stored as part of the medical record.

Methods

Physicians enter an application-specific order in EPIC as they would for any other diagnostic test. EPIC routes the order to an ultrasound modality worklist. On the modality the examination is selected and demographic information populates from the order. On study completion, the clinician ends the examination, sending images to PACS from the modality. In the radiology read worklist in EPIC, the physician associates the patient account number and enters a report using customized application-specific templates. The results, including a link to the PACS images, are immediately available to all providers with EMR access.

Results

The process allows for documentation and permanent EMR storage of POC ultrasound studies. The EPIC EMR allows consultants or providers throughout the health system to access a link within the report to review the PACS images. The advantage of using solely EPIC, rather than multiple interfaces, is that clinicians across specialties are able to view important clinical results;providers are also easily able to integrate this process into their workflow as they are accustomed to placing orders and navigating EPIC for all clinical functions. Continuity of care is improved as our patient portal allows the patient to access results and share with providers outside the health system. Additionally, by having the report in the standard results section of the EMR, providers do not have to search the chart for a separate clinical procedure note or flowsheet.

By placing the order for the ultrasound, completing the study (including sending the images to PACS), linking the registration account number in EPIC to the study, and the attending physician entering a report complete with the patient information, indications, findings and impression, the steps required to allow a professional and technical fee bill are complete. This also allows us to easily separate out billed official studies from educational studies, as the later are not ordered in the EPIC EMR. Also, the billers and coders do not need to dissect through notes or access additional systems, as all the elements for billing are stored within EPIC.

Conclusion

This novel workflow solution allows for a streamlined workflow with minimal interfaces with which the clinical sonologist and down-stream providers have to interact. This improves patient care and safety by allowing ultrasound to be used readily at the bedside and have that information available for the provider and as a permanent part of the medical record.

#7796 : Comparison of Parasternal Long Axis and Carotid VTI measurements to Apical 5 Chamber VTI for the assessment of Fluid Responsiveness

Preferred format : ePoster

Authors:

Chiricolo Gerardo (1), Christopher Raio (2), Ryan Giorgetti (1)

1. , NYMH, Brooklyn, USA
2. , Good Samaritan Hospital, Dix Hills, USA

Keywords: point of care, ultrasound, VTI, focused echocardiography, fluid responsiveness, fluid challenge, passive leg raise

Abstract :

Background

Accurate assessment of fluid responsiveness remains a significant challenge in critically ill patients. Doppler measurements of stroke volume [SV] using left ventricular outflow tract — velocity time integral [LVOT VTI] have been utilized to predict fluid responsiveness when combined with a passive leg raise maneuver [PLR]. Traditionally, the apical 5 chamber [A5C] view has been used for LVOT VTI; but its usefulness remains limited due to the considerable skill required to obtain it. The primary objective of this study is to determine if easier-to-obtain VTI measurements from alternative sites such as parasternal long axis [PLAX] and carotid artery [CA], are equivalent to the A5C. A secondary objective is to evaluate CA Blood Flow as a measure of fluid responsiveness.

Methods

Healthy adult volunteers were recruited and consented. Subjects were placed in supine position with the head of the bed at 45 degrees and peripheral IV lines placed. Non-invasive baseline measurements of CO (NICOM), HR and SV were made. Five sets of Doppler tracings were obtained in the CA, PLAX, and A5C views at baseline. Doppler and NICOM measurements were repeated 3 minutes after PLR and again 3 minutes after an IV fluid bolus (IVFB) of 10cc/kg. The change (Δ) in all parameters were compared after PLR and IVFB. Pearson correlation coefficients were calculated.

Results

15 volunteers were recruited and 1080 data points generated. Doppler measurements were made after all participants were scanned and blinded to the examiner during the study. Our data shows that baseline CA VTI and CA Flow measurements correlated well with A5C [r=0.65]. ΔCA flow also compared very well to ΔA5C after PLR [r=0.74] and correlated well with ΔA5C after IVFB [r=0.65]. Both correlated well with ΔCO [r=0.69]. PLAX Doppler tracings suffered significant motion artifact and measurements did not correlate as well as CA with A5C.

Conclusion

PLAX views were easier to obtain than A5C but VTI measurements from this view did not correlate as strongly with A5C compared to those from CA. The PLAX Doppler tracings were of limited quality due to motion artifact making measurements from this site less reliable. In contrast, high quality Doppler tracings from CA were easily obtained in all cases. CA VTI and Blood Flow was comparable to A5C. The ΔCA Flow consistently correlated well with ΔA5C. The simplicity of obtaining measurements from this site and minimal skill level required suggests that CA Doppler may be a highly reproducible and useful marker of fluid responsiveness.

#7797 : B-Mode Ultrasound Signs in Ovarian Torsion and Normal Doppler Blood Flow: Masses, Cysts, and Follicular Ring Sign - A Potential Diagnostic Algorithm

Preferred format : ePoster

Authors:

Chiricolo Gerardo (1), Christopher Raio (2), Harinder Singh (1)

1. , NYMH, Brooklyn, USA
2. , Good Samaritan Hospital, Dix Hills, USA

Keywords: point of care, ultrasound, Ovarian Torsion, Follicular, Ring Sign

Abstract :

Background: Ovarian torsion is a surgical emergency for which ultrasonography is the gold standard imaging modality. Absence of blood flow is diagnostic, but blood flow may be visualized in the setting of torsion. B-Mode signs may be sufficient to establish torsion in the presence of blood flow. Ultrasound finding of masses or cysts, as well as, “Follicular Ring Sign” (FRS), a prominent hyperechoic ring around the antral follicles of the affected ovary, have been identified in patients with ovarian torsion.

Objective: To determine if the presence of ovarian mass, cyst, or FRS can predict the diagnosis of ovarian torsion, when Doppler blood flow analysis is nondiagnostic.

Methods: A retrospective chart review was done for patients diagnosed operatively with ovarian torsion at a large community, teaching hospital from January 1, 2011 to January 1, 2015. Preoperative pelvic ultrasounds from these cases were examined for the presence or absence of Doppler flow, ovarian mass or cysts, and FRS.

Results: 63 patient charts were reviewed. 43 patients were found to have preoperative ultrasounds and surgically confirmed ovarian torsion. In total 46 scans were reviewed. 34 were radiology scans (RAD), and 12 were point-of-care scans (POCUS) performed in the ED.

Doppler flow was done in 44 of 46 scans. 19/44 (43%) had normal arterial and venous Doppler flow. 25/44 (57%) had abnormal or absent arterial flow. 15/44 (34%) had abnormal or absent venous flow and 15/44 scans (34%) had abnormal or absent arterial and venous flows.

The presence of ovarian mass alone had sensitivity of 28%, specificity of 100%, PPV of 100% and NPV of 77%. Ovarian mass or cyst had sensitivity of 84%, specificity of 79%, PPV of 80% and NPV of 83%.

Of the 46 ultrasounds reviewed, ovarian follicles were seen in 30 scans. The presence of FRS was assessed in these 30 scans (22 RAD and 8 POCUS). Overall FRS had a sensitivity of 60%, specificity of 83%, PPV of 78% and NPV of 68%. For RAD only, FRS had a sensitivity of 50%, specificity of 82%, PPV of 73% and NPV of 62%. For POCUS only, FRS had a sensitivity of 88%, specificity of 88%, PPV of 88% and NPV of 88%.

Conclusion: 43% of the patients with ovarian torsion had normal arterial and venous blood flow. The presence of ovarian mass was found to be 100% specific for the diagnosis of ovarian torsion. FRS alone does not appear to be highly sensitive or specific for the diagnosis of ovarian torsion. The sensitivity and specificity of the ED POCUS scan is higher compared to the Radiology Department scans.

An algorithm starting with Doppler flow and, when present, progressing to ovarian assessment for mass, cysts, and FRS may have high predictive value.

#7798 : The Effect of Cholecystitis Diagnosed by Emergency Department Point of Care Ultrasound on Throughput Metrics

Preferred format : ePoster

Authors:

Chiricolo Gerardo (1), Christopher Raio (2), Carlos Calaf (1)

1. , NYMH, Brooklyn, USA
2. , Good Samaritan Hospital, Dix Hills, USA

Keywords: Point of Care, Ultrasound, Throughput, Metrics, Cholecystitis

Abstract :

Background

The American College of Radiology (ACR) recommends ultrasound as the imaging modality of choice for patients with right upper quadrant pain and suspected gallbladder disease. Ultrasound is 90-95 percent sensitive for cholecystitis and is 78-80 percent specific. Either clinician-performed point of care ultrasound (POCUS) or comprehensive consultative ultrasonography (CCUS) can be used to diagnose cholecystitis. Studies indicate that emergency clinicians require minimal training to effectively use right upper quadrant ultrasonography in their practice.

Objectives

To show that POCUS reduces time to emergency department disposition (ED-LOS), time to OR (TOR) and hospital length of stay (H-LOS) in patients diagnosed with cholecystitis.

Methods

A retrospective chart review was done of all patients who presented to the emergency department between January 1, 2013 and June 1, 2015 for abdominal pain and had cholecystitis as discharge diagnosis. The POCUS use was compared to CCUS for ED-LOS, TOR, and H-LOS using unpaired t-tests with alpha set at 0.10.

Results

Table

ED-LOS

p value

T2OR

p value

H-LOS

p value

POCUS [P]

N=37

4.75

36.81

67.59

CCUS [C]

N=4

7.08

0.17

71.50

0.08

102

0.09

BOTH [B]

N=68

5.67

0.07

59.01

0.02

93.74

0.02

CLOSED

N=65

5.03

45.42

76.60

OPEN

N=45

5.97

0.06

61.57

0.07

97.82

0.05

Closed [P vs B]

0.10

0.10

0.06

POCUS was associated with decreased TOR and H-LOS when compared to CCUS or both. POCUS had lower ED-LOS, TOR, and H-LOS when CCUS services were closed vs open. When closed, ED-LOS, TOR, & H-LOS were lower with POCUS than with CCUS or both. When CCUS was open all patients received both exams.

Conclusion

POCUS can diagnose and treat acute cholecystitis while helping to decrease the patient's time to disposition, time to OR, ED and hospital length of stay when compared with traditional approach with CCUS in patients with suspected acute cholecystitis. Routinely following POCUS with CCUS may delay care and constitute an unnecessary utilization of valuable resources.

#7799 : Intraabdominal a-lines as a new sign of pneumoperitoneum

Preferred format : ePoster

Authors:

Christopher Raio (1), Gerardo Chiricolo (2)

1. Emergency Medicine, Good Samaritan Hospital Medical Center, Dix Hills, USA
2. Emergency Medicine, NY Methodist Hospital, Brooklyn, USA

Keywords: ultrasound, pneumoperitoneum

Abstract :

INTRODUCTION:

Acute abdominal pain is one of the most common chief complaints encountered in emergency medicine and bowel perforation is one life-threatening etiology of such a presentation. Timely detection of intraperitoneal free air is critical. Imaging is frequently performed to better elucidate the cause of pain. Upright plain film x-ray and the gold standard of CT are commonly utilized for the detection of intraperitoneal free air. Although frequently employed during the work-up of abdominal pain, ultrasound is not considered the imaging study of choice for the detection of pneumoperitoneum. We describe a case of a patient presenting with acute abdominal pain and distension after colonoscopy that was ultimately diagnosed as rectal perforation. Massive pneumoperitoneum was first detected via emergency physician performed bedside ultrasonography. We discuss the sonographic features and accuracy of ultrasound in the diagnosis of pneumoperitoneum as described in recent literature, and also define “intraabdominal A-lines” as pathognomonic for pneumoperitoneum.

CASE REPORT:

An 82 year-old female presented to the emergency department after experiencing severe abdominal pain and distension immediately following colonoscopy for rectal prolapse. She denied chest pain, dyspnea, fevers, chills, nausea, or vomiting. Surgical history was significant for hysterectomy 30 years ago. Vital signs were normal. Physical examination was remarkable for an elderly woman in moderate distress with diaphoresis, and a severely distended, tympanic abdomen with diffuse moderate tenderness to palpation. There was no rigidity, guarding or rebound tenderness.

A focused abdominal ultrasound using the curvilinear probe was performed by the emergency medicine physician and revealed diffuse abdominal “A-lines" consistent with intraperitoneal free air. Suprahepatic reverberation artifact was also clearly visualized. Exploratory laparotomy revealed rectal perforation and repair with anterior segmental resection of the rectosigmoid as well as proximal and distal colonic donuts was performed successfully. The patient was discharged on post-operative day six.

DISCUSSION:

Although not well-investigated, studies have attempted to define the sonographic features of pneumoperitoneum. The diagnosis is based on the detection of intra-abdominal air outside its physiologic location within the bowel lumen. Hyperechoic enhancement of the anterior peritoneal line is the earliest pathognomonic sonographic sign of intraperitoneal free air. Reports have concluded that this finding may be evident in extraluminal collections as small as 2-5ml of air. Additionally, Muradli et al. described a horizontal posterior reverberation pattern that is more evident with larger accumulations of intraperitoneal free air, akin to intrathoracic A-lines.

It has been reported that even under ideal conditions and technique, plain film chest x-rays may miss up to 49% of patients with pneumoperitoneum. In addition, upright positioning of patients for xrays may cause discomfort or may not be possible in emergent situations. While CT possesses greater sensitivity than plain radiography, it is a more time-consuming study requiring the transport of patients away from the emergency department. Furthermore, CT exposes patients to ionizing radiation.Ultrasonography can provide a rapid bedside evaluation of the acute abdomen. Patients can be scanned in supine position, and reported results demonstrate promise for this technology.

CONCLUSION: Ultrasonography represents a potentially useful bedisde option for the evaluation of free air.

#7800 : A Survey of the Importance of Emergency Ultrasound in Prospective Practice Settings Amongst Emergency Medicine Residents

Preferred format : ePoster

Authors:

Chiricolo Gerardo (1), Christopher Mendoza (2), Christopher Raio (3)

1. , NYMH, Brooklyn, USA
2. , NYMH, brooklyn, USA
3. , Good Samaritan Hospital, Dix Hills, USA

Keywords: point of Care, Ultrasound, survey, resident education,

Abstract :

Background

Point of Care Ultrasound (POCUS) has been integrated into many community and academic emergency departments and is now a mandated skill for all emergency medicine (EM) residents according to the ACGME. Current EM resident education includes US as a critical part of both life saving procedures and the bedside evaluation of critically ill. It is well accepted that approximately 80% of EM residents will practice in a community setting after completing their training. Access to US in the community setting is variable and many sites have not secured credentialing to perform these examinations. We question whether current EM residents would be comfortable working in a clinical environment that does not include or has limited access to bedside US.

Objectives

The goal of this study was to survey EM residents about their experience with POCUS and the importance of the accessibility of US in their future practice settings. This information is important to help set a foundation for the need of US infrastructure in the community setting.

Methods

FREIDA, an online residency resource, was referenced to obtain contact information for all current ACGME accredited EM residency programs. Each program was asked to distribute a 14-question survey to all residents currently in training at their site. The survey was accessed through surveymonkey.com.

Results

There were 381 responses from various residency programs around the United States. When asked how often they were using US, 80% said they were performing at least one scan per shift.

The residents were asked on a scale of 1-5, 1 being “absolutely will not” and 5 being “very likely”, How likely are you to take a job that:

Does not have POCUS available?
Has a machine solely for procedural guidance?

The weighted average of responses was 1.84 and 2.18 respectively.

When asked if they felt they could be able to perform quality EM without POCUS, 65% said no, 14% were unsure and 22% said yes.

65% of the respondents came from programs that have EM US fellowships.

Conclusion

Residents felt that procedural guidance, echo, early obstetric, FAST and AAA were considered to have the most utility in their future practice. The majority of residents felt that they were very unlikely to take a job at a site that did not have POCUS available. It is clear that residents believe that in order to have quality EM performed at your institution POCUS needs to be available.

#7801 : Smoothing the elective surgical schedule to decrease emergency department length of stay

Preferred format : Oral presentation

Authors:

Niels Rathlev (1)

1. Department of Emergency Medicine, University of MAssachusetts -Baystate, Springfield, MA, USA

Keywords: crowding, length of stay, elective surgery

Abstract :

Background: The demand for emergency department (ED) care and non-elective hospital admissions exhibit “natural” variability and do not vary significantly by day of the week. In contrast, the elective surgical schedule is subject to “artificial” variability and is created, in large part, for the convenience of physicians. Consequently, the majority of patients requiring elective surgical procedures are admitted on Mondays and the procedures are subsequently performed on Tuesdays, Wednesdays and Thursdays. Many of these patients occupy a hospital bed post-operatively. We examined the effect of “smoothing” or balancing the elective surgical schedule over the five weekdays on ED length of stay as a surrogate marker of ED crowding. Previous literature has demonstrated that each additional elective surgical case can prolong the mean length of stay per ED patient because of competition for in-patient beds.

Methods: The Division of Vascular Surgery was asked to each limit the number of elective surgical cases to no more than two per day. Based on previous experience, two cases per day for five days exceeded the number that the vascular surgeons typically performed in a week. Agreement with this new paradigm was accomplished by assuring surgeons that they would be able to perform all elective cases in timely fashion and that no case would be turned away. A similar plan was developed for the Department of Thoracic Surgery. After implementation, the need for in-patient beds for elective surgical cases was measured for both services. The number of direct nursing hours on the floors that received these post-operative patients was measured since the demand for nursing staffing was expected to become more predictable. Finally, the time from ED decision to admit to actual departure to the floor, and, total length of stay for admitted ED patients were measured.

Results: The interventions were successful in limiting the number of elective vascular and thoracic surgical cases requiring in-patient beds to the maximum of two cases per day per service. The number of direct nursing hours decreased by over 6% from 8.66 hours per patient day to 8.16 after “smoothing” of the surgical schedule. This resulting in a savings of several hundreds of thousands of dollars because of more predictable nursing scheduling and fewer overtime payments. The time from ED presentation to decision to admit did not change; but, the time from decision to admit to departure for the floor for admitted patients decreased by a mean of 30 minutes (19%) per patient from 162 to 132 minutes. As a result, the total ED length of stay for admitted patients decreased by a mean of 30 minutes.

Conclusion: “Smoothing” the elective surgical schedule can result in lowering costs for overtime pay on the nursing floors that receive these patient postoperatively. Moreover, by reducing “artificial” variability in surgical scheduling we were able to reduce the total length of stay for patients admitted from the ED by a mean of 30 minutes.

#7802 : Can an “Ultrasound First” policy reduce incidence of CT scan use and radiation exposure in pediatric patients presenting to the Emergency Department for Evaluation of Abdominal Pain?

Preferred format : ePoster

Authors:

Chiricolo Gerardo (1), Christopher Raio (2), Lindsey Behan (1)

1. , NYMH, Brooklyn, USA
2. , Good Samaritan Hospital, Dix Hills, USA

Keywords: Point of Care, Ultrasound, Appendicitis, CT, radiation, pediatrics

Abstract :

Background

Abdominal pain is a common complaint in presentation to the Emergency Department and acute appendicitis is the most common condition requiring emergent abdominal surgery. Early diagnosis to minimize the incidence of perforation is important to a successful outcome, however diagnosis can be challenging in the pediatric population who frequently do not have a classic presentation and to whom radiation exposure is a concern.

The American Academy of Radiology recommends ultrasonography as the initial imaging modality of choice for children in whom appendicitis is suspected (1). The principles of as-low-as-reasonably-possible (ALARA), an approach to minimizing radiation exposure, suggest ultrasound be used in suspected cases of appendicitis, followed by CT only if the ultrasound results are equivocal.

In January 2013, New York Methodist Hospital instituted an “ultrasound first” policy for the evaluation of abdominal pain in patients presenting to the emergency room ages 18 years and younger. All patients presenting with abdominal pain undergo an ultrasound examination performed by an ultrasound trained Emergency Medicine attending physician or an ultrasound performed by the radiology department prior to obtaining a CT scan.

Objectives

To demonstrate that a formal policy recommending ultrasound prior to CT scan in the diagnostic algorithm for acute appendicitis is effective at reducing CT usage and radiation exposure in the pediatric population.

Methods

A retrospective chart review was done of all pediatric patients who presented to the emergency room between January 1, 2013 and January 1, 2015 for abdominal pain and underwent an appendectomy. The rate of ultrasound use and CT use was compared to prior ultrasound and CT rates at our institution.

Results

In 2009, prior to the availability of POCUS at our institution, 116 cases of acute appendicitis were analyzed. Four patients went to the OR solely based on clinical exam findings (3.4%). 10 of 112 (8.9%) cases of acute appendicitis underwent an ultrasound examination prior to CT and 3 of these went to the OR based on ultrasound alone (2.7%)

In 2011, after the introduction of POCUS, 140 cases of acute appendicitis were analyzed. Six went to the OR based on clinical findings (4.2%). 36 of 134 (26.8%) underwent ultrasound prior to CT and 15 of these went to the OR based on ultrasound alone (11%).

From Jan 1 2013 to Jan 1 2015, there were 104 cases of acute appendicitis. None went to the OR based on clinical findings. 97 of 104 (93.2%) underwent ultrasound prior to CT and 38 of these went to the OR based on ultrasound alone (39.2%).

Introduction of bedside ultrasound followed by implementation of an “ultrasound before CT” policy in our ED has raised the rate of risk avoidance from 2.7% to 38.9%.

Conclusion

Implementation of an “ultrasound first” policy for the evaluation of acute appendicitis for pediatric patients presenting to the ED is associated with a significant reduction in CT utilization. By decreasing CT use in the ED in the workup of acute appendicitis, it is reasonable to conclude that medical radiation exposure has decreased.

#7803 : Facial cellulitis and diabetic ketoacidosis

Preferred format : ePoster

Authors:

Enrique Caro (1), Marina Buforn (1), Carmen Adela Yago (1), Juan Antonio Rivero Guerrero (2), Eduardo Rosell Vergara (2), Eva María Fragero Blesa (2)

1. Critical care and emergency service, Malaga, Malaga, SPAIN
2. Critical care and emergecy service, Virgen Victoria Hospital, Malaga, AUSTRIA

Keywords: Facial, cellulitis, Ketoacidosis

Abstract :

History:

34years old male who came to present box nausea and uncontrollable vomiting evolution of 48hours, accompanied by general malaise. 10days ago had acccidente traffic with nasal hematoma, treatment with analgesia and amoxicillin.

AP: DM-1 treated with Humalog.

Physical exploration:

TA 90 / 50mmHg, Fc 110lpm. Tachypneic. Regular state general. Dry skin and mucous membranes. ACP: taquirrítmicos and audible tones. No murmurs. MVC. Neurologic without source. Inability to eye opening nasal and periocular edema.

Investigations:

Blood tests: blood count: Leukocyte 26700, neutrophilia 92%. Hb 14.2, platelets 293000. Coagulation: PT activity 78.6%. venous blood gases: pH 7.11. Biochemistry: 379 glucose, urea 52, creatinine 1.74, normal ion 360 PCR.

TAC skull and sinuses: mucosal thickening of the left maxillary sinus, sphenoid sinus, ethmoid cells and some of the right frontal sinus. Increased extracranial soft tissue to frontal, periorbital and perinasal level. Diastasis left esfenocigomática joint with slight angulation of fragments.

Final diagnosis:

Facial cellulitis (periorbital and nasal) Staphylococcus Aureus by posttraumatic bacteremic.

Evolution:

Admission is decided in observation area for management of diabetic ketoacidosis box of infectious origin with facial door entrance.

Blood cultures are extracted and empirical antibiotic therapy with ceftazidime, cloxacillin, ampicillin and amphotericin B and supportive treatment (fluid therapy, insulin and analgesia) starts.

Once stabilized and ketoacidosis and renal failure having been corrected, enters plant, where the same antibiotic therapy is maintained until the fourth day of treatment Staphylococcus Aureus is isolated Methicillin Resistant both blood and facial exudate.

After completing intravenous antiboterapia for 14days he was discharged from hospital.

Conclusions:

However minimal possible entry must take special caution in patients with Diabetes Mellitus being immunosuppressed patients and complications that might entail.

#7804 : Ethical treatment of the mangled extremity in a disaster: just-in-time education is not a curriculum

Preferred format : Oral presentation

Authors:

Eric Weinstein (1), Lisa Kurland (2), Ahmadreza Djalali (3), Jeffrey Franc (4), Brielle Weinstein (5), Panna Codner (6), Edward Norcross (7)

1. European Master of Disaster Medicine Thesis, Lexington Medical Center, West Columbia SC, Summerville , USA
2. , Karolinska Institutet, Stockholm Sweden, Stockholm, SWEDEN
3. , CRIMEDIM – Research Center in Emergency and Disaster Medicine, Università del Piemonte Orientale, Novara, Novara, ITALY
4. , University of Alberta, Edmonton, Alberta, Edmonton, CANADA
5. , University of South Florida Morsani College of Medicine Department of Surgery Plastic Surgery Integrated Residency, Tampa, USA
6. , Medical College of Wisconsin, Milwaukee Wisconsin, Milwaukee, USA
7. , Medical University of South Carolina Charleston SC, Charleston, USA

Keywords: entrapped;mangled extremity; crush injury; amputation; just-in-time education; resource constrained austere environment

Abstract :

Across the globe, volunteer disaster response teams may present to authorities to respond in the field to assist in a disaster. Though physicians on these teams may or may not have had rudimentary exposure to hospital amputations in their training, amputations may not be in their typical practice nor are they credentialed to perform amputations and they not aware of the indications, ethics and psychological effects of field amputations in a resource constrained, austere environment (RCAE) disaster setting.

Proper patient selection using an evidence based scientific consensus approach to arrive at an ethical decision to amputate or not, should be considered as important as proper procedural technique. Remarkably, there has been no tangible effort to incorporate this into a formal education of pre-hospital, trauma and emergency physicians.

An interactive website, www.JITFIELDAMP.com, was created that randomly assigned Emergency Physicians, recruited as likely first responding local Disaster Response Team or Foreign Medical Team physicians, into two arms: non-podcast or podcast. There were no demographic differences between the two arms. The non-podcast arm of 38 participants responded to a 10-question quiz of patients with a mangled extremity in a RCAE scenario, asking: “When would you amputate”. There were 5 answers on a scale, depending on the scenario, with eight scenarios describing an entrapped or mangled extremity with answers “now-3 time intervals-wait or never”, and two scenarios describing a crushed extremity with answers “now-2 time intervals, perform fasciotomy or never”. The 33 participants in the podcast arm watched a 15- minute podcast explaining the ethical treatment indications of the mangled extremity in a RCAE then responded to the same quiz. The podcast was based on exhaustive review of the worldwide literature on the subject.

A panel of twelve physicians that have written extensively on the subject was created to determine inter-rater reliability of the 10-question quiz using the Fleiss method for multiple raters. The Kappa value was 0.06, which indicates only slight agreement between the raters.

Using the Welch Two Sample t-test, the mean quiz score for the control group was 4.7/10, while the mean score for the podcast group was 5.2/10. The confidence interval had a 95% certainty that the podcast improved the overall score by less than 1.5/10 (15%).

An expert panel was created to determine the validity of the questions, their lack of agreement can be explained by the lack of evidence-based consensus guidelines used to create a curriculum to teach the ethical treatment of the entrapped and the mangled extremity in a RCAE. Without a “gold standard’ to reference when designing questions of any quiz, the expected quiz results cannot be expected to be consistent.

Just-in-time education is not a curriculum. The dynamic environment of a disaster presents far too many ethical, assessment and treatment decisions to be taught in the constrained just-in-time format. Just-in-time education can be utilized to reinforce a specific widely accepted topic with few variables first taught in medical school or residency.

#7806 : Febrile syndrome in young patient. Boutonneuse Mediterranean fever.

Preferred format : Oral presentation

Authors:

Enrique Caro (1), Carmen Adela Yago (1), Marina Buforn (1), Juan Antonio Rivero Guerrero (2), Eduardo Rosell Vergara (2)

1. Critical care and emergency service, Malaga, Malaga, SPAIN
2. Critical care and emergecy service, Virgen Victoria Hospital, Malaga, AUSTRIA

Keywords: Febrile, Boutonneuse, Rickettsia

Abstract :

History:

34years male goes to hospital emergency departments for fever of up to 40 ° C, malaise, nausea, vomiting and hyporexia about 3 days of evolution. No semiotics respiratory, gastrointestinal or genitourinary.

Refers live in pine forest where usually walk your dog.

Physical exploration:

REG. TA 120 / 80mmHg. Fc 100lpm.

ACP: taquirrítmicos and audible tones. No murmurs. MVC.

Abdomen soft and palpable. No palpo mass or organ enlargement. Not painful on palpation.

pápula type skin lesions disappear Acupressure generalized lesion localization frontal region blackish and reddish halo center

Investigations:

Blood tests: Leukocyte 16700, Hb 14.2, platelets 393000. Coagulation: PT-Act 68%. Biochemistry: Urea 42. Glucose 82. Creatinine 1'23. PCR 109.

Rx thorax: Normal.

Final diagnosis:

Boutonneuse Mediterranean fever. Rickettsia conorii infection.

Evolution:

Before the injury front, serology is requested and empirically starts treatment with Doxycycline.

Conclusions:

A thorough physical examination is necessary to reach a definitive diagnosis, being important to make a good history with the patient's history.

#7807 : Seizures during air travel

Preferred format : ePoster

Authors:

Valentina Morell (1), Enrique Caro (1), Maria Angela Canas Barranco (2), Juan Antonio Rivero (1), Eduardo Rosell (1), Francisco Temboury (3)

1. Critical care and emergency service, Malaga, Malaga, SPAIN
2. Critical care and emergecy service, Virgen Victoria Hospital, Malaga, SPAIN
3. Critical care and emergency service, Virgen Victoria Hospital, Malaga, SPAIN

Keywords: pneumoencephalus, barotrauma, air

Abstract :

History:

Male 70 years from the airport brought by present three tonic-clonic seizures sphincters relaxation during airplane flight, which have been administered intramuscular 30mg Diazepam.

AP: unknown.

Physical exploration:

Regular state general. Stuporous. Well hydrated and perfused. TA 120 / 66mmHg, Fc 105lpm. Sat O2 99%. Afebrile. arreactivas mydriatic pupils. ACP: rhythmic and audible tones. No murmurs. MVC.

Investigations:

Blood count: Leukocyte 7200. Hb 13,5. Platelets 339000. Biochemistry: Glucose 101. Creatinine 0'8. Urea 52. Na 135. K 3'7. CK 486. LDH 276. PCR 5. Normal venous blood gases. Negative toxic. Urine Sediment: Normal.

TAC skull: multiple air bubbles in subarachnoid space scattered throughout the left brain (pneumoencephalus), associating discrete diffuse cytotoxic edema resulting loss of cortico-subcortical differentiation in the convexity.

Evolution:

The origin of pneumoencephalus can be varied, in this case may be due to air embolism secondary to barotrauma given the history of air travel.

The patient became comatose with repeated seizures, passing away a few hours.

Final diagnosis:

Air embolism secondary to barotrauma by air travel.

Conclusions:

The gas embolism with cerebral ischemic lesions corresponding to it and symptomatic seizures, usually poor prognosis.

Although no antecedents had to make assumptions about what it was physiopathogenesis, although the flight and in itself is a risk factor (or snorkeled have been subjected to pressure opposing changes prior to your flight?).

In such cases, the hyperbaric chamber is the therapeutic option.

#7808 : Bleeding after change anticoagulation

Preferred format : Oral presentation

Authors:

Valentina Morell (1), Enrique Caro (1), María Carmen Rodríguez Casimiro (2), Juan Antonio Rivero (1), Eduardo Rosell (1), Antonio Ramón Boscá Crespo (2)

1. Critical care and emergency service, Malaga, Malaga, SPAIN
2. Critical care and emergecy service, Virgen Victoria Hospital, Malaga, SPAIN

Keywords: Rivaroxaban, Acenocumarol, Bleeding

Abstract :

History:

Male patient 66 years after change of anticoagulant therapy makes a 20días (taking rivaroxaban and initiated acenocumarol) refers bleeding episodes at several levels: bleeding gums, epistaxis and from the previous day hiposfagma with hematoma infraorbitario left without trauma or eye clinic. Refers dyspnea with moderate effort, without fever or infectious clinic.

AP: Permanent Atrial Fibrillation. IHD. Mellitus diabetes. HTA.

Physical exploration:

REG. BHyP. TA 120 / 80mmHg. Sat O2 99%. Afebrile.

ACP: arrhythmic and audible tones. No murmurs. MVC with some isolated roncus.

Left Eye: left infraorbital hematoma, hiposfagma with conjunctival edema.

Supplementary tests:

CBC: Hb 12.2. Platelets 330000. Leukocyte 9200. Coagulation: INR 10'7. Biochemistry:Glucose 33. Urea 82. Creatinine 0'9. Na 136. K 4'6

Rx thorax: alveolar-interstitial infiltrate bilateral.

Evolution:

After the analytical results, the patient was admitted to observation area where prothrombin complex is administered, achieving figures of INR in range.

He later joined by pulmonology for development of pulmonary hemorrhage.

conclusions:

Updates pharmacopoeia helps prevent complications of older drugs such as acenocumarol complications and difficult INR control.

#7809 : ED Crowding - Key Players in Key Roles

Preferred format : Oral presentation

Authors:

Niels Rathlev (1), Joseph Schmidt (1), Paul Visintainer (2)

1. Department of Emergency Medicine, University of MAssachusetts -Baystate, Springfield, MA, USA
2. Department of Academic Affairs, University of MAssachusetts -Baystate, Springfield, MA, USA

Keywords: Crowding, Left without being seen, ED visits

Abstract :

Background: The percentage of patients who leave without being seen (LWBS) by a physician is commonly used as a surrogate marker of ED crowding. In December 2012, a new ED opened at Baystate Medical Center in Springfield, Massachusetts. The new ED had 94 licensed beds, four separate Pods and three times the area (72,000 sq. ft.) of the old facility. The demand for ED care grew quickly from a baseline of 265 patients “seen” per day (96,725 per year). The percentage of patients who LWBS quickly became a priority because of a very high daily rate of 8.2% the first month. Nursing leadership on duty was responsible for managing patient flow, but was loosely organized and determined on an ad hoc daily basis.

Methods: With the goals of improving efficiency, reducing the percentage of patients who LWBS and increasing the number of patients “seen” per day, nursing leadership roles were assigned to selected individuals with demonstrated management skills. Physician staffing was not added. The *Charge Nurse* was responsible for coordinating care throughout the ED and was responsible for all four Pods. This individual managed current resources and requested additional personnel and equipment when necessary. The *Charge Nurse* also coordinated the transfer of admitted patients to appropriate in-patient settings and initiated a call for assistance from in-patient services when the boarding of these patients exceeded certain benchmarks. The *Flow Coordinator* accepted transfers from other facilities and notification of patient arrivals from primary care and specialist physicians. Reports from Emergency Medical Services regarding in-coming traffic were also accepted by the *Flow Coordinator*. The *Pod Lead Nurse* assumed the coordination of care within each Pod for every shift. “Direct bedding” of new patients into open ED bays was the became the standard while bypassing the Waiting Room altogether after triage. Measures were calculated over a 3-year period as the mean per week of daily outcomes. The number of patients actually “seen” was approximately normally distributed; therefore, simple linear regression was used for analysis. Total walkouts as a percentage of total volume was analyzed using fractional logistic regression, since the dependent variable was a proportion ranging between 0 and 1. All analyses were conducted in Stata (version 14.0, StataCorp, Colleg Station, TX). A critical test level of 5% was considered statistically significant.

Results: The percentage of patients who LWBS declined steadily over time with a negative trend line reaching 4.5% in December 2015. This was a 45% decrease in three years. The number of patients “seen” rose steadily with a positive trend line to a mean of 316 per day (115,340 per year) in the same timeframe. This represented a 19% increase despite no increase in physicians staffing. The regression lines for both measures were significant at $P < 0.001$.

Conclusion: Measures of ED efficiency include the percentage of patients who LWBS and the number of patients “seen” on a daily basis. These outcomes can be improved significantly with a dedicated nursing management structure that is clearly focused on efficiency without adding physician staffing.

#7810 : Characteristics and Survival Outcomes of Adult Non-traumatic Out-of-hospital Cardiac Arrests Between Patients With and Without Extracorporeal Cardiopulmonary Resuscitation - A Prospective Community-wide Evaluation

Preferred format : Oral presentation

Authors:

Patrick Chow-In Ko (1), Matthew Huei-Ming Ma (1), Yih-Sharng Chen (2)

1. Department of Emergency Medicine , National Taiwan University Hospital, Taipei, TAIWAN
2. Department of Cardiovascular Surgery, National Taiwan University Hospital, Taipei, TAIWAN

Keywords: Cardiac arrest, Cardiopulmonary resuscitation, Extracorporeal circulation, Outcomes

Abstract :

Objectives:

The outcome of patients after OHCA is poor. Return to spontaneous circulation (ROSC) dramatically decreases with the duration of CPR. Extracorporeal membrane oxygenation has been proposed to assist CPR (ECPR) in OHCA. This study was to investigate the effects and characteristics of ECPR for adult non-traumatic OHCA versus NonECPR on a communitywide basis.

Methods:

A prospective four-year observational database collected from a communitywide OHCA web registry in an urban EMS (emergency medical services) was studied. The EMS ambulance teams were capable with advanced airway, intravenous (iv) fluid skills, basic and advanced life support and automated external defibrillator techniques. Outcomes included survival and cerebral performance category scale (CPC) at discharge. Adult non-traumatic OHCAs with and without ECPR were compared by regression analysis including factors of patient, prehospital and hospital characteristics and outcomes.

Results:

Comparing OHCA receiving ECPR (n=79) to those without (n=959), ECPR group were younger (median age 56 vs 78, p<0.001) and had higher portion for men (89 vs 64%, p<0;001), witnessed arrest (Wit) (60.8 vs 32.5%, p<0.001), bystander CPR (BCPR) (53.2 vs 36.8%, p=0.005), initial shockable rhythms (SR) (74.6 vs 12.2%, p<0.001) and therapeutic hypothermia (TH) (22.8 vs 1.1%, p<0.001). They (EPCR vs nonECPR) had no difference for prehospital time intervals (22.5 vs 23 min.), laryngeal mask airway treatment (55.7 vs 52.8%), EMS iv epinephrine (20.3 vs 15.5%), endotracheal intubation (6.3 vs 8.0%), prehospital ROSC (11.4 vs 6%, p=0.09), and ROSC upon hospital arrival (10.1 vs 8.5%). Outcomes were better in ECPR for discharged survival (41 vs 7%, p<0.001) and CPC 1or2 (20.8 vs 3.8%, p<0.001). After adjusting for Wit, BCPR, SR, TH, age and sex, both survival (adjusted odds ratio: 3.6 [95% CI: 2.0-6.6]) and good CPC 1or2 (adjusted OR: 2.9 [95% CI: 1.2-6.9]) were still significantly higher in ECPR.

Conclusions:

In current clinical practice for adult nontraumatic OHCA, ECPR tended to apply to patients of younger age, men, witnessed arrest, BCPR, and initially shockable rhythms regardless of positive ROSC upon hospital arrival, that can independently lead to higher survival and good neurological outcome compared to nonECPR.

#7811 : Creative Signals Analysis of Media Technology for Recognizing Cardiac Arrest

Preferred format : Oral presentation

Authors:

Patrick Chow-In Ko (1), Yu-Chen Lin (2), Yuan-Hsiang Lin (2)

1. Department of Emergency Medicine , National Taiwan University Hospital, Taipei, TAIWAN
2. Department of Electronic and Computer Engineering, National Taiwan University of Science and Technology, Taipei, TAIWAN

Keywords: Cardiac arrest, Media technology, Recognition

Abstract :

Purpose:

Recognition of cardiac arrest with checking carotid pulse is less than a half correct by the public. Poor recognition of cardiac arrest or patient of agonizing situation delays early bystander cardiopulmonary resuscitation (BCPR) that should be critically provided in the first five minutes before emergency ambulance arrival. Globally we still lack of effective technology to assist better recognition of cardiac arrest to facilitate early BCPR and public access defibrillation (PAD). In this study, we aim to innovate a video signals analysis tool to assist recognition of cardiac arrest.

Method:

We designed an innovative skill algorithm for transforming and analyzing the signals of the video recordings filmed with mobile smartphone for part of human body. Fast Fourier Transform (FFT) signals were evaluated in our skill algorithm. The time length for each video recording was fifteen seconds, which was filmed within the first five minutes after cardiac arrest witnessed in the intensive care unit. This signal analysis skill algorithm was applied on the video recordings of cardiac arrest patients and compared with that of normal volunteers.

Results:

We applied our skill algorithm analysis on video segments from twenty cardiac arrest patients (asystole for 18 cases, ventricular fibrillation for 2 cases) and twenty non-arrest volunteers (median heart rate 74/min, IQR: 65-88/min), matched in age and sex. We innovated a mathematic formula to calculate a value (we called it Slope Alfa) mainly from the cluster of FFT signals evaluated by the skill algorithm. The Slope Alfa value (Mean, [SD]) of cardiac arrest patients was significantly different from the value of non-arrest volunteers (0.14, [0.09] vs 1.96, [0.37], $p<0.01$). The results also indicated a tendency that for cardiac arrest patient the Slope Alfa would be less than 1.0.

Conclusions:

The skill algorithm we innovated for smartphone video signals analysis may successfully recognize patient after cardiac arrest. Further integration of this technology with mobile devices would provide the general public an easily accessible tool for cardiac arrest recognition and early chest compressions.

#7812 : National trends in quantative descriptors of emergency departments in The Netherlands

Preferred format : Oral presentation

Authors:

Evert Gips (1), Crispijn Van den Brand (2), Rebekka Veugelers (3), Menno Gaakeer (3)

1. , Fiona Stanley Hospital, Perth, Australia, Fremantle, AUSTRALIA
2. , Medisch Centrum Haaglanden, The Hague, THE NETHERLANDS
3. , Admiraal De Ruyter Ziekenhuis, Goes, THE NETHERLANDS

Keywords: trends, emergency medicine, self-referral, general practitioners triage

Abstract :

National trends in quantitative descriptors of Emergency Departments in The Netherlands.

E. Gips

Emergency Physician, Fiona Stanley Hospital Emergency Department, Perth, Australia

C.L. van den Brand

Emergency Physician, Medisch Centrum Haaglanden, The Hague, The Netherlands

Dr. R. Veugelers

Emergency physician, clinical epidemiologist, Emergency Department, Admiraal De Ruyter Ziekenhuis, Goes, The Netherlands

M.I. Gaakeer

Emergency Physician, Admiraal De Ruyter Ziekenhuis, Goes, The Netherlands

Background

In 2012 the first nationwide inventory of attendances at Dutch emergency departments (EDs) and self-referrals was done. We present the results of this survey repeated in 2013, 2014 and 2015 and compare them with the 2012 results.

Methods

All Dutch EDs providing 24/7 patient care were approached and the following data were collected: type of liaison between ED and on-call GP service, total number of ED attendees, origin of patient (self-referral, referred by GP, by ambulance or other) and the number of hospital admission via ED

Main findings

In 2012, out of all EDs, 89/93 (96%) responded; 83/89 (93%) in 2013; 85/88 (97%) in 2014 and 84/88 (95%) in 2015.

In 2012, total number of visits, extrapolated to all 93 EDs, was 2.079.172.

In 2013, 2.008.737 in all 89 EDs; in 2014, 2.003.411 in all 88 EDs and in 2015, 1.943.998 in all 88 EDs

The average percentage of ED patients brought in via ambulance was 13% in 2012; 14% in 2013; 16% in 2014 and 2015

The average percentage of GP referrals for all EDs was 43% in 2012; 47% in 2013 and 49% in 2014 and 2015

The average percentage of self-referrals for all EDs was 30% in 2012; 26% in 2013; 21% in 2014 and 17% in 2015

The percentage of close liaison types between ED and GP services was 49% in 2012; 64% in 2013; 70% in 2014 and 76% in 2015

The average percentage of hospital admissions via ED was 32% in 2012; 34% in 2013; 35% in 2014 and 37% in 2015

Conclusion

There remains a nationwide variation in the number of ED visits, rate of self-referrals and admission rate.

The total number of ED visits decreased little despite increasingly closer liaisons between EDs and GP services.

The number of self-referrals has decreased, whereas the number of patients presented via GPs or ambulance services has increased with the same percentage.

Further research is required to establish any causality between these last two phenomenons.

#7813 : TREATMENT OF NON-DISPLACED RADIAL NECK FRACTURES IN THE ED literature, protocols and practice

Preferred format : Oral presentation

Authors:

J.J. (Anne) Eversdijk (1), R. (Rianne) Meijer (2), R. (Rebekka) Veugelers (3), J.M. (Sjors) van Lieshout (3), M.I. (Menno) Gaakeer (2)

1. Emergency Medicine Department, Admiraal De Ruyter Ziekenhuis, Rotterdam, THE NETHERLANDS
2. Emergency Medicine Department, Admiraal De Ruyter Ziekenhuis, Goes, THE NETHERLANDS
3. , Admiraal De Ruyter Ziekenhuis, Goes, THE NETHERLANDS

Keywords: radial neck fracture, treatment, evidence, practice

Abstract :

ts of immobilization with upper arm plaster or compression bandage. No consensus seems to exist on the most appropriate means of initial conservative treatment in the ED. Therefore the aims of this study were: 1) review of literature, 2) inventory of existing protocols and 3) consideration of initial treatment given in practice.

Methods:

A systematic search of PubMed was performed. Also protocols fortreatment of non-dislocated radial neck fractures were collected in every Dutch ED. Finally, a retrospective

#7815 : A qualitative approach to evaluating the global barriers of International Emergency Medicine development.

Preferred format : Oral presentation

Authors:

Nirma Bustamante (1), Andres Patino (2), Alex Von Eckartsberg (3), Rebekah Coelho (4), Sebastian Suarez (5), Christian Arbelaez (1)

1. Emergency Medicine, Brigham and Women's Hospital , Boston, USA
2. Emergency Medicine, Brigham and Women's Hospital , boston, USA
3. , None, Arlington, USA
4. , None, Boston, USA
5. Orthopedics, Beth Israel Deaconess Hospital , Boston, USA

Keywords: International Emergency Medicine, developement, education

Abstract :

Study Objectives The ACEP International Ambassador Program was developed as a venue for international experts to provide the current status and progress of Emergency Medicine (EM) in their assigned countries. An annual one-day conference was created to convene the ambassadors and allow for collaboration in order to reach the common interest of advancing emergency care. Our objective was to analyze the major perceived barriers for the evolution of the specialty.

Methods Open-ended interviews were conducted during the program’s annual conference and collated from 2013-2015. ACEP International Ambassadors (N=75), who represent over 60 countries, were divided into focus groups through break-out sessions. Interviews were centered on thematic topics, including barriers encountered by stage of EM development; local, regional, and international needs for EM development; and barriers and needs of International Emergency Medicine (IEM) education. Data collection took place in real-time using scribes and subsequently grouped into key themes and findings. An inductive approach to data analysis was used to identify barriers for the evolution of EM abroad.

Results Ambassadors represented 83 countries which accounted for almost 50% of the world’s nations. The definition of EM is very country specific. Identifying local stakeholders in each country that would advocate for EM can be difficult. Even though the motivations of local governments are difficult to recognize at times, the involvement of Ministers of Health, public officials, and local leaders are an essential part in advancing the specialty. Furthermore, international organizations could provide quality control that allows for the development of EM through a process of merit. A heterogeneous curriculum and lack of knowledge of EM as a specialty has been a major challenge for residency programs. Centralizing educational resources can reduce duplication of efforts and would benefit educational processes for EM residency programs and health personnel.

Conclusion International Emergency Medicine remains underdeveloped and there still is not a clear definition of EM as a specialty. The scope of practice of EM abroad is still not widely recognized, which further increases the difficulty of its evolution. The indispensable expansion of EM will be exponential with the support of regional leaders to form a unique identity of the specialty. These leaders play a vital role in standardization and communication, while serving as catalysts in resolving shared concerns. It is important to attempt to professionalize IEM education. With the support from ACEP and IFEM, initial steps to professionalize IEM education would include course maps with milestones and guide for a core curriculum.

#7816 : Intranasal Sufentanil versus Intravenous Morphine Sulfate in Pain Management of Patients with Extremity Trauma

Preferred format : Oral presentation

Authors:

Ali Arhami dolatabadi (1), memary elham (2), hamid kariman (1), majid shojaee (3)

1. Emergency department, Immam Hossein Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran, tehran, IRAN, ISLAMIC REPUBLIC
2. Anesthesiology, shahid Beheshti university of medical sciences, tehran, IRAN, ISLAMIC REPUBLIC
3. Emergency department, Immam Hossein Hospital, shahid Beheshti university of medical sciences, tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Sufentanil; administration, intranasal; morphine; administration, intravenous; wounds and injuries; emergency service, hospital; pain management

Abstract :

Introduction: Pain is one of the most common complaints of patients referred to emergency department (ED) and its control is one of the most important responsibilities of the physicians. The present study was designed, aiming to compare the efficiency of intranasal sufentanil and intravenous (IV) morphine sulfate in controlling extremity trauma patients' pain in ED. Methods: In the present clinical trial, extremity trauma cases referred to the ED of Imam Hossein Hospital, Tehran, Iran, from October 2014 to March 2015 were randomly divided into 2 groups treated with intranasal sufentanil (0.3 µg/kg) and IV morphine sulfate (0.1 mg/kg) single-doses. Demographic data and information regarding the quality of pain control such as pain severity before intervention and 15, 30, and 60 minutes after intervention, and probable side effects were gathered using a checklist and compared between the 2 groups. Results: 88 patients with the mean age of 35.5 ± 14.8 years were included in the study (81.8% male). 44 patients received IV morphine sulfate and 44 got intranasal sufentanil. No significant difference was detected between the 2 groups regarding baseline characteristics. In addition, there was no significant difference in the groups regarding pain relief at different studied times ($p = 0.12$; $F = 2.46$; df: 1, 86). Success rate of the drugs also did not differ significantly at different studied times ($p = 0.52$). No significant difference was seen between the groups regarding side effects ($p = 0.24$). Conclusion: Based on the results of this study, it seems that intranasal sufentanil has a similar effect to IV morphine sulfate in rapid, efficient, and non-invasive pain control in patients with traumatic extremity injuries.

#7817 : Evaluating the access to health of the post-conflict internally displaced persons of Granizal, Colombia.

Preferred format : Oral presentation

Authors:

Nirma Bustamante (1), Casey Gradick (2), Andres Patino (3), P. Gregg Greenough (1), Christian Arbelaez (1)

1. Emergency Medicine, Brigham and Women's Hospital , Boston, USA
2. Internal Medicine , University of Utah , Salt Lake City, USA
3. Emergency Medicine, Brigham and Women's Hospital , boston, USA

Keywords: post-conflict, internally displaced persons, Colombia

Abstract :

Study Objectives Unlike refugees, internally displaced persons (IDPs) are not granted a status that allows them explicit or specific international protection or assistance. After Syria, Colombia has the second largest population of IDPs in the world, estimated at 6.5 million. During Colombia's prolonged internal conflict, large numbers were displaced from rural to peri-urban informal settlements. The cities of Medellin, the second largest city in Colombia, and Bello are home to about 365,000 IDPs. Our objective was to provide the first description of factors that obstruct the utilization of medical services by this post-conflict displaced population.

Methods A descriptive, semi-structured qualitative study was conducted using open-ended group interviews in February 2016 by investigators at Harvard University and University of Utah. They were carried out in Granizal, Colombia, a community with a high concentration of IDPs, which straddles the municipalities of Medellin and Bello. Participants included IDP community leaders, key informants of NGOs providing healthcare and services to IDPs, and local experts in the field from the Universidad de Antioquia (N=12). Interviews were arranged in collaboration with faculty from the Universidad de Antioquia and conducted in Spanish. Thematic topics included current access to medical care, barriers to healthcare, and common disease burdens. They were subsequently transcribed into English. An inductive approach to data analysis was used to identify factors that obstruct the access to health for IDPs.

Results Due to social stressors and on-going violence, an IDP population of Granizal currently resides illegally in privately owned land. This fact does not allow them the protection or access to public services from Medellin or Bello. Without legal recognition by local governments, they lack access to potable water, electricity, public education, and medical services. This leads to high rates of diarrheal illness for children, poor quality of maternal health, and untreated chronic non-communicable diseases. A deficiency in concrete demographic and qualitative descriptive data is the principal barrier that prevents this IDP population from claiming additional protections from local governments.

Conclusion Although IDPs do not lose the rights afforded to those nondisplaced under national or international law, they do not have additional civil and economic protections and assistance created by their needs and vulnerabilities. The lack of recognition by the governments of Medellin and Bello leads to major public health challenges for this IDP population. We propose creating a large-scale descriptive qualitative survey that will provide the data necessary to improve access to health for this vulnerable population.

#7819 : Global State of Emergency Medicine

Preferred format : Oral presentation

Authors:

Nirma Bustamante (1), Andres Patino (2), Christian Arbelaez (1)

1. Emergency Medicine, Brigham and Women's Hospital , Boston, USA
2. Emergency Medicine, Brigham and Women's Hospital , boston, USA

Keywords: International Emergency Medicine, development, current state

Abstract :

Study Objectives The specialty of Emergency Medicine (EM) is at different stages of development around the world. Some important milestones in the development of EM include recognition as a specialty, the presence of residencies programs, board certification, professional societies, recognized fellowships, and a specialty journal. ACEP International Ambassadors are selected to represent ACEP and create a report on current state of EM in a particular country. Our objective was to describe the state of emergency medicine globally based on the ACEP International Ambassador Yearly Country Reports.

Methods All ACEP International Ambassador Country Reports published in the ACEP website as of April 2015 were analyzed. Variables available for most countries included whether EM is recognized as a specialty, existence of an EM residencies, presence of an emergency medicine professional society, availability of an EM Fellowships, and circulation of an EM professional journal. Descriptive data was tabulated and reported as frequencies.

Results Ambassador Country Reports were available for a total of 83 countries (Figure1). Of the countries represented, 6 were from North American and the Caribbean; 17 were from South American and Central America; 18 were from Europe; 15 were from Africa; 16 were from Asia and Australia; and 11 were from the Middle East. EM was recognized as a specialty in 58 countries (70%). EM residencies existed in 58 countries (63%). An EM professional society was present in 60 countries (72%). EM Fellowships were available in 52 countries (63%), and EM professional journals circulated in 31 countries (37%).

Conclusion ACEP International Ambassadors have produced Country Reports for approximately 50% of the world’s countries. Emergency medicine is present in a large part of the world, albeit mostly in early stages of development. More detailed information on the current state of EM in every country would inform efforts to further develop EM as a specialty globally and improve emergency care provided around the world.

#7820 : Characteristics of acute poisonings in catalonian emergency departments (intox-28 study)

Preferred format : Oral presentation

Authors:

ALBERT MORENO DESTRUELS (1), JESUS GÁLVEZ MORA (2), DOMINGO RIBAS SEGUÍ (2), FRANCESC XAVIER AVILÉS JURADO (3), GILMAR PUGNET (2), DOINA SOLTOIANU (2)

1. EMERGENCY DEPARTMENT, HOSPITAL UNIVERSITARI JOAN XXIII DE TARRAGONA. TOXICOLOGY IN EMERGENCY WORKING GROUP OF CATALAN SOCIETY OF EMERGENCIES (SoCMUETox), TARRAGONA, SPAIN
2. EMERGENCY DEPARTMENT, HOSPITAL UNIVERSITARI JOAN XXIII DE TARRAGONA, TARRAGONA, SPAIN
3. OTORHINOLARYNGOLOGY DEPARTMENT, HOSPITAL UNIVERSITARI JOAN XXIII DE TARRAGONA, TARRAGONA, SPAIN

Keywords: INTOXICATION, EMERGENCY DEPARTMENT, EPIDEMIOLOGY

Abstract :

INTRODUCTION:

Accidental and intentional poisoning or drugs overdoses remains a significant source of morbidity and mortality. The objective of this study is to evaluate the epidemiological and toxicological characteristics of acute poisoning requiring Emergency Department consultation.

METHODS

Descriptive study of poisonings attended in 7 Emergency Departments of Catalonia attended the 28th of each month from 2013 to 2015. Data affiliation , type and location of poisoning , toxic involved, administered treatment, psychiatric evaluation, notification to court and destination were collected and statistical analyses were performed by using IBM SPSS statistics.

RESULTS

A total of 475 patients were included. The mean age was 38,62 years (STD 19,61) and 46,3% were female. Most patients were from Spain (64,8 %) followed by Western Europe (7,8%), Latinoamerica (6,5%), Magreb (3,8%), and Eastern Europe (2,7%). The main causes were recreation(40,6%), attempted suicides(25,1%) and accidents(21,7%). Alcohol poisoning was present in 226 patients (47,8%), drugs in 165 patients (34,7%), and drugs of abuse in 92 patients (19,4%). Among medicine overdoses, benzodiazepines stands out (24%) and drugs, cannabis(7,6%), cocaine(6,5%) and amphetamines(2,7%). It was suicide attempt in 37,9% of patients, and 36% had psychiatric history. Emergency psychiatric assessment was performed in 30,3% and notification to court was issued in 15,2% of poisonings. Regarding treatment, activated charcoal was administered in 12,6% of cases,12,2% antidotes, and gastric lavage was performed in 3,4%. Hospital admission was necessary in 12,5%, Intensive Care Unit in 1,3%, and Psiquiatric unit 6%.

CONCLUSION

Toxics most frequently involved in acute poisoning are alcohol, benzodiacepines and cannabis. Activated charcoal is the method of gut decontamination most used in acute poisoning, and the gastric lavage was used less than 5%.

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#7824 : Analgesic treatment of ST-segment elevation myocardial infarction (STEMI). Characterization and outcomes of affected patients.

Preferred format : Oral presentation

Authors:

Gilles Lenoir (1), Clément Derkenne (2), Alexandre Allonneau (3), Thévy Boche (4), Aurélie Loyeau (5), François-Xavier Laborne (6), François Dupas (7), Mireille Mapouata (8), Yann-Laurent Violin (3), Sophie Bataille (5), Frédéric Lapostolle (9)

1. Services des Urgences, SAMU 93, Hôpital Avicenne, Avicennes, FRANCE
2. Service médical d'urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
3. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
4. Services des Urgences, SAMU 94, Hôpital Henri Mondor, Créteil, FRANCE
5. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
6. Pôle des Urgences, SAMU 91, Centre Hospitalier Sud Francilien, Corbeil, FRANCE
7. Services des Urgences, SAMU 95, Centre Hospitalier de Pontoise, Pontoise, FRANCE
8. Service des registres ARS Ile de France, ARS Ile-de-France, APHP, Paris, FRANCE
9. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE

Keywords: STEMI, Analgesic treatment, myocardial infarction

Abstract :

Introduction : analgesic treatment in coronary patients is recommended. Almost half the time, Morphine is used in almost half of the cases. Some recent interactions (ATLANTIC study) lead to raising questions about this practice.

Objectives : compare STEMI patients receiving analgesic treatment to those who don’t.

Methods : Inclusion : data analyse of a regional registry including all STEMI patients from 2004 to 2015. Secondary transfers were excluded from the analysis. Inclusion criteria: characterization, delay) for treatment, treatment and outcomes. Adjusted Odds Ratio (95% confidence interval, significant if $p<0.05$).

Results : 14892 patients have been analyzed. Factors associated with analgesic treatment administration were: male versus female gender, (0.81 [0.73-0.90] ; $p < 0.0001$), delay between chest pain and first medical care less or equal to 60 minutes (1.61 [1.46-1.78] ; $p < 0.0001$), high blood pressure (1.11 [1.01;1.22] ; $p=0.037$), dyslipidaemia (1.13 [1.02-1.24] ; $p = 0.0159$).

Conclusion : patient receiving analgesic showed different outcomes from the others. This should be taken into account in the interactions morphine / platelets aggregation inhibitor management.

#7825 : Evaluation of the rate of acute coronary syndromes with ST segment (STEMI) patients initial handling by a prehospital medical team

Preferred format : Oral presentation

Authors:

François-Xavier Laborne (1), Amandine Abriat (2), Alexandre Allonneau (2), Sophie Bataille (3), Aurélie Loyeau (3), Gaelle Le Bail (4), Lionel Lamhaut (5), Virginie Pirès (6), Jean-Michel Juliard (7), Yves Lambert (8), Hugues Lefort (2), Frédéric Lapostolle (9)

1. Pôle des Urgences, SAMU 91, Centre Hospitalier Sud Francilien, Corbeil, FRANCE
2. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
3. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
4. Services des Urgences, SAMU 92, Hôpital Raymond Poincaré, Garches, FRANCE
5. Intensive Care & SAMU 75, Hôpital Necker, Paris, FRANCE
6. SAMU 77, Centre hospitalier Marc Jacquet, Melun, FRANCE
7. Service de Cardiologie, Hopital Bichat, Paris, FRANCE
8. Services des Urgences, SAMU 78, Centre Hospitalier de Versailles, Versailles, FRANCE
9. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE

Keywords: STEMI, pre-hospital medical team, MICU, acute coronary syndrome, dispatching center

Abstract :

Introduction. Upon receiving a 112 call for chest pain, the assumption is that it is an acute coronary syndrome (ACS) and the immediate dispatch of an MICU constitutes the 1st phase of optimal STEMI handling.

Objective: To evaluate sending an medical intensive care units (MICU) as first intervention in the handling of ACS.

Method: Prospective data from a regional pre-hospital STEMI register involving 39 MICU and 8 departmental prehospital Emergency Medical Services. Included: patients with STEMI from 2008 to 2014 treated with primary intervention patient handling. Factors studied: age, gender, cardiovascular risk factors, pain characteristics, type of caller. Evaluation criteria: response rate of the MICU from the time of the initial call and factors associated with this early response.

Results. Out of 11 295 STEMI, the MICU response rate from the time of the initial call was 83%. In univariate analysis, heredity, smoking, diabetes and obesity were not significantly linked to MICU response. In multivariate analysis, a doctor's 112 call and a history of coronary heart disease were factors independent of instant MICU response, unlike an age over 75, female gender, a paramedic's 112 call and unusual pain.

Conclusion. Primary response by the MICU on an assumed ASC was found in 83% of cases. Among these cases, women, people aged over 75 and cases with unusual pain seemed insufficiently taken into account, and were associated with a delayed MICU response.

#7826 : Angioplasty reporting channels for acute coronary syndromes with ST segment (STEMI) within 24 hours.

Preferred format : Oral presentation

Authors:

Hugues Lefort (1), Alexandre Allonneau (1), Olivier Yavari-Sartakhti (2), Hakim Benamer (3), Aurélie Loyeau (4), Lionel Lamhaut (5), Sophie Bataille (4), Frédéric Lapostolle (6), Christophe Caussin (7), Gaëtan Karillon (8), Christian Spaulding (3), Yves Lambert (9)

1. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service Médical d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
3. Service de cardiologie, Hôpital Européen Georges Pompidou , Paris, FRANCE
4. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
5. Intensive Care & SAMU 75, Hôpital Necker, Paris, FRANCE
6. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE
7. Service de cardiologie, Institut Mutualiste Montsouris, Paris, FRANCE
8. Service de cardiologie, Hôpital Simone Veil, Montmorency, FRANCE
9. Services des Urgences, SAMU 78, Centre Hospitalier de Versailles, Versailles, FRANCE

Keywords: Angioplasty, STEMI, Acute coronary syndrome, reperfusion strategy

Abstract :

Introduction: Regional health care agencies' preventive campaigns are urging patients and healthworkers to call the 112 prehospital Emergency Medical Services centre for any suspicious chest pain. In the event of a STEMI, access to a technical platform for angioplasty within 24 hours is recommended by the European Society of Cardiology, regulated by the prehospital Emergency Medical Services through optimal primary patient handling, or a secondary transfer. Some STEMI do not seem to benefit from this system.

Objective: Changes in the proportions of patients in each of these channels.

Methods: Comparative study of two interdepartmental observational prospective registers, for prehospital handling and interventional cardiology, including those STEMI undergoing an angioplasty within 24 hours between 2003 and 2014.

Evaluation criterion: Changes in the percentage of patients not benefitting from the prehospital Emergency Medical Services arrangements.

Results: For 11 years in the region, 46,303 STEMI patients have received angioplasty within 24 hours, 55% of which (25,850) were dealt with by the prehospital Emergency Medical Services ; 43% in primary care (19,965) and 12.7% in secondary care (5,885). On average, each year 1,704 (± 212) STEMI were not dealt cared for.

Discussion: The number of STEMI not benefitting from the prehospital Emergency Medical Services is significant, even if it tends to decline. There is an urgent need to identify and learn more about the epidemiological characteristics of these patients, so they can benefit from more efficient care.

#7827 : The lack of consensus about the role for LP in SAH leads to wide variation in practice.

Preferred format : ePoster

Authors:

Christiana Stavrou (1), Parisah Seyed-Safi (1), Frances Bennett (1)

1. , UCLH, London, UK

Keywords: Subarachnoid haemorrhage, Lumbar puncture, CT head

Abstract :

Title

The lack of consensus about the role for LP in SAH leads to wide variation in practice.

Background

Subarachnoid haemorrhages (SAH) carry a significant mortality risk (Day 1 25-30%1[1]). In patients with a high suspicion for SAH, a CT head is the first line investigation. If negative, a lumbar puncture (LP) has traditionally been thought to increase diagnostic yield[2]. However, there is controversy in the literature about the utility of performing LP following a negative CT.

Aim

To investigate current practice relating to use of LPs in diagnosis of SAH at University College Hospital (UCH) and review the guidelines and evidence base surrounding them.

Methods

Retrospective cohort study of 46 emergency patients investigated for SAH at UCH, over a period of 11 weeks.

Results

100% of patients (n=46) had a CT head, whom 9% (n=4) CT demonstrated SAH. Of those with normal CTs (n=42) 38% had an LP (n=16). 100% of LPs were negative for xanthochromia. Analysis of pre-test features of SAH showed that only 53% (n=9) of patients who had an LP presented with a thunderclap headache.

Discussion

It is clear that any patient being investigated for an SAH should have a CT head. The sensitivity of a CT in the first 6 hours is near 100% [3]. Confusion lies in the utility of LP as a second line investigation.

Our data shows that a LP did not help diagnose any of the patients presenting over 11 weeks to UCH with a suspected SAH. The 4 patients who presented with a SAH were diagnosed on CT. 16 LPs were therefore performed that did not provide any additional diagnostic information.

There is a need for the development of evidence-based guidelines for the role of LPs in the diagnostic pathway of patients with a suspected SAH.

The diagnostic pathway should incorporate a scoring system to help identify pre-test probability for SAH. This should be based on a validated tool for high-risk clinical characteristics, such as witnessed loss of consciousness and neck pain or stiffness[5]. Clinicians would be able to make use of the guidelines to risk-stratify patients presenting with a headache and investigate to an appropriate level.

Conclusion

There is a lack of guidance to suggest when a non-diagnostic CT head necessitates an LP in the investigation of SAH. Clearer guidelines are needed to standardise practice in order to allow clinicians to appropriately investigate SAH, whilst avoiding unnecessary invasive procedures.

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No conflict of interest

#7828 : Acute coronary syndrome with ST segment elevation (STEMI): Impact of a medical intermediary to trigger the prehospital Emergency Medical Services

Preferred format : Oral presentation

Authors:

Gaelle Le Bail (1), Alain Courtiol (2), Alexandre Allonneau (2), François-Xavier Laborne (3), Aurélie Loyeau (4), Virginie Pirès (5), Thévy Boche (6), Jean-Michel Juliard (7), François Dupas (8), Yves Lambert (9), Hugues Lefort (2), Frédéric Lapostolle (10)

1. Services des Urgences, SAMU 92, Hôpital Raymond Poincaré, Garches, FRANCE
2. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
3. Pôle des Urgences, SAMU 91, Centre Hospitalier Sud Francilien, Corbeil, FRANCE
4. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
5. SAMU 77, Centre hospitalier Marc Jacquet, Melun, FRANCE
6. Services des Urgences, SAMU 94, Hôpital Henri Mondor, Créteil, FRANCE
7. Service de Cardiologie, Hopital Bichat, Paris, FRANCE
8. Services des Urgences, SAMU 95, Centre Hospitalier de Pontoise, Pontoise, FRANCE
9. Services des Urgences, SAMU 78, Centre Hospitalier de Versailles, Versailles, FRANCE
10. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE

Keywords: Prehospital, Medical intensive care unit, STEMI, cardiologist, general practitioner

Abstract :

Introduction: The prognosis for patients with an acute coronary syndrome with ST segment elevation (STEMI) is determined by the reperfusion time period. The presence of an intermediary, such as a general practitioner (GP) or cardiologist before the call to the prehospital Emergency Medical Services could help extend these time periods.

Goal: To evaluate patient handling times and the rate of reperfusion decisions by origin of the call to theprehospital Emergency Medical Services.

Methods: Data was retrieved from a regional register of 8 prehospital Emergency Medical Services and 39 medical intensive care units (MICU). Inclusion criteria: patients with a STEMI of less than 24 hours. Exclusion criteria: secondary transfer. Judgement criteria: period between pain and patient handling by MICU and the rate of reperfusion decisions.

Results: 9,858 patients with STEMI were included from 2009 to 2014. The prehospital Emergency Medical Services were called in 6,457 (65%) of the cases by the patient, relative or friend, in 1,209 (12%) of the cases by a GP/cardiologist, in 1,810 (18%) of the cases by firefighters and in 382 (4%) of the cases by other callers. Consistent breakdown over the period was studied. The average period between pain and patient handling was significantly prolonged if the call was from a GP/cardiologist (versus a call by the patient or firefighters) (181 [79-437] minutes versus 50 [20-130] minutes; $p < 0.0001$). By comparison, people using a medical intermediary before calling the prehospital Emergency Medical Services were significantly older (64.2 [53.8 to 76.5] against 60.2 [51.8 to 72.2]), more likely to be women (29.2% against 20.4%), were less typical syndrome (83.7% against 88.5%), had less medical history (90.3% against 92.3%) and had fewer unblocking decisions (89.2% against 95.9%). The main prognosis was not significantly different (3.9% against 4.5%; $p = 0.4$).

Conclusion: The delay before patient handling was significantly extended if there was an intermediary, GP or cardiologist. These patients, who were older and more often women, with less medical history and more unusual pain, encountered lower rates of reperfusion decisions.

#7829 : Acute coronary syndromes in peak hours and off-peak hours. Is there a lost opportunity?

Preferred format : Oral presentation

Authors:

Alexandre Allonneau (1), Isabelle Klein (1), Aurélie Loyeau (2), Gaelle Le Bail (3), Mireille Mapouata (4), François-Xavier Laborne (5), Jean-Michel Juliard (6), Lionel Lamhaut (7), Frédéric Lapostolle (8), Sophie Bataille (2), Yves Lambert (9), Hugues Lefort (1)

1. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE
2. Service des registres ARS Ile-de-France, ARS Ile-de-France, APHP, Paris, FRANCE
3. Services des Urgences, SAMU 92, Hôpital Raymond Poincaré, Garches, FRANCE
4. Service des registres ARS Ile de France, ARS Ile-de-France, APHP, Paris, FRANCE
5. Pôle des Urgences, SAMU 91, Centre Hospitalier Sud Francilien, Corbeil, FRANCE
6. Service de Cardiologie, Hopital Bichat, Paris, FRANCE
7. Intensive Care & SAMU 75, Hôpital Necker, Paris, FRANCE
8. Services des Urgences, SAMU 93, Hôpital Avicenne, Bobigny, FRANCE
9. Services des Urgences, SAMU 78, Centre Hospitalier de Versailles, Versailles, FRANCE

Keywords: Acute coronary syndrome, STEMI,

Abstract :

Introduction: The time-period before prehospital patient management of an acute coronary syndrome (ACS) is influenced by many factors. The time when patient care begins is a factor altering these time periods significantly.

Method: Data was retrieved from a regional prospective register that lists all acute coronary syndromes with ST segment elevation (STEMI) managed by 8 prehospital Emergency Medical Services (EMS) and 39 MICUs. Patients with a STEMI within 24 hours from 2003 to 2014 were included, excluding secondary transport. Two periods were defined: ON from 7.00 a.m. to 7.00 p.m. from Monday to Friday, excluding public holidays; otherwise OFF. Average time periods studied: the beginning of chest pain - calling EMS dispatching center (112) (DT-112), calling centre 112 and starting patient medical care by the MICU (112-med). Wilcoxon test is significant if $p < 0.05$.

Results: 19,965 patients were included during the period. The CP-112 time periods decreased unlike 112-med time periods which remained stable. The increment between ON and OFF periods has decreased; it is almost non-existent since 2011.

Discussion: Since 2003, the time taken for prehospital care for STEMI in our region has been constantly improving, nowadays without loss of opportunity during ON periods. Calling centre 112 at the onset of any chest pain is vital and is well understood by patients; this can be further improved as it seems difficult to act on the 112-med time periods.

#7830 : Oculo-orogenital disease: an interesting rare case of Fuch's syndrome in association with ibuprofen

Preferred format : ePoster

Authors:

Deepwant Singh (1)

1. , Saint Mary's Hospital Isle of Wight NHS Trust, Newport, UK

Keywords: Steven Johnson syndrome, drug reaction

Abstract :

Introduction: The aetiology of oculo-orogenital disease is vast and can include various causes including infections, drug-reactions, neoplasms, trauma or Behçet's syndrome. Stevens-Johnson syndrome is a hypersensitivity reaction most commonly induced by drugs that often presents as a medical emergency with both skin lesions and mucosal involvement. A rare pure mucosal variant of Steven-Johnson syndrome or Fuch's syndrome is reported in the literature which should be considered in the differential diagnosis. We present a case of this rare entity presenting in a patient with oculo-orogenital disease in absence of any cutaneous symptoms and a rare association with a commonly used drug ibuprofen.

Case: A 26-year old previously fit and well female presented to emergency department with one-week history of insidious-onset bilateral conjunctivitis, an oral-ulcer along with dysuria and dyspareunia. She became generally unwell over next 24 hours with worsening painful red-eyes, difficulty in swallowing and dysuria. On examination she had multiple buccal-mucosal erosions with vulvo-vaginal ulcers and bilateral conjunctivitis; rest of the systemic examination was unremarkable. Interestingly, there was complete absence of any cutaneous lesions. On direct questioning, no high-risk behaviour or sexual history was elicited; however, she reported using over the counter ibuprofen for last fortnight for intermittent headaches.

Investigations revealed raised C-reactive protein and erythrocyte-sedimentation-rate. Rest multitude investigations were negative including cultures for urine, blood, throat-swab, nasal, oral, uretheral, triple-swab, high-vaginal swab; serology for retrovirus, gonorrhoea, syphilis, Chlamydia and screening for human herpes virus type 1 and 2, varicella-zoster virus,cytomegalovirus and *Mycoplasma pneumonia.* Immunology screen was negative for auto-antibodies (antinuclear, extractable nuclear antigens, DNA, neutrophil-cytoplasmic, rheumatoid-factor) and HLAB-51/5 and had normal vitamin B12/B6 levels. Empirical treatment for possible herpes (started on admission) was discontinued once results were confirmed.

After excluding common differentials, a suggestive history of drug-exposure (ibuprofen) with gradually progressive oculo-orogenital non-cutaneous pure mucosal involvement supported the diagnosis of Fuch's syndrome.

Her ibuprofen was discontinued. Supportive care with corticosteroids (systemic and topical) was provided including appropriate cleaning of eyelids and daily lubrication with preservative-free drops/ointments and topical corticosteroids for ocular care. Antiseptic solutions and gargles were administered for oral care. Intravagical topical corticosteroid ointments were used in conjunction with topical antifungal-creams to prevent vaginal-candidiasis followed by inserting soft-vaginal-moulds (to prevent adhesions). This led to a clinically-evident regression of her mucosal symptoms and within 14 days she made a significant recovery with ongoing high-dose oral-corticosteroids; and complete symptomatic resolution with no recurrence of her symptoms at one–month follow-up.

D**iscussion:** "Fuch's syndrome" or "Steven-Johnson syndrome without skin lesions" or "Atypical Steven-Johnson syndrome" is usually reported in literature in children and adolescents but rather rarely in adults; and mostly in association with Mycoplasma pneumonia infection.

As per our best knowledge this is the first ever reported case of ibuprofen associated Fuch's syndrome in an adult worldwide.

Our case report emphasises the need to consider drug-induced Fuch's syndrome as a differential diagnosis while evaluating non-cutaneous oculo-orogential presentations; where early identification and prompt withdrawal of the culprit drug with appropriate supportive care and steroids could lead to a remarkable recovery.

#7831 : Autopsic examination of injured bicyclists due to disease.

Preferred format : ePoster

Authors:

Satoshi Furukawa (1)

1. , Shiga University of Medical Science, Japan, Otsu, JAPAN

Keywords: Bicyclists, injury severity, chest injury

Abstract :

The objective of this study was to clarify the relationship between injury severity in bicyclists involved disease. Autopsic records were reviewed for all cadavers from 1995 to 2014 in Shiga University of Medical Science and from 2003 to 2014 in Dokkyo Medical University School of Medicine. The mechanism of injury, Abbreviated Injury Scale (AIS) score, and Injury Severity Score (ISS) of the patient were determined. A total of 26 cadaver's records were reviewed. The mean patient age was 62.2 years. The average ISS was 6.6, with an average maximum AIS (MAIS) score of 1.7. The mean chest AIS scores were as high as 1.3, with head ones were 0.9. This study provides useful information for emergency physicians who suspect disease in bicyclists involved in the traffic accidents.

#7832 : What's Going Wrong With This Postpartum Woman?

Preferred format : ePoster

Authors:

Müge Sönmez (1), İrfan Kala (1), Miray Baba (1), Uysal Pınar (1), Nurullah Tarhan (1), Nazlı Kala (2)

1. emergency department, Ankara Numune Training and Research Hospital, Ankara, TURKEY
2. obstetrics and gynecoloy department, Ankara Numune Training and Research Hospital, Ankara, TURKEY

Keywords: dyspne, cardiomyopathy, postpartum, emergency department

Abstract :

Introduction

Peripartum cardiomyopathy (PPCMP) is a rare entity and potentially life-threating maternal disorder occured during the late pregnancy or within five months of postpartum period in the absence of obvious etiology. Herein we report a postpartum patient who presented to emergency department (ED) with dyspne that should make a physician consider the possibility of PPCMP.

Case report

A 35 year old female patient was admitted to our ED with an acute onset of dyspnea and squeezing chest pain started a couple of hours before presentation. She described a similar with a fewer intensity of dyspnea occurred 1 week ago and was prescribed amoxiciline-clavunalate and salbutamol with the diagnosis of pneumonia by a pulmonologist. She only had an history of gestational hypertension and diabetes mellitus with an uncomplicated ceasarean section of a healthy baby 3 weeks ago.

On admission she had a blood pressure of 180/110 mmHg, oxygen saturation of 78 on pulse oxymetry, a heart rate of 140 beats/min, a body temperature of 36.7˚C and respiratory rate of 22 breaths/min. Physical examination revealed bilateral lower extremity eudema existing for 2 weeks, diminished lung sounds and rhythmic and tachycardic heart sounds on auscultation. The electrocardiogram was nonspesific with sinus tachycardia. The chest X-ray showed bilateral mild pleural effusion existing since at the time of her pulmonologist visit. Bedside echocardiography was performed and left ventricular ejection fraction (EF) was found to be 20%. Diffuse left ventricular hypokinesia and left atrial enlargement were also the existing sonographic pathologies. Her laboratory findings were as follows; hemoglobin level: 9.8 g/dL (12-16 g/dL), heamotocrite level: 31.8% (37-47%) and brain natriuretic peptite value: 410 pg/mL (0-100 pg/mL). Other markers including troponin, d-dimer, TSH, renal function tests, liver enzymes were found normally. . Arterial blood gas analysis on oxygen supply showed a P_aO_2 of 99,0 mmHg (83-108 mmHg), a pH of 7.46 (7.38-7.46), a P_aCO_2 of 27.3 mmHg (35-48 mmHg), and HCO3 of 19,0 mmol/L (22.2-28.3 mmol/L).

In ED IV nitroglycerine infusion with the rate 10 µg/min and IV bolus of 40 mg furosemide was initiated. She was admitted to coronary intensive care unit (CICU) with the diagnosis of PPCMP with an additional anticoagulant and metoprolol therapy. The patient was discharged after 3 days with an EF of 35% and was prescribed per oral treatment of metoprolol 100 mg/day, ivabradine 10 mg/day, perindopril 5 mg/day, spirinolactone 25 mg/day and furosemide 40 mg/day. 20 days after discharge hypokinesia was still remained but her EF was 55%.

Conclusion

Emergency physicians should be aware of PPCMP at the differantial diagnosis of dyspne in pregnancy related emergencies and play role in early diagnosis of heart failure both in peripartum and postpartum period.

#7833 : USING HIGH-FIDELITY SIMULATION FOR POST GRADUATE YEAR STUDENTS IN EMERGENCY MEDICINEDEPARTMENT

Preferred format : ePoster

Authors:

PEI-YIN LIU (1), LI-PING KE (2), CHU-FENG LIU (3), CHIEN-HUNG WU (3)

1. , Department of Nursing Emergency Medicine, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung city, TAIWAN
2. , Department of Nursing in Emergency Medicine, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung city, TAIWAN
3. , Department of Emergency Medicine, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung city, TAIWAN

Keywords: CRITICAL CARE TRAINING, HIGH-FIDELITY SIMULATION, MEDICAL EDUCATION, TEAM RECOURCE MANAGEMENT

Abstract :

Objectives: Post Graduate Year(PGY) program is important for developing medical education in Taiwan. One-monthtraining in emergency medicine departement started compulsorily for every graduated medical student since July 2011.Since the characteristics of emergency patients are emergency, severe, difficult and troblesome, it is a extremely challenging for PGY student. The appropriate uses of simulation based training can enhance the teaching and learning for students in emergency medicine departement.

Methods: In 2014, we designed a training course using high-fidelity simulation for PGY students of emergency medicine traning. Trainees were divided into pairs and each pair participate one scenario. They assessed by standardized written tests before (Pre-test) and after the course (Post-test) after each simulation session. 82 PGY students of the emergency medicine department participated this training course between Oct 2014 and Dec. 2015.

Results: During Sep. 2014 to Dec. 2015, 82 PGY students participated this training course and 82 questionnaires were collected and analyzed using paired t-test (100%). The mean score of Self-Confidence in the pre-test is 2.8 and that in the post-test is 4.0 ($p < 0.001$). The mean score of Communication Skills in the pre-test is 3.0 and that in the post-test is 4.0 ($p < 0.001$). The mean score of Leadership in the pre-test is 3.1 and that in the post-test is 4.1 ($p < 0.001$). The mean score of Situation Monitor in the pre-test is 3.2 and that in the post-test is 4.2 ($p < 0.001$). The mean score of Mutual Support in the pre-test is 3.2 and that in the post-test is 4.3 ($p < 0.001$). The average of training course satisfaction is 4.9.

Conclusion: High-fidelity simulation provide a harmless, repetitive and effective environment. It can improve quality and ability of PGY students in critical care training education and will increase patient safety in health care. For further educational programs, we suggest high-fidelity simulation combined with clinical patient safety policies for all health-care providers to reduce the incidence of medical errors.

#7835 : Validation of a Predictive Model for Identifying Febrile Young Infants With Altered Urinalysis at Low Risk of Invasive Bacterial Infection

Preferred format : Oral presentation

Authors:

Roberto Velasco (1), Borja Gomez (2), Susanna Hernandez-Bou (3), Andres Gonzalez (4), Izaskun Olaciregui (5), Mercedes De la Torre (6), Aris Rivas (7), Alba Rubio (8), Isabel Duran (9)

1. Pediatric Emergency Department., Rio Hortega University Hospital. (Valladolid, SPAIN), Laguna de Duero, SPAIN
2. Pediatric Emergency Department., Cruces University Hospital (Bilbao, Spain), Barakaldo, SPAIN
3. Pediatric Emergency Department, Hospital Sant Joan de Deu , Barcelona, SPAIN
4. Pediatric Emergency Department, Hospital de Basurto, Bilbao, SPAIN
5. Pediatric Emergency Department, Hospital de Donostia, Donostia, SPAIN
6. Pediatric Emergency Department., Niño Jesus University Hospital (Madrid, Spain), Madrid, SPAIN
7. Pediatric Emergency Department, Hospital Universitario Gregorio Marañon, Madrid, SPAIN
8. Pediatrics, Hospital Universitario 12 de Octubre, Madrid, SPAIN
9. Pediatric Emergency Department, Hospital Carlos Haya, Malaga, SPAIN

Keywords: urinary tract infection, febrile infant

Abstract :

Urinary tract infections (UTI) are the most common serious bacterial infection in infants less than 90 days of age. Guidelines recommend inpatient treatment under 60-90 days old, due to risk of complications. In 2010, a predictive model was published by Schnadower et al. trying to find a subgroup of patients with low risk of adverse outcomes. That model shown high accuracy, but for predicting risk of bacteremia secondary to UTI. In 2014, a new approach was published by Velasco et al. This new model did not focus not in patients with a positive urine culture, but in patients with an altered urine dipstick, trying to select a group of low risk of having a invasive bacterial infection (IBI). Sensitivity and negative predictive value of this model were 100%.

Aim of this study was to test the performance of the predictive model in a new sample of febrile infants with altered urine dipstick.

Study design

Retrospective multicenter study including 9 Spanish hospitals. Febrile infants ≤90 days old with altered urinalysis (presence of leukocyturia and/or nitrituria) were included. According to our predictive model, an infant is classified as low-risk for IBI when meeting all the following: being well appearing at arrival to the emergency department, being >21 days old, having a procalcitonin value <0.5 ng/mL and a C-reactive protein value <20 mg/L. Patients were excluded if any of the data evaluated by the predictive model was missed, a blood culture was not performed or if informed consent was not given by the parents. Invasive bacterial infection (IBI) was defined as the isolation of a single pathogen in a blood or cerebrospinal fluid (CSF) culture. IBI was considered as secondary to UTI if the same pathogen was isolated in the urine culture and in the blood or CSF culture

Results

Four hundred twenty-five febrile infants attended in the participant hospitals had an altered urine dipstick. After applying exclusion criteria, 391 (92%) patients were analysed. Mean age was 50.5 days old (SD 23.0), and 297 (69.9%) were male. Median hours of fever when attended in the PED was 4 (P_{25}-P_{75}: 2-12). Urine culture was positive in 346 (88.5%) patients, being *Escherichia coli* the most frequently isolated bacteria, in 302 (87.5) infants. Thirty (7.7%) patients were diagnosed as IBI. Among them, 28 had bacteremia, being 25 (89.3%) secondary to UTI. Two patients had meningitis, one due to *E. coli* and the other one growth *Klebsiella oxytoca* in both urine, blood and CSF culture.

According to the predictive model, 104 (26.6%) infants would have been classified as low-risk patients. Two low-risk patients (1.9%) presented an IBI vs 9.8% ($p<0.05$) of the infants classified as not low-risk patients, although 1 of them growth *Moraxella catarrhalis,* suspected of being a contaminant, even it was not defined as one in the study's protocol.

Conclusion

Outpatient management might be suitable for 1 of each 4 patients diagnosed as possible UTI, although limitations of the study make mandatory prospective validation prior its incorporation to clinical practice.

#7836 : Is substance abuse a trigger for psychiatric disorder in patients presenting to the Emergency Department?

Preferred format : ePoster

Authors:

Luisa Tarraso Gomez (1), Pedro Garcia Bermejo (1), Luis Manclus Montoya (1), Asif Muhammad (1), Maria Cuenca Torres (1), Jose Luis Ruiz Lopez (1)

1. Emergency department, Hospital de La Ribera, Alzira, SPAIN

Keywords: Psychiatric disorder, substance abuse, emergency department

Abstract :

Introduction

Patients with psychiatric disorders frequently present to the Emergency Department with acute illness. It is extremely important to understand the factors that trigger this decompensation in order to best manage these patients as well as to establish recommendations and subsequent preventative treatments.

Methodology

It is a descriptive retrospective observational study analyzing data from patients with the ED discharge diagnosis of psychiatric disorders during the period of January 1 – December 31 of 2015. The data used includes the chief complaint, reason for psychiatric consultation, drug consumption, treatment and evaluation by specialists.

Results

Anxiety was the most frequent diagnosis in patients in this sample (77 out of 359 patients). Many of the patients were being treated for psychiatric disorders. 21.73% were taking anti-psychotics, 11.98% were taking anti-depressives and 11.14% were being treated with anxiolytics. We note that 51.81% of the patients had no history of psychiatric disorders.

Of the reasons for presenting to the ED, 47.63% presented with altered behavior, 36.77% for physical complaints and 15.60% for attempted suicide.

Regarding drug consumption, only 19.5% used toxic substances of which sedatives were the most common at 5.6% and cannabis, 3.6%. 80.5% of the patients did not ingest any toxic substance.

After discharge, 47.1% of the patients had no complications after the resolution of the initial presenting complaint.

Conclusion

We found that the consumption of toxic substances was not an important factor or trigger for the decompensation of the majority of patients presenting to the Emergency Department with psychiatric disorders.

The abuse of sedatives and cannabis may contribute to the decompensation of underlying disease requiring urgent medical attention.

#7837 : Traumatic internal carotid artery dissection treated with stent

Preferred format : ePoster

Authors:

Zerrin Defne Dundar (1), Fulya Kose (1), Abdulaziz Dogan (1), Basar Cander (1)

1. Emergency Medicine Department, Necmettin Erbakan University Meram Faculty of Medicine, KONYA, TURKEY

Keywords: carotid artery, dissection, stent

Abstract :

Introduction: Carotid artery dissection is a rare disease. The incidence of carotid artery dissection after blunt injuries is less than 1- 3%. It is usually seen in head trauma due to high-speed motor vehicle accidents.

Case: A 23-year-old male patient was transferred from scene to emergency department with extra-vehicular motor vehicle accident by 112 emergency medical services. He had no prior disease history and he did not use any medication. His Glasgow coma score was 15, arterial blood pressure was 110/75 mmHg and pulse rate was 80/min. There was ecchymosis on the anterior aspects of both femurs and deformity on right tibia. X-rays revealed bilateral femur fracture and right tibia fracture. He was admitted to emergency department intensive care unit with a diagnosis of multiple long bone fractures. At the second day of his admission, his mental status altered and he became unresponsive to verbal comments. He had diagnosed as internal carotid artery dissection after performing brain computed tomography, brain magnetic resonance imaging and cerebral angiography. Stent was implanted in internal carotid artery by interventional radiology. He had operated by orthopedists for his long bone fractures. Then he was transferred to reanimation intensive care unit.

Conslusion: Although traumatic carotid artery dissection is a very rare clinical situation, trauma patients with altered mental status should be evaluated for dissection. After diagnosis of dissection, interventional radiological procedures may be the best choice for those trauma patients.

#7838 : Nosocomial and Healthcare-Associated Pneumonia on a patient with chronic antibiotic treatment

Preferred format : ePoster

Authors:

Chirea Gabriela (1), Comsa Mihai (2)

1. Student, Carol Davila University of Medicine and Pharmacy, Bucharest, ROMANIA
2. internal medicine, Clinical Emergency Hospital Bucharest, Bucharest, ROMANIA

Keywords: Nosocomial Pneumonia; Oxygen Therapy; Antibiotherapy, Respiratory Viral Infection;

Abstract :

Introduction:
Nosocomial viral pneumonia remains a common disease, associated with significant morbidity and mortality. It is the second most common nosocomial infection and accounts for 15–20% of the total patients in the intensive care unit. Patients with nosocomial pneumonia with influenza virus are older and more commonly have simultaneous health problems (such as previous stroke, heart failure and DIABETES).
Case report:
A 60-year-old female patient, with a history of oxygen dependent chronic obstructive pulmonary disease, stage III hypertensive disease, type II insulin-dependent DIABETES, surgical treatment for mitral valve stenosis secondary to rheumatic fever, in her early life (for which she administers monthly antibiotic therapy, with amoxicillin/clavulanic acid), congestive heart failure, tricuspid and aortic valve disease, chronic kidney disease addressed the emergency department, presenting dyspnoea, anterior chest pain with posterior irradiance, and cough with expectoration for two days. The disease occurred after waiting for about 4 hours at the general practitioner for her antibiotic prescription and she went into progressive respiratory failure, because she could not administer herself oxygen.
She was unstable in the emergency ward, where she presented severe dyspnoea, wheezing, diffuse sibilant rales, moderate hyperkalaemia (potassium level 5.88 mEq/L), peripheral oxygen saturation of 82%, arterial oxygen pressure was 68.4 mmHg (83–106 mmHg), respiratory acidosis with arterial blood pH-7.26, and moderate leucocytosis with neutrophil predominance. In the emergency ward she received oxygen with a high volume, several administrations of inhalatory salbutamol (100 mcg/inhalation), intravenous hydrocortisone (two doses of 100 mg each), intravenous aminophylline (5.7 mg/kg body weight dose, as a bolus). She was eventually admitted to the internal medicine department as her status did not improved significantly. Her blood tests revealed chronic infection with hepatitis B virus.
After 8 days of hospitalization and antibiotic treatment with large spectrum penicillins, the patient contracted nosocomial pneumonia due to the airborne transmission. The patient's symptoms were: dry cough, chest pain, myalgia, wheezing. Both lungs presented crepitants in the lower halves of the lungs. This correlated with X-ray aspect which showed increased heart size, basal pulmonary stasis and increased opacity in the base.
The patient was treated with oxygen therapy, acenocumarol (for mitral valve vegetations prophylaxis), ceftriaxone, aminophylline, metamizole, ranitidine, furosemide, nifedipine, and her evolution was favourable, with the disappearance of the dyspnoea and the anterior chest pain.
Discussion:
Viral pneumonia, in patients with chronic pulmonary pathologies and other major comorbidities, constitutes a frequent cause of acute presentations. Although hospitalization is mandatory in their instances, their chronic use of prophylactic antibiotherapy makes them susceptible to overinfection with nosocomial bacterial pathogens, with resistance to regular antibiotics, therefore complicating their evolution. It is essential to monitor their evolution very closely. Also, it is very important for the emergency medicine specialist to correctly evaluate the potential hazards at which such a patient is exposed and to recommend for hospitalization, even if, in several cases, he might present a partial remission of the signs and symptoms that have determined the presentation to the emergency ward.

#7839 : Job satisfaction among emergency department staff

Preferred format : Oral presentation

Authors:

Miquel Sanchez (1), Montse Suarez (1), Maria Asenjo (1)

1. Emergency Department, Hospital Clínic de Barcelona, Barcelona, SPAIN

Keywords: job satisfaction, emergency department, healthcare personnel

Abstract :

OBJECTIVE: To compare the level of job satisfaction (JS) among physicians (P), nurses (N) and administrative staff (AS) in an Emergency Department (ED). To analyze the relationship of JS with the demographic and professional characteristics of these personnel.

METHODS: We performed a descriptive, transversal study based on the answers to the Font-Roja questionnaire on JS voluntarily given by P, N and AS. Multivariate analysis determined the relationship between the overall JS and the variables collected. We also compared the dimensions of JS among P, N and AS.

RESULTS: A total of 22 P, 22 N and 30 AS were included. AS were significantly more satisfied than P and N: 3.42 + 0.32 vs. 2.87 + 0.42 and 3.06 + 0.36, respectively. Multivariate analysis showed the following variables to be associated with JS: rotation among the different ED acuity levels (OR: 2.339; confidence interval (CI) I95% 0.929-5.888) and belonging to AS (OR: 0.271; CI95% 0.093-0.796). P and N reported greater stress and work pressure than AS and described a worse physical working environment. Interpersonal relationships obtained the highest score among the 3 groups of professionals.

CONCLUSIONS: JS of P and N in an ED is lower than that of AS with the former perceiving greater stress and work pressure. Conversely, interpersonal relationships are identified as strength. Being P or N and not rotating among the different ED acuity levels increase dissatisfaction.

#7840 : Can Failure Mode and Effects Analysis (HFMEA) improve the door to needle time in patients suspect of ischemic cerebral accident?

Preferred format : Oral presentation

Authors:

Abel Wei (1), Frank Erik de Leeuw (2)

1. Department of Emergency Medicine, University Medical Centre Radboud Nijmegen, Nijmegen, THE NETHERLANDS
2. Depertment of Neurology, University Medical Centre Radboud Nijmegen, Nijmegen, THE NETHERLANDS

Keywords: HFMEA, Failure Mode and Effects Analysis, Cerebral accident, door to needle time, patient safety, quality of care,

Abstract :

Background

The door to needle time (DNT), defined as time between arrival of an ischemic stoke patient and the deliver of the thrombolytic agent, is considered to be an important indicator of quality of care. Considering only one out of seven ischemic stroke patient leaves hospital with fully regained functions, it is paramount to deliver the agent to the right patient as fast as possible. Acceptable norm of door to needle time is considered to be within 1 hour. The DNT in Radboud university in 2014 was 41 minutes.

Failure Mode and Effects Analysis (HFMEA) is systematic techniques for failure analysis. It was developed by reliability engineers in the late 1950s to study problems that might arise from malfunctions of military systems. It is often the first step of a system reliability study.

Methode

The current thrombolysis procotol is revised by utilizing HFMEA and the involvement of department of neurologie, radiologie and emergency medicine.

Patients who are suspect of stroke presented at our ED between 1/1/2015 and 31/12/2015 are included in the study. The time between arrival of ischemic stoke patients and deliver of alteplase is recorded and compaired to the same patient group in 2014.

Result

There are 359 stroke patients presented at our ED in 2015. 275 with ischemic stroke, 42 have hemorrhagic stroke and 42 with transient ischemic accident. The DNT in 2015 is 25 minutes compares to 41 minutes in 2014.

Conclusion

Failure Mode and Effects Analysis is able to identify and eliminate de delays in the thrombolysis protocol and effectively shortens the door to needle time by 40%.

CASE PRESENTATION

Abdelmonim Elhakim

#7842 : Case Report

Preferred format : Oral presentation

Authors:

Abdelmonim Elhakim (1), Adeeb Bukhari (1)

1. Emergency Medicine, KAMCJ, Jeddah, SAUDI ARABIA

Keywords: Aconite poisoning

Abstract :

4 patients presented to the ED with ingestion of Unknown Plants. They are from Nepal and one of them brought that plant from the forest in Nepal. They used it for headache, body pain, and flu symptoms (herbal). After ingestion, 3 of them started to vomit with abdominal pain.. They presented with hypotension, relative bradycardia, tingling sensation, and dizziness. The most critical patient has fluctuating rhythm (multi-focal PVCS, runs of non-sustained VT, R on T phenomena, PACs, change in the amplitude of the complex), hypotension, salivation, active vomiting, deep rapid respiration, GCS is 13/15, compensated metabolic acidosis. The 2nd one had the same presentation but milder and better ECG, GCS is 15/15. The 3rd one has no cardiac manifestations but hypotensive, less vomiting. The 4th one is asymptomatic. They have a piece of its root with him. All of them showed normal LAB. Results

difficulties are (language barrier, unknown poisoning, non-famous in the current community, resemble the manifestations of other toxidrome like cholinergic effect, multi-causality with only 1 senior staff, Unknown mechanism of action so difficult to decide about the use of any supportive medication)

By translator with some language barrier, safety to the patient from legal issues given to allow them to explore more about the nature of the plants As it is unbelievable that all of them have headache at the same time. Then they admitted that it was for energetic effect. Then I discovered the plant which is Aconitum Napellus and it was the root

Amoidarone given to control the arrythmias followed by ICU admission

Aconitum Napellus contains (Aconitine and mesaconitine)

MECHANISMS:

The cardiotoxicity and neurotoxicity are due to their actions on the sodium channels of the cell membranes of he myocardium, nerves, and muscles. they bind with high affinity to the open state of the voltage-sensitive sodium channels at site 2, causing an activation of the sodium channels, which become refractory to excitation. The arrhythmogenic properties are due to its anticholinergic effects mediated by the vagus nerve. Aconitine has a +ve inotropic effect by prolonging sodium influx during the action potential. It has hypotensive and bradycardic actions due to activation of the ventromedial nucleus of the hypothalamus. they can induce strong contractions of the ileum through acetylcholine release from the postganglionic cholinergic nerves.

CLINICAL FEATURES:

Patients present with paresthesia and numbness of face, perioral area, and the four limbs, muscle weakness in the four limbs. hypotension, chest pain, palpitations, bradycardia, sinus tachycardia, vent. ectopics, VT, and VF. nausea, vomiting, abdominal pain and diarrhea. The main causes of death are refractory ventricular arrhythmias and asystole and the overall hospital mortality is 5.5%.

MANAGEMENT:

supportive, close monitoring of blood pressure and cardiac rhythm. Inotropic therapy is required if hypotension persists and atropine for bradycardia. vent. arrhythmias are often refractory to direct current cardioversion and antiarrhythmic drugs. Amiodarone and flecainide are reasonable first-line treatment. maintaining systemic blood flow, blood pressure, and tissue oxygenation by the early use of cardiopulmonary bypass.

more information are available but no place here.

#7843 : Venous thromboembolism prophylaxis in the emergency department: a new score

Preferred format : Oral presentation

Authors:

giovanni maria vincentelli (1), manuel monti (2), francesco rocco pugliese (3), maria pia ruggieri (4), giuseppe murdolo (5), francesco borgognoni (6), giuliano bertazzoni (7)

1. emergency department, fatebenefratelli isola tiberine rome, Rome, ITALY
2. emergency department, usl umbria 1, Rome, ITALY
3. emergency department, pertini hospital, Rome, ITALY
4. emergency department, San giovanni Hospital, Rome, ITALY
5. internal medicine, Assisi Hospital, assisi, ITALY
6. emergency department, Assisi Hospital, assisi, ITALY
7. emergency department, Sapienza University of Rome, Rome, ITALY

Keywords: anticoagulation, medical patients, emergency patients, thrombosis prophylaxis, pulmonary embolism, venous thromboembolism,new score

Abstract :

Objectives: Venous thromboembolism (VTE) prophylaxis is less frequent in emergency medicine (EM) than in internal medicine (IM) department. The aim of the present study is a critically revue of thromboembolism criteria and score in the medical patient, in EM and IM department. Particularly we hope find a score more suitable for acute patient but with high sensibility and specificity.
Methods: Double case-control observational study, with enrollment, for each case of VTE, of two consecutive patients without VTE, of equal sex and age group (18–50, 50–55, 55–60, 60–65, 65–70, 70–75, 75–80, >80 years).The study involved EM and IM department of 23 hospital/university of Lazio and Umbria, in Italy.

Results: We analyzed data pertaining to 1215 patients, 409 with VTE (50% – deep venous thrombosis (DVT), 9.9% – pulmonary embolism (PE), 40.1% – PE+DVT) and 806 case-control. 222 patients (30%) were in charge to EM department while 520 patients (70%) to IM department. The TEV risk factors at more statistical significance ($p<0.01$) were: previous VTE, active cancer, known thrombophilic condition, immobilization, chronic venous insufficiency, hyperhomocysteinemia, central venous catheter, recent hospitalization. Obesity, recent surgery, family history of VTE, hormone therapy and treatment with drugs that stimulate hematopoiesis were resulted at intermediate statistical significance ($p<0.05$ but >0.01). Multiple logistic regression was used with robust standard errors and forward selection of candidate variables using the Bayesian information criterion to develop a new score: the " TEvere Score" This score shows the highest specificity and sensitivity, (respectively 43.3and 87.5 with accuracy 72.1) compared with Padua, Kuscer and Chopard scores. Tevere score had predictive validity for risk of thromboembolism(AUROC 0.7266; 95% CI, 0.71 to 0.73) than was greater than Kuscer score(AUROC 0.6891; 95% CI, 0.67 to 0.70)($p =0.0093$).

Conclusions: The TEVERE score has shown to have a higher accuracy than the other scores most commonly used in clinical practice to stratify the risk of thromboembolism.In particular, in our study, we were taken into exams also patients from the Department of Emergency, which appear to have, for a variety of factors, different characteristics than patients hospitalized in medical wards.This makes the TEVERE a good score to use, fast, also in the Emergency Departments.

#7845 : EMS systems´comparison across the cases

Preferred format : Oral presentation

Authors:

Christoph Redelsteiner (1)

1. , Univ of Applied Science, Depts Social Work and Health / Danube Univ Emergency Health Services Mgmt Program, St Pölten / Krems, AUSTRIA

Keywords: Gatekeeper; Emergency Medical Services; Community Care; Primary Care; hear, refer and treat; see, treat and release;

Abstract :

Background

The study compares pathways for the same patient conditions of different Emergency Medical Services from 17 European Nations. These cases were designed as urgent but not life threatening emergencies: A simple laceration, an adult experiencing an asthma attack, a patient with lower back pain, a caller having cough and chest pain, an elderly after a fall, a patient with fever and a senior in need to have a urinary catheter change.

Participants and methods

Services in Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Luxembourg, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom participated in the study. The seven case scenarios have been answered via questionnaire or personal interview during participation in field ambulance work.

•Results

There is a high degree of variation in steering the patient into different medical pathways via phone evaluation or on scene assessments between the different services that have been researched. Overall, in the observed institutions there is a tendency to treat and release patients if ambulance providers also have a nursing or community/advanced paramedic background, combined with standardized assessment protocols or if there are general practitioners systematically involved. Some services have a strict ‘transport to the hospital strategy’ whereas others have a ‘hear and refer or treat’ or ‘see, treat and release’ response.

Discussion/conclusion

Ambulance services fulfill primary care tasks in all nations. If there is no common strategy developed with traditional primary care providers such as general

#7846 : Five-year experience of intraosseous access in prehospital stage

Preferred format : ePoster

Authors:

Dmitrijs Sergejevs (1), Sarmite Villere (1)

1. State Emergency Medical Service of Latvia, , Latvian Association of Emergency Medicine, Riga, LATVIA

Keywords: Prehospital, intraosseous

Abstract :

Introduction: Establishment of State Emergency Medical Service (SEMS) in Latvia (2009) was the general precondition for implementation of unified equipment and new methods in prehospital emergency medical care provision. In January, 2011 devices for intraosseous (hereinafter - IO) access were introduced in all EMC crews throughout the state. Regular and continuing training for IO establishment was provided for SEMS medical staff. According to the training IO has to be established in proximal tibial plateau in case when intravenous access is not available or feasible.

Objective: To summarize the results of the IO access in 5-year period in prehospital stage in Latvia with a purpose to evaluate the effectiveness of training.

Materials & Methods: Medical records of patients to whom IO access was established in prehospital stage in Latvia from 2011 to 2015 were analyzed.

Results:

488 IO line placement attempts were performed to 468 patients from January 1, 2011 to December 31, 2015 - 457 times with Bone Injection Gun, B.I.G. (Waismed Ltd.) and 31 times with EZ-IO (Vidacare).

Age of patients varied from 19 days to 97 years (average 54.0 years, SD 25.3). In 47 cases IO was established to children, including 19 infants.

In most cases (41%, n=192) the patients had cardiac arrest, while 28.6% (n=134) of patients had hemodynamic instability and 30.3% (n=142) had other condition requiring vascular access during transportation to hospital. 25.2% (n=118) of patients had trauma, while 74.8% (n=350) of patients had non-trauma related condition.

Most IO insertions were performed by physicians - 67% (n=327), while in 33% (n=161) of cases IO access was performed by doctor’s assistant.

Successful insertion on the first attempt was achieved in 87.5% (n=427) cases. In 12.5 % (n=61) cases IO access was not established due to different reasons - bone but not marrow entered, failure to remove the trocar needle after insertion, inability to identify the insertion site correctly and improper needle length in obese patients. 12 unsuccessful IO line insertions were observed in children, including 7 infants. Needle dislodgment was observed in 14 cases after initially successful IO access, thus diminishing overall IO line success rate to 84,6%.

Conclusions:

1. Regular training improves success rate in establishment of IO access. Our results showed substantial increase of success rate of IO insertion on the 1st attempt from 78.9% to 87.5%.
2. First attempt success rate for B.I.G. device was 87,1%, including 88% for adults and 80% for children.
3. There was no statistical difference in success of IO line placement performed by physicians or doctor’s assistants (OR=0.99; p=0.42). Overall 84.4% success rate was achieved by physicians and 85.0% - by doctor’s assistants.
4. Vast majority of unsuccessful attempts were performed with B.I.G. device. There was only 2 unsuccessful IO insertion reported with EZ-IO, but the number of EZ-IO insertions is too small to make statistical analysis.

#7849 : An unusual presentation of Intracranial Abscess

Preferred format : ePoster

Authors:

Omar Ghazanfar (1), Saleh Fares (1)

1. Emergency Medicine, Zayed Military Hospital, Abu Dhabi, UNITED ARAB EMIRATES

Abstract :

A fifty five year old patient was referred to the Emergency Department wit a diagnosis of hyponatremia.On assessment in the Emergency Department he was found to have a three day history of fever,headache,body aches and nexk pain.Although he was fully conscious during initial he was found to have intermittent periods of delirium.An initial working diagnosis of meningitis was made and patient was started on IV antibiotics.LP was turbid and was consistent with bacterial infection .A CT scan and later an MRI scan showed multiple foci of abcesses in his cerebellar and thalamic region.

On further review of his medical file it was found that he was admitted a few months prior with lung empyema and required a thoracostomy at that point.This was an unusual case and it is presumed that the patient had thrown off several septic emboli to the brain.

We will intend to discuss ED presentations of intracranial infections and elaborate on investigation and treatment protocols as pertaining to managing such patients in the Emergency Department.

#7852 : Risk stratification in acute coronary syndrome: evaluation of the GRACE and CRUSADE scores in the setting of a tertiary care centre

Preferred format : ePoster

Authors:

Katharina Tscherny (1), Raphael van Tulder (1), Harald Herkner (1), Christof Havel (1), Wolfgang Schreiber (1), Dominik Roth (1)

1. , Department of Emergency Medicine, Medical University of Vienna, Austria, Vienna, AUSTRIA

Keywords: acute coronary syndrome, risk assessment, major bleeding, outcome research

Abstract :

Background:

The management in acute coronary syndrome (ACS) is influenced by risk assessment. The Global Registry of Acute Coronary Events (GRACE) and the Can Rapid risk stratification of Unstable angina patients Suppress Adverse outcomes with Early implementation of the American College of Cardiology/American Heart Association guidelines (CRUSADE) scores are among the most frequently used risk assessment tools. A recently published study on 1,587 patients suggested a clear superiority of the GRACE vs. the CRUSADE score to predict in-hospital mortality and major bleeding. These results were noted controversially in the scientific community.

Objectives:

We aimed to assess the performance of the GRACE and CRUSADE risk scores to predict in-hospital mortality and major bleeding in a contemporary ACS population at a high-volume centre.

Methods:

All patients treated for ACS from January 1, 2006 to December 31, 2015 at our tertiary care centre were prospectively included in our registry. Demographic and clinical characteristics as well as details on diagnostic findings and therapy were collected according to the Cardiology Audit and Registration Data Standards (CARDS) of the European Society of Cardiology. GRACE and CRUSADE risk scores were calculated. The discrimination capacity of both scores for in-hospital mortality and major bleeding were compared using receiver operating characteristic curves and the method suggested by DeLong et al.

Results:

In total 4,087 patients (874 (21.4%) female; age 62±14 years) were included, 2218 (54.3%) were diagnosed with ST-elevation myocardial infarction (STEMI), 2973 (72.7%) underwent acute percoutaneous coronary intervention (PCI), 92 (2.3%) received thrombolytic therapy, 113 (2.8%) died, and major bleeding occurred in 65 (1.6%). Based on GRACE risk categories 1,031 patients (25.2%) had low risk, 1,401 patients (34.3%) had intermediate risk, and 1,655 patients (40.5%) had high risk. Risk based on CRUSADE categories was very low/low in 1,505 patients (36.8%), moderate in 924 patients (22.6%), and high/very high risk in 1,658 patients (40.6%). Discrimination capacity for in-hospital mortality of the GRACE score was superior to the CRUSADE score (area under the curve (AUC) 0.91 (95% CI 0.89 - 0.93) vs. 0.83 (95% CI 0.80-0.86); $p<0.05$). Performance for major bleeding was poor for both scores (AUC 0.71 (0.65-0.76) for GRACE vs. 0.61 (0.55-0.68) for CRUSADE; ns).

Conclusion:

Our findings support a superiority of the GRACE over the CRUSADE score to predict in-hospital mortality. Major bleeding is rare in the era of primary PCI and performance of both scores to predict it was poor, however there was a trend towards superiority of the GRACE score for this outcome, too.

#7857 : CORE CONTENT IN EDUCATION FOR NURSES IN AMBULANCE CARE IN SWEDEN, FINLAND AND BELGIUM – A CASE STUDY

Preferred format : ePoster

Authors:

Helena Sjölin (1), Veronica Lindström (2), Håkan Hult (3), Charlotte Ringsted (4), Lisa Kurland (5)

1. Karolinska Institute, Dept. of clinical research and education, Södersjukhuset, Stockholm, SWEDEN
2. Karolinska Institute, Dept. of neurobiology, care sciences and society, Division of nursing, Stockholm, SWEDEN
3. Linköping University, Department of Behavioral Science and Learning, Linköping, SWEDEN
4. Aarhus University, Centre for Health Science Education, Faculty of health , Aarhus, DENMARK
5. Karolinska Institute and Södersjukhuset, Department of Clinical Science and Education and Unit of Emergency Medicine, Stockholm, SWEDEN

Keywords: Curriculum; Nurse Education; Ambulance care; Prehospital care; Emergency care

Abstract :

There is no general agreement regarding education and competence for working in emergency medical services in Europe. A few countries staff ambulances with registered nurses (RN), but there is no consensus on specific knowledge needed for RNs in ambulance care. The objective of the study was to explore the content in Swedish, Finnish and Belgian advanced level education for RNs in ambulance care. A deductive case-study research design was used. Three Universities, one from each country of Sweden, Finland and Belgium participated. Data was generated from curricula and interviews with teachers, analyzed with different approaches of qualitative content analysis. The result showed that common content of the curricula can be described as pharmacology, medical science, medical care and treatment, clinical judgment, nursing practice, patient relationship, knowledge transfer, ethical views, contextual skills, management, and employment factors. Content concerning medical knowledge, especially medical science, medical care and treatment, and clinical judgment, dominated. Clinical reasoning, applied knowledge, personal abilities and scientific awareness were described by the teachers as essential in the education.

Conclusions: The need for medical knowledge dominates the educational content with an obvious focus on medical science, medical care and treatment, and clinical judgment. The teachers aim to meet the need of broad competence in clinical reasoning by implementing theory into practice, as well as to develop the students' personal abilities and instilling a scientific awareness.

#7860 : Hamate Body Fracture: A Rare Entity

Preferred format : ePoster

Authors:

Onur Kaplan (1), Demet Tas (1), Mehmet Yigit (1), Tugba Evran (1)

1. Emergency Department, Haseki Training and Research Hospital, Istanbul, TURKEY

Keywords: hamate body fracture, CT scan of the wrist, blunt truma, wrist pain

Abstract :

Background: The hamate bone is an irregularly shaped carpal bone found within the hand. Fractures of hamate bone are rare and often difficult to diagnose, hamate fracture constitute about 2 % of all carpal fractures. Hook of hamate fractures have the potential to cause significant injury to the ulnar nerve and artery. Herein, we present a rare case of isolated hamate body fracture in a young male following blunt trauma during a motor vehicle accident.

Case: A 23 year-old previously healthy man was involved in a motor vehicle accident and presented to our emergency department with a complaint of left wrist and hand pain on the ulnar side of the wrist. On arrival, the young male was alert and oriented, and his vital signs were stable. On physical examination, he complained about pain in his left hand and wrist since 1 hour. His pain relieved with grip strength. He had tenderness on the ulnar side of the wrist. Anteroposterior and oblique x-ray showed no fracture but, Computed tomography (CT) scan of the wrist revealed a displaced hamate body fracture. The patient was finally diagnosed as having hamate body fracture and he underwent operation for displaced hamate body fracture.

Conclusion: On conventional x-ray, 60% of wrist fractures are misdiagnosed as simple wrist sprains. Carpal bone fractures can be difficult to detect radiographically, hence CT of the wrist should be considered where fracture is still suspected. When hamate body fracture is detected early, appropriate treatment can improve a patient's quality of life and reduce disability,

#7865 : Beware: unexpected heart reaction.

Preferred format : ePoster

Authors:

Daniel Fernández Vargas (1), Enrique Caro Vázquez (1), Carmen Adela Yago Calderón (1), Susana Martín Caravante (2), Ana José Duarte Romero (1), Juan Antonio Rivero Guerrero (1)

1. Servicio de Cuidados Críticos y Urgencias. Hospital Virgen de la Victoria. Málaga., Servicio Andaluz de Salud, Málaga, SPAIN
2. Dispositivo de Cuidados Críticos y Urgencias. Distrito Málaga., Servicio Andaluz de Salud, Málaga, SPAIN

Keywords: arrhythmia, brugada syndrome, atrial fibrillation

Abstract :

INTRODUCTION: Brugada syndrome (BS) is classified as an channelopathy, whose consequence is the predisposition to arrhythmias. SB prevalence is around 5 in every 10,000 people, although it is estimated that there is also a large percentage of the population with silent forms of the disease and, therefore, there are people who are undiagnosed. Between 17% and 42% of them present syncope or sudden death due to ventricular arrhythmia during mostly, the third or fourth decade of life. SB patients have an increased risk of suffering atrial arrhythmias, especially atrial fibrillation (AF) risk. The incidence of atrial fibrillation in patients with Brugada syndrome is 10 to 20% and, in turn, the presence of AF was associated with a severe presentation of disease and increased risk of ventricular fibriliación. AF is the arrhythmia most common presentation in the Emergency Departments (ED), so it is crucial to know all the possible etiologies of the AF for proper patient management, minimizing the risk that the patients would suffer adverse events.

OBJECTIVE: Recycling and update training for the management of Brugada syndrome in the context of tachyarrhythmias that are handled in the usual emergency practice.

METHODS AND RESULTS: A case report: Male, 42 years without allergies, smoker ten packs / year, without family or other personal factors of structural heart disease. He arrived to Hospital in an ambulance with well tolerated palpitations, that started 2 hours ago. He refers previous episodes that are self-limiting in recent years, with electrocardiogram (ECG) without pathology when he is seen. Upon arrival, hemodynamically stable, the ECG shows a narrow QRS tachyarrhythmia with left axis and morphology of Incomplete Right Bundle branch block compatible with AF to 130 bpm. The chest X-ray shows no findings. The patient is not with chest pain and there are not signs of heart failure, so we proceed to cardioversion pharmacologically with intravenous flecainide. After 5 minutes, the patient reported being "dizzy", while retaining hemodynamic parameters. We repeat ECG, that confirms us became to sinus rhythm (SR), although with alterations in repolarization of V1 to V3 compatible with BS type I.

The patient has hemodynamic and clinical stability, and being asymptomatic, so he goes to observation area, where he recovered the ECG original morphology of repolarization, and remaining in SR in the following 6 hours. Serial tests of markers of myocardial necrosis are made more than 12 hours of onset of symptoms, and there is not evidence of an ischemic event. The patient is valued by Cardiology, and due to the clinical presentation and evolution (Asymptomatic, BS morphology type I after blocking sodium channels drugs, and without family history of sudden death), the patient is discharged from hospital to continue the study and monitoring by the Arrhythmia Unit.

CONCLUSIONS: Although the BS has a low prevalence, the high incidence of AF and its management in Emergency Departments, must motivate us to have a proper recycling in the etiology of atrial arrhythmias, to ensure patient safety and proper integrated management in the ED.

#7866 : To evaluate whether the existence of fever is linked to a lower rate of significant coronary artery stenosis in patients with suspected acute coronary syndrome

Preferred format : Oral presentation

Authors:

Hiroshi Dohgomori (1), Shozo Saho (2), Junichi Imamura (3), Ichiro Kukita (1)

1. Division of Emergency Medicine, Ryukyu University Hospital, Nishihara-cho, JAPAN
2. Department of Anesthesiology, Kagoshima Medical center, Kagoshima, JAPAN
3. Department of Neurosurgery, Kagoshima Medical center, Kagoshima, JAPAN

Keywords: acute coronary syndrome, diagnosis, feverCV

Abstract :

Background: Although a correct and prompt diagnosis of acute coronary syndrome (ACS) is important, it is not always easy to perform in an emergency room (ER) setting.

Purpose: We evaluated whether the presence of fever at ER was associated with severe coronary artery stenosis in patients undergoing emergency catheterization [coronary angiography (CAG)] for suspected ACS.

Method and Main results: This study was approved by the local ethical committee. In this retrospective study, we enrolled patients who visited ER of the Kagoshima Medical Hospital (Kagoshima, Japan) from October 1, 2013 to March 31, 2014 and underwent emergency CAG. Those patients received examination and if they complained of the symptoms and complains such as chest pains which were suspected of ACS, physicians in charge decided to perform CAG and percutaneous coronary intervention (PCI) for necessary. And in these patients, the rate of the PCI was checked in relation to the existence of fever checked at the time of ER. In total of 1873 patients visiting ER, 100 underwent emergency CAG to determine the diagnosis of suspected ACS; 70 of them were assessed for fever at ER. Sixty two patients (average age: 72.2 year, male/female: 42/20) had a temperature of <37°C (N-P) and the remaining 8 (average age: 66.9, male/female:6/2) had a temperature of >37°C (F-P). In the N-P group, 77% required PCI for the stenosis treatment, and in the F-P group, 50% required PCI (P = 0.08). There was the tendency of the lower rate of PCI in F-P group than in N-P group. The existence of the fever might have the possibility to influence on the rate of PCI in patients suspected of ACS.

Conclusion: We observed a tendency toward the lower rates of PCI in the F-P group . With a larger number of patients, the association of fever at the ER with coronary artery stenosis may be clarified. More examinations are warranted.

#7871 : Current specialists training of Emergency Medicine in Kanta-Häme Central Hospital, Finland

Preferred format : ePoster

Authors:

Jari Ylä-Mattila (1), Teemu Koivistoinen (1), Ari Palomäki (1)

1. , Kanta-Häme Central Hospital, Hämeenlinna, Finland, Hämeenlinna, FINLAND

Keywords: Emergency Medicine, training, specialists

Abstract :

Background

Emergency medicine (EM) became a full-length specialty in Finland in the beginning of 2013. To date, more than 10 hospitals are offering EM specialist training. Our EM specialist training is based on the European Curriculum for Emergency Medicine and comprises a six-year program including systematic theoretical and practical training.

The Kanta-Häme Central Hospital (KHCH) is the fifth largest secondary hospital in Finland offering EM services for 175 000 people and having annually 42 000 visits in the Emergency Department (ED). In KHCH, the EM specialist tuition started on October 1st, 2012, and the hospital is privileged to have the first EM specialist in Finland. Our first-year experiences in EM specialist training have been published earlier (1). In this descriptive study, we present the current situation of the EM training in the KHCH, Hämeenlinna, Southern Finland.

Methods

We analyzed the weekly time table of physicians specializing in EM. The study was carried out in the KHCH.

Results

In our ED trainees are working in shifts for 18 to 24 hours/week. They are working in the fields of Internal Medicine, Surgery, Neurology, Traumatology, ENT and Paediatrics. The rest of the working week is practiced in education by “learning and doing”. There is one day per week for further theoretical and practical training which is led by specialist of EM or Anesthesiology.

The theoretical part of the day consists of a lecture of Internal Medicine with changing topics. There are also one to two lectures presented by our own trainees or an appropriate specialist depending of the main topic of the day. The weekly changing main topics are followed by the book of Tintinalli’s Emergency Medicine (2). Since 2008, in the ED of KHCH, there have been lunch time lectures in EM covering both conservative and operative specialties. The lectures are included in the EM trainees day, but are also mentioned and been popular among the other physicians of the hospital.

To ensure the further practical skills there is hands-on sonography training with on duty Radiologist or EM or Internal Medicine specialists. The main focus of sonography training is in the Focus Assessment with Sonography for Trauma (FAST) and Focus Assessed Transthoracic Echo (FATE). The trainees have the log books to ensure sufficient amount of sonography examinations. Simulations are also a crucial part of the day. These are usually led by Anesthesiologist, and the topics are changing from the care of critically ill patients in ED or pre-hospital emergency services to equipment training or ED protocol testing. In addition, procedural education program includes training by using cadavers for four times a year.

Conclusion

The present systematic education program covers well the demands of the EM specialist training.

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2. Tintinalli JE., Stapczynski JS., Ma JO., et al. Tintinalli’s Emergency Medicine: A Comprehensive Study Guide, 8th edition, 2015.

#7873 : Efficacy of Web-based logbook System on Emergency Medicine Residents Recorded Activity and Satisfaction

Preferred format : Oral presentation

Authors:

Javad Seyedhosseini (1), Ali Labaf (1), Maziar Ashrafi (1), Narges Mohammadrezaei (1)

1. , Tehran University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Electronic Logbook, Residenty Training

Abstract :

Background
logbooks are useful materials in registering activities, defining goals and evaluation in any residency program. The purpose of this study was to evaluate efficacy of a newly initiated web-based electronic logbook system in compared with paper-based logbook based in registration of activities of emergency medicine residents activities and satisfaction of residents and faculty members.
Methods
A new web-based electronic logbook system developed inside our emergency medicine department. This crosssectional descriptive evaluation study was performed after 3 month initiation of the web-based electronic logbook
system. Two major activities of PGY1 and PGY2 residents, procedures and shift activities were compared with previous year recorded activities in paper logbooks in same period of time. Also satisfaction of faculty members and residents was evaluated via separated survey.
Results
40 residents paper logbooks and 47 residents web-based logbooks were evaluated. mean number of confirmed and registered cases of shifts and procedures per each resident in web based logbook were significantly more than paper based logbook (paper-based and web-based confirmed recorded shifts 10.4 and 20.1 respectively and paper-based and web-based confirmed recorded procedures 104.5 and 147.2 respectively , p-value<.005). Data analysis in satisfaction survey showed that most faculty members and residents prefer using web-based over paper-based logbook.
Conclusions
Our study showed that web-based logbooks can influence on quantity of recorded activities in residency program. Moreover, it is possible to record activities at any time in any place by residents and to verify by their teachers online in web based logbook system. Evaluation of the electronic system is more accurate and very time-saving than paper based system. It is crucial to evaluate effect of web-based systems on quality of residency programs in future.

#7874 : Performance of early warning scores calculated in the prehospital setting by ambulance crew to define the level of medical response: the SAPA/EAS study

Preferred format : Oral presentation

Authors:

Denis Rans (1), Marc Vranckx (2), Bernadette Cuvelier (3), Benjamin Kerzmann (4), Thierry Sottiaux (5), Christian Mélot (6), Fabien Guérisse (1), Didier Taminiau (7)

1. Emergency department, CHU Tivoli, La Louvière, BELGIUM
2. Emergency department, CHU de Charleroi, Charleroi, BELGIUM
3. Emergency department and Emergency Medical Service, Grand Hopital de Charleroi, site Notre Dame and Charleroi Fire Department, Charleroi, BELGIUM
4. Emergency department, Clinique Notre Dame de Grace, Gosselies, BELGIUM
5. Emergency Medical Service, Centre Régional d'Aide Médicale Urgente, Charleroi, BELGIUM
6. Emergency department, Erasme University Hospital, Brussels, BELGIUM
7. Hygiene Inspection, Federal Public Service, Hainaut Province, BELGIUM

Keywords: Prehospital, EMS, Mobile Intensive Care Unit, Early Warning Score

Abstract :

Introduction: Currently, in the prehospital setting, the first line ambulance crew don’t have any objective tool for helping to define the usefulness of Mobile Intensive Care Unit (MICU - SMUR) intervention. Early Warning Scores (EWS), based on vital signs, are used to monitor inpatients and to trigger a timely medical response. EWS in the prehospital setting might provide an objective tool leading to a more rational use of Emergency Medical Services (EMS). This study compares the performance of ten EWS among which the new EAS (Emergency Alert Score).

Material and method: 2343 ambulance’s report forms recorded during two months (January and July 2014) were retrospectively reviewed. Patients not transferred into one of the six participating hospitals of the ambulance district, patients aged less than 16 years, patients known to be pregnant and incomplete forms were excluded. Seven criteria for a medical response, independent of vital signs, were taken into account before calculating EWS. The primary outcome was the usefulness of MICU intervention, who was assessed by reviewing hospital medical files (adverse event and/or severity level at admission).

Results: 1120 patients were analysed. Hospitalisation rate was 45 %, among which 8 % in intensive care unit. Areas Under the Curve (AUC’s) of the best EWS (i.e. the EAS) without or with criteria for a medical response, independent of vital signs, were 0.76 (95 % CI: 0.74 – 0.79) and 0.83 (95 % CI: 0.80 – 0.85) respectively. For an EAS > 3, sensitivity was 73 % (95 % CI: 67 – 79), specificity was 80 % (95 % CI: 77 – 83), predictive positive value was 48 % (95 % CI: 43 – 53) and predictive negative value was 92 % (95 % CI: 90 – 94).

Discussion and Conclusion: Criteria for a medical response, independent of vital signs, improve the performances of the EAS score. A negative score (EAS ≤ 3) may help ambulance crew to decide to stop or to not call the MICU, with the advantage of an improvement in EMS management. These results must be confirmed by a prospective study.

References: Fullerton JN. et al. Resuscitation 2012; 83: 557-62. Silcock DJ et al. Resuscitation 2015; 89: 31-35.

#7875 : Aborted sudden cardiac death due to ventricular fibrillation in a patient addicted to supplements.

Preferred format : ePoster

Authors:

Daisuke Nishioka (1), Keitaro Goto (1)

1. Emergency Department, Tokatsu Hospital, Nagareyama, Chiba, JAPAN

Keywords: sudden cardiac death, ventricular fibrillation, supplements

Abstract :

BACKGROUND: Sudden cardiac death (SCD) represents about one-fifth of all mortality in industrialized countries and still remains a major public health issue. Most of SCDs are caused by ventricular fibrillation (VF) and asystole. We experienced the case of ventricular fibrillation of walk-in visit patient while performing ECG examination. We introduce the case of VF due to hypokalemia induced by supplements abuse.

OBJECTIVE: This is a case of aborted sudden cardiac death due to ventricular fibrillation in emergency room. The purpose of this report is to heighten suspicion against not only prescribed drugs or illicit drugs but also on-the-counter supplements as a cause of ventricular fibrillation for all emergency physicians.

CASE REPORT: 56-year-old woman was presented to our hospital because of her continuous chest pain. She began to feel her chest tightened 3 years ago. She was diagnosed as vasospastic angina and followed up without medication. While her examination of ECG, a seizure was developed and ECG showed ventricular fibrillation. Cardiopulmonary resuscitation was started and successfully returned her spontaneous circulation after once of electrical cardioversion. Emergent coronary angiography was performed, found no significant coarctation. Blood examination showed hypokalemia of 2.8mEq/L, the cause of this hypokalemia was abuse of several supplements that claim a great effectiveness on constipation. Intracoronary acetylcholine spasm provocation test revealed the spasm of left anterior descending branch and the high lateral branch. There were no endocrine abnormalities, and serum potassium value was normalized by discontinuation of the supplements. She was discharged without any delayed effect, and she has not experienced the subsequent angina or fatal arrhythmia after discharge.

DISCUSSION and CONCLUSION: This was a case of aborted sudden cardiac death caused by ventricular arrhythmia due to addiction to supplements. In clinical practice, hypokalemia is a common electrolyte abnormality and known as one of the causes of lethal arrhythmia. The use of digitalis or coronary ischemia increases the risk of fatal arrhythmia in hypokalemic patient. In this patient, vasospastic angina was merged with hypokalemia associated with the addiction of supplements, resulting in triggering ventricular fibrillation. Hypokalemia can be critical in patients with heart disease, we should listen to the history, not only medications or illicit substances but also on-the-counter supplements as the cause of the hypokalemia and lethal arrhythmia.

#7876 : Diagnosis, Management and Risk Profile Of Patients With Venous Thromboembolism Attended In Spanish Emergency Departments: Espheria Registry

Preferred format : Oral presentation

Authors:

MARTA MERLO (1), PEDRO RUIZ-ARTACHO (2), PASCUAL PIÑERA (3), CORAL SUERO (4), ALBERT ANTOLIN (5), JOSÉ RAMÓN CASAL (6), MARTA SÁNCHEZ-GONZÁLEZ (7), PABLO HERRERO (7), SÒNIA JIMENEZ (8)

1. A&E, HOSPITAL UNIVERSITARIO GETAFE-MADRID, MADRID, SPAIN
2. A&E, HOSPITAL CLINICO - MADRID, MADRID, SPAIN
3. A&E, HOSPITAL UNIVERSITARIO REINA SOFIA - MURCIA, MURCIA, SPAIN
4. A&E, HOSPITAL DE LA AXARQUIA, MÁLAGA, SPAIN
5. A&E, HOSPITAL CLINIC - BARCELONA, BARCELONA, SPAIN
6. A&E, HOSPITAL EL BIERZO - PONFERRADA, LEÓN, SPAIN
7. A&E, HOSPITAL UNIVERSITARIO CENTRAL DE ASTURIAS - OVIEDO, OVIEDO, SPAIN
8. A&E, HOSPITAL CLINICO - BARCELONA, BARCELONA, SPAIN

Keywords: Emergency department, disease management, venous thromboembolism.

Abstract :

Background

In most cases in which venous thromboembolism (VTE) is developed in the outpatient setting, the Emergency Departments (EDs) is where the disease is actually diagnosed. Surprisingly, however, few studies have analyzed the characteristics of patients with VTE and the disease itself from the perspective of the ED. This is relevant for several reasons. Firstly, little is known about the epidemiology of VTE in the ED and the risk factors most frequently presented by patients diagnosed with an episode of VTE in the ED. Secondly, few studies have evaluated the most adequate management of patients with VTE by emergency physicians or whether this managment is carried out according to the recommendations of the clinical practice guidelines (CPG), and if this has any repercussion on the final outcome of the patient. Lastly, little is known about the treatment performed in the ED and how this may influence the outcome of the patient.

Aim. The aim of this study was to determine the clinical presentation of VTE and the main risk factors involved in patients diagnosed in Spanish EDs as well as evaluate the management of these patients and adherence to clinical practice guidelines by emergency physicians.

Methods. We performed a prospective cohort study in 53 Spanish EDs, consecutively including patients diagnosed with VTE in the ED. The following data were evaluated: demographic, comorbidities, risk factors for the development of VTE, index event, hemorrhagic risk factors, prognostic factors [pulmonary embolism (PE)] and in-hospital mortality. To evaluate health care quality we determined the percentage of patients registered with clinical probability of PE, requests for D-dimer concentrations according to clinical probability, administration of treatment prior to confirmation of diagnosis based on clinical probability and records of risk of bleeding and prognosis of the patients with VTE.

Results. Of 549,840 ED visits made over a mean period of 40 days, 905 patients were diagnosed with VTE (impact 1.6/1000 visits). Of these, 801 patients were included in the analysis, 49.8% of whom had PE with or without deep venous trhrombosis (DVT). The most frequent risk factors for VTE were: age (≥70 years), obesity, new immobility, previous VTE and active cancer. In the ED medical reports a scale of clinical probability, the prognosis or the risk of bleeding were only described in 7.6%, 7.5% and 1%, respectively of the cases. Of the patients with PE and high clinical probability, D-dimer was determined in 87.2%, and treatment was initiated prior to confirmation in 35.9%. Regarding risk, 31.3% of the patients with PE presented low risk, 59.1% intermediate-low risk, 6% intermediate-high risk and 3.5% high risk. Of the patients with PE, 98.7% were hospitalized while 50.2% of the VTE (without PE) were admitted. The in-hospital mortality of the patients with PE was 3.8%.

Conclusion. VTE has an appreciable impact on Spanish EDs. Risk profile for the VTE development in patients diagnosed in ED being similar to previous studies. Adherence to CPG recommendations needs to significantly improve.

#7878 : Anticoagulant treatment of acute venous thromboembolism in the Spanish Emergency Services: Does it change the attitude of the specialist physician in front of emergency physicians? EDITH Study

Preferred format : Oral presentation

Authors:

MARTA MERLO (1), PEDRO RUIZ-ARTACHO (2), PASCUAL PIÑERA (3), CORAL SUERO (4), ALBERT ANTOLIN (5), JOSÉ RAMÓN CASAL (6), MARTA SÁNCHEZ-GONZÁLEZ (7), PABLO HERRERO (7), SÒNIA JIMENEZ (8)

1. A&E, HOSPITAL UNIVERSITARIO GETAFE-MADRID, MADRID, SPAIN
2. A&E, HOSPITAL CLINICO - MADRID, MADRID, SPAIN
3. A&E, HOSPITAL UNIVERSITARIO REINA SOFIA - MURCIA, MURCIA, SPAIN
4. A&E, HOSPITAL DE LA AXARQUIA, MÁLAGA, SPAIN
5. A&E, HOSPITAL CLINIC - BARCELONA, BARCELONA, SPAIN
6. A&E, HOSPITAL EL BIERZO - PONFERRADA, LEÓN, SPAIN
7. A&E, HOSPITAL UNIVERSITARIO CENTRAL DE ASTURIAS - OVIEDO, OVIEDO, SPAIN
8. A&E, HOSPITAL CLINICO - BARCELONA, BARCELONA, SPAIN

Keywords: Emergency department, venous thromboembolism, Therapeutics

Abstract :

The Emergency deparments (ED) are very important, among other things, because are the places where the diagnosis of venous thromboembolic disease (VTE) that develops on an outpatient basis in most cases is established. It is also where doctors often start specific treatment for VTE and management is decided.

AIM

The principle aim of this study was to evaluate the therapeutic management by emergency physicians of patients diagnosed with VTE in Spanish ED. On the other hand, which is the process of change that has experienced this treatment during follow-up of the patients for six months.

METHODS

The EDITH study is a multicenter retrospective cohort study involving 50 Spanish emergency services belonging to fifteen regions .

We included consecutive patients who were diagnosed with VTE (-PE- pulmonary embolism or deep vein thrombosis -DVT-) and were treated in emergency services between October 13 and December 14, 2014 were included in the study.

We were collected demographic variables, morbidity, risk factors for VTE in the moment of diagnosis , besides the diagnostic and therapeutic management in the emergency department and 6 months later.

RESULTS

A total of 775 patients with VTE were included in the study. 386 patients (49.8%) have PE, with or without DVT. The mean age of patients was 66 years. A 96.9% received anticoagulant therapy in the emergency department, of which 90.6% was LMWH. Only 30 patients in the emergency began acenocumarol and 7 patients received rivaroxaban. At hospital discharge, 65% of DVT and 33.6% of PE remained with LMWH monotherapy. At 1, 3 and 6 months after the stay in the emergency these percentages were maintained for DVT in 42.7, 30.6% and 17.8%, and for PE in 29.2%, 23.1% and 18.9%, respectively. These results are not exclusive to cancer patients but it also observed in all study population. A 73.1% of patients maintained anticoagulant therapy for at least 6 months (83.9% of PE and 61.2% of DVT).

CONCLUSION

A hospital management centered in the use of heparins and low transition to antivitamins K in patients with VTE was observed. Similarly, in the outpatient management the introduction of oral anticoagulants was less than would be expected according to the guidelines of recommendation and a more prolonged duration of treatment it was observed.

#7879 : ECG Lead Misplacement - Fool Me Once Shame on You,Fool Me Twice Shame On Me

Preferred format : ePoster

Authors:

Irene Grossi (1), Richard M Lynch (1)

1. Midland Regional Hospital Mullingar, Midland Regional Hospital Mullingar, Mullingar, IRELAND

Keywords: ECG lead misplacements, REVERSE Mnemonic, Right Arm-Right Leg Misplacement,Right arm-Left arm

Abstract :

ECG lead misplacement can dramatically alter the appearance of the ECG. if this is not detected significant and profound errors in treatment can ensue. We report the case of a 42 year old male who presented following a fall down a flight of stairs. An ECG was performed and this was compared with a previously recorded ECG which was filed in the patient's hospital record. Two separate limb lead misplacement were present on this ECG even though classical features of both limb lead misplacements were present. Not only was this ECG filed in the in-patient records the ECG was not signed off by a senior doctor.

A Review of the ECG appearence of both examples of misplacement is present together with tips on how to recognise these lead misplacements.

ECG lead misplacement can alter the diagnosis in approximately 25% of cases and represents an avoidable risk in patient management.

#7880 : The utility of inferior vena cava diameter (IVC) in patients with acute heart failure: review of ultrasound protocol.

Preferred format : Oral presentation

Authors:

Julio Armas Castro (1), Blas Giménez Fernández (2), Laura Fernández Calvo (1), Juan Carlos Real López (2), Tamara Martín Casquero (1)

1. Emergency Department, Hospital del Vinalopó, Alicante, SPAIN
2. Emergency Department, Hospital del Vinalopo, Alicante,

Keywords: IVC diameter, heart failure, ultrasound

Abstract :

Background: The ultrasound “point of care” can permit rapid, accurate, and noninvasive diagnosis of a broad range of acute critical situations in emergencies. Both inferior vena cava (IVC) diameter and the degree of inspiratory collapse are used in the estimation of right atrial pressure. This index correlated significantly with other markers of pulmonary congestion.

Objectives: The primary goal is to determine the utility of IVC diameter and collapsibility as a pulmonary congestion marker in patients with acute heart failure.

Patients and Methods: The cross-sectional study at Emergency Department of Hospital del Vinalopo prospectively evaluated 145 patients between February 2015 and February 2016 complaining of dyspnea in context of acute heart failure. The attending physician of emergency medicine evaluated the patients through NT-proBNP, lung ultrasound (LUS) with determination of B pattern and estimation of IVC diameter during inspiration. Finally, data were compared and quantitative and categorical variables were worked out along with other statistical analysis through estimated indicators.

Results: The values of NT-proBNP were significantly higher among the patients with acute symptoms of pulmonary congestions and diameter of IVC more than 50% ($P \leq 0.001$). In the group of patients with IVC diameter less than 50% the medium value was 5300 (675-28324 $P \leq 0.005$).

The medium value of IVC diameter in both group of patients with acute heart failure was 20.4mm (sensitivity 90% and specificity 73%). The correlation between pattern of B lines in LUS, IVC diameter and IVC colapsability resulted significantly in all patients with acute heart failure. ($r=0.886$, $p \leq 0.001$).

The patients with highs values of NT-proBNP and the B pattern in LUS, high index of colapsability of IVC predicted a diagnosis of acute heart failure with a high mortality in a nearest future.

Conclusions: This study demonstrates that ICV diameter and collapsibility in LUS correlated significantly with values of NT-proBNP in patients with heart failure. The use of estimators in both groups of patients may also enable to distinguished patients with a high risk of decompensated disease with a higher mortality.

#7881 : A multisource derivation of guidelines for education and screening for human trafficking in the emergency department.

Preferred format : Oral presentation

Authors:

Stephen Morris (1), Marlee Hahn (2), Brandy Clucka (2)

1. Acting Assistant Professor of Emergency Medicine, University of Washington School of Medicine, seattle, USA
2. , University of Washington Division of Emergency Medicine, seattle, USA

Keywords: Human Trafficking, Emergency Medicine, Education

Abstract :

Trafficking in persons is a major problem that intersects many facets of society, including the legal system, law enforcement, and healthcare. While some elements of society have been active in improving awareness and action against trafficking in persons, healthcare has been slow to adopt standardized education and training about this population. There remains some ambiguity regarding how to identify these victims, but some understanding of screening can be correlated from literature surrounding intimate partner violence. An understanding of what is known of the epidemiology, combined with evidence of efficacy of screening techniques for other vulnerable populations, supports targeted screening. Emergency medicine as the front line of the healthcare system has a unique opportunity to access these vulnerable patients and connect them with services. With a review of easily accessible literature, training, and legal documents, we make a case for a comprehensive training program for emergency medicine residents. Our recommended training would include epidemiology of the populations involved, screening and interviewing, training and practice, understanding of ways to access local resources, and education around risk factors and indicators to help identify victims.

Because the literature on TIP traverses multiple social areas (legal, law enforcement, global and public health, economics, healthcare), a formatted comprehensive literature search was not possible. Therefore, the research team opted to utilize a combination of generalized Pub-Med searches and internet and lay-literature sources to gather the most prominent current literature that would be available to residency directors seeking to develop a program. While this non-traditional research method leaves the possibility of key components being missed, it represents a more practical approach to gaining an understanding of a subject that crosses multiple academic lines.

While the evidence on how to identify and manage the victims of human trafficking is inconclusive, what is clear is that there is a great unmet need with regard to healthcare providers awareness of and education on this subject. By utilizing and understanding the current literature on TIP, lessons learned in other realms, such as screening tools for intimate partner violence, interview techniques and practices from the legal and law enforcement literature, and what is known about the environment of the emergency department, we have constructed a guideline for the development of a curriculum on the subject for emergency medicine residents. This guideline, supplemented with an understanding of local epidemiology and available resources, can allow residency programs to fulfill a portion of the unmet educational need on this important subject.

#7885 : Pre-hospital ultrasound, what benefit for pre-hospital care ?

Preferred format : Oral presentation

Authors:

Jonathan GONZVA (1), Jimmy ROBERT (1), Alexandre ALLONNEAU (1), Clément DERKENNE (1), Nicolas HERVAULT (1), Vincent GELE (1), Frédéric DELAY (1), Daniel JOST (1), Jean-Pierre TOURTIER (1)

1. Bureau Médecine d'Urgence, Brigade de sapeurs-pompiers de Paris, Paris, FRANCE

Keywords: pre-hospital ultrasound, diagnostic agreemen,t hospital ultrasound, abdominal sonography for trauma, FAST, Deep Vein Thrombosis, venous catheter, femoral nerve block

Abstract :

Introduction : The pre-hospital ultrasound (PHU) has shown interest to diagnose and refer severe trauma patients. Few studies have reported its usefulness in medical condition. First, we aimed to assess PHU's contribution in pre-hospital medical decisions, in dispatching severely injured patients and those who suffer from a medical condition in hospitals. Secondly we assessed the diagnostic agreement between PHU and hospital ultrasound (HU).

Material and methods : This was an observational prospective study. The collected datas concerned the epidemiological characteristics (age, gender, medical history..), ultrasound (type of sonography done and diagnostic contribution), and therapeutic guidelines (what evacuation vector, what hospital destination). We included any patient who benefited from PHU by our mobile intensive care unit (MICU). After an univariate description of the patients' characteristics, we tested the statistical association between PHU and: -specific treatment decision, -transportation by MICU , - admission to a specific hospital department. At the end we compared the diagnostic agreement between PHU and HU. We used Student and Fisher exact test, according to the type of variable.

Results and discussion : From 25 May to 31 December 2015, 2153 patients were treated by our MICU. In total 5.9% (n=127) benefited from PHU. Their mean age was 44.3 + 23 years and 68,5% (n=87) were men. The most frequent antecedent was cardiac related (20,5%, n=26). A PHU was performed for 25,2% (n=74/294) of severe trauma, 6,8% (n=3/44) pregnancy, 4,4% (n=11/247) of cardiac arrest, 2,6% (n=17/641) of chest pain and 2,4% (n=22/927) of other diagnoses.

Concerning the PHU procedures: 54,3% (n=69) physicians focused on abdominal sonography for trauma (FAST), 27,6% (n=35) on the chest, 14,2% (n=18) on the abdomen, 1,6% (n=4) on the 4 points DVT (Deep Vein Thrombosis) compression examination, and 3,1% on guiding for inserting venous catheter (n=2) or perform femoral nerve block (n=4) ; 9,4% (n=12) of the PHU were difficult to conclude properly.

Among the PHU procedures performed, only the abnormal FAST seemed to be associated with prehospital treatment establishment (p=0,09), with medical transportation (p=0,051) and with the choice of a specific hospital department (p=0,004).

Among the 55 patients who benefited from HU, there was a substantial matching between the diagnostic agreement of PHU and HU for 82% of the patients. For 41,7% of the patients, the diagnostic doubt was shared by pre-hospital and hospital sonographer as well.

Only FAST seemed to bring added value in terms of treatment decisions and dispatching in hospitals. Others PHU, more specific to medical condition, did not show interest in this cohort, probably because of too low effective and less control of gesture.

Conclusion : This work was the first to measure the diagnostic agreement between PHU and HU. Only FAST seemed to bring added value.

#7886 : Assessment of passive leg raise by thoracic electrical bioimpedance in spontaneously breathing volunteers, a pilot study

Preferred format : ePoster

Authors:

Mohammed Elwan (1), Ashraf Roshdy (2), Assem Khamis (3), Eman Elsharkawy (4), Salah Eltahan (4), Timothy Coats (5)

1. Department of Emergency Medicine, Alexandria University, Alexandria, EGYPT
2. Department of Critical Care Medicine, Alexandria University, Alexandria, EGYPT
3. Department of Epidemiology and Population Health, American University of Beirut, Beirut, LEBANON
4. Department of Cardiology, Alexandria University, Alexandria, EGYPT
5. Department of Cardiovascular Sciences, University of Leicester, Leicester, UK

Keywords: Fluid therapy, haemodynamics, passive leg raise, impedance cardiography, cardiac output, fluid responsiveness

Abstract :

Background: While Intravenous fluid resuscitation is common in emergency departments (ED), existing standard monitoring techniques are relatively poor indicators of fluid responsiveness (FR). Passive Leg Raise (PLR) creates a reversible haemodynamic response similar to fluid challenge. Thoracic Electrical Bioimpedance (TEB) is a non-invasive cardiac output (CO) monitoring technology which can be used to quantify the cardio-haemodynamic response to PLR.[1, 2]

Objectives: To study the haemodynamic response to PLR measured by TEB (Niccomo, Medis, Germany), assess the feasibility of the test and the reproducibility of the findings.

Methods: A prospective observational study was conducted on healthy volunteers (≥18 years old). Blood pressure was recorded and TEB device was used to record continuous data of heart rate (HR), CO and stroke volume (SV). Subjects were placed in head-up position for 3 minutes followed by 3 minutes lying flat with legs elevated (PLR_1). Subjects were returned to semirecumbent position for 5 minutes, then the procedure was repeated (PLR_2). FR was defined as a rise in CO by more than 10% during the test.

Results: Fifteen volunteers were enrolled. Median age was 35 (interquartile range [IQR] = 28 – 47) and 8 were males. Median mean arterial pressure was 100 (IQR = 90 – 107). FR was observed in 11 subjects during PLR_1 and 14 subjects during PLR_2. Median change of CO during PLR_1 was 13.9% (IQR = 11.2 -18%) and 15.2% (IQR = 13.4 - 18.2) during PLR_2. Repeated FR testing showed fair agreement (Kappa = 0.328; 95% confidence interval [CI] = -0.175 to 0.832). In the 30 PLR tests CO and SV responses showed weak correlation (r_s = 0.45, CI = -0.08 to 0.78).

Conclusion: These initial data suggest that PLR-TEB test is a promising tool to predict FR in ED. The test showed fair repeatability, however this should also be established in a patient group. The weak correlation between CO and SV responses suggests that the response to increased preload is more complex than the current literature recognises. Additional patient data will allow us to determine the CO response to PLR-TEB test with more confidence and to establish the limits of agreement of repeated PLR-TEB. The next step will be evaluating the accuracy of this test to predict FR to a fluid bolus.

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#7888 : Correlation Between the Translated Italian Global Rating Scale and Technical Abilities in Critical Care Simulation

Preferred format : Oral presentation

Authors:

Jeffrey Franc (1), Luca Carenzo (2), Federico Barra (2), Pier Luigi Ingrassia (2)

1. University of Alberta, Department of Emergency Medicine, Edmonton, CANADA
2. Universita del Piemonte Orientale, Translation Medicine, Novara, ITALY

Keywords: simulation, evaluation

Abstract :

INTRODUCTION: As simulation is playing an ever increasing role in medical education, methods to objectively evaluate simulation performance are becoming more important. At present, no single method for simulation performance has become universally recommended. This study aimed to establish the correlation between simulation performance ratings of the Translated Italian Global Rating (TIGR) scale, and ratings of technical abilities (AT). The null hypothesis of no correlation between any of the seven fields of the TIGR and AT was tested against the two sided alternative hypothesis of significant correlation.

METHODS: Medical residents partaking in the 2015 and 2016 Italian national SIMCUP performed at SimNova in Novara, Italy were rated independently by two trained observers using the TIGR and an AT rating scale. The TIGR score used the previously validated Italian version of the Ottawa Global Rating Scale (Franc J et al, unpublished data). The TIGR scores global performance on a 1 to 7 scale in 6 domains: 'overall', 'leadership', 'problem solving', 'situational awareness', 'resource utilization', and 'communication'. The AT scoring was specific for each simulation scenario, and included technical skills expected to be performed to manage the cases appropriately. The AT scores included a variable number of fields which were rated on a scale of 0 to 2, with 2 signifying correct performance, 1 signifying incomplete performance, and 0 signifying lack of performance. Correlation between each of the 7 fields of the TIGR scale to the AT score was assessed using linear regression. P-values for the regression coefficients were corrected using the Holm method.

RESULTS: Fourteen teams completed 75 simulations. The mean AT score was 66%. Mean score for the TIGR fields was: 'overall': 4.1/7; 'leadership': 4.3/7; 'problem solving': 4.2/7; 'situational awareness': 3.9/7; 'resource utilization': 4.3/7; and 'communication': 4.3/7. Of the six fields of the TIGR tool, only the field of 'utilization' was found to be statistically significantly correlated to the AT ($p=0.0027$). Correlation coefficient between 'utilization' and AT was 0.78 (95% confidence interval 0.68 to 0.86). Post-hoc analysis of plots of TIGR vs AT suggest a stronger correlation when the TIGR is either very low or very high, and poor correlation between TIGR and AT at the mid level scores.

CONCLUSIONS: The results support that the TIGR and AT have poor correlation. This suggests that simulation performance may require assessment of both global rating and technical abilities. The apparent stronger correlation at very low or very high scores may deserve further study. This finding suggests that teams who are very strong in global rating, also appear to be be very strong in technical abilities; the same may be true for very weak teams. Conversely, teams with global ratings in the mid scale have much more variable technical abilities.

8867
8880

#7889 : APHER: Analyzing Acute Pyelonephitis Handling in Emergency Hospitalary Room: observacional study

Preferred format : ePoster

Authors:

Álvaro Martín Pérez (1), Ana Santos Lucio (2), Concepcion De Vera Guillén (2), Juan María Fernandez Nuñez (2)

1. Servicio de Urgencias del Hospital Ciudad de Coria, Servicio Extremeño de Salud, Badajoz, SPAIN
2. Servicio de Urgencias del Hospital Infanta Cristina, Badajoz, Servicio Extremeño de Salud, Badajoz, SPAIN

Keywords: pyelonephritis, ceftriaxone

Abstract :

Acute pyelonephritis (APN) is a frecuent infection that mainly affects to sexually active healthy women. APN represents a 3% of the urological patients attended in the Emergency Hospitalry Room (EHR) wich prevalence is around 12% in women and decreases to 2-3 % in men. APN encompasses both renal parenchyma and collecting system and it presents with 3 key symptoms: fever, lowerback pain and voiding syndrome. However, a high amount of the APN are uncomplicated. It´s of a vital importance to know the patient epidemiological characteristics, reason for consultation and therapeutic management in order to achieve a quick and safe handling in HER.

Observacional descriptive study enrolled patients with APN diagnosis made in EHR during a 5 moths period. Medical histories, current complaints, labortory test results and prescribed hospitalary and ambulatory treatment were recorded to all patients, as well as final destination and analyzed with SPSSv17 stadistical programme.

43 patients were included with an average age of 38.4 ± 15.9 years, being 93 % women. The total incidence for APN was 1.7 ‰. No risk factors for developing APN were detected in most of the patients. The 86 % of the patients showed fever as the most prelavent symptom in association or not with renal fossa pain and sickness. More than the 90 % had urinary sediment altered, with a 74.4 % presenting leukocytosis and neutrophilia. A 53.3 % of the abdominal ultrasounds made were pathological. Urine culture, recorded in 35 patients, were positive in 30.2%, with Escherichia Coli as leader pathogenic agent and antibiogram sensivity test positive for nitrofurantoin and fosfomicyne. Empirical intraveous antibiotic therapy was performed with ceftriaxone in association with tobramicyne(67.1%) and discharged home with oral cefuroxime and cefditoren treatment. More than a half of the patients required hospital stay in Urology or Intensive Care Unit.

Discharge home from the EHR is therefore justified after an observation period less than 24h in which a first pal antibiotic dose is administered(ceftriaxone+tobramicyne) and an appropriate oral antibiotic is chosen. The patient should be warned about possibility of the persistence of some symptoms and referred for appropriate outpatient follow-up.

Virtually all the patients were women with no risk factors. E. Coli was the most common patohenic agent, with high rate of resistance, particularly to trimethoprim-sulfamethoxazole and ampicillin. Therefore we can afirm that our results are similar to other studies consulted

#7890 : Symptomatic hypocalcemia and hypoparathyroidism associated with Dioscorea tokoro toxicity

Preferred format : ePoster

Authors:

Youngho Jin (1), Jaechol Yoon (1), Taeoh Jeong (1), Jaebaek Lee (1)

1. , none, Jeonju, KOREA, REPUBLIC OF

Keywords: Dioscorea tokoro, hypocalcemia, hypoparathyroidism

Abstract :

Dioscorea species, commonly known as yam, are widely used as a staple dietary component in Africa and Asia. In Korea, it had been used for treatment of rheumatism, urinary tract infection, and sequela of stroke. Detoxification of yam is necessary before eating. Poisoning may result from the ingestion of partially detoxified tubers that can lead to acute kidney injury (AKI) and toxic encephalopathy. Herein, we report of a case of symptomatic hypocalcemia and hypoparathyroidism developed after drinking boiled water with raw tubers of *Dioscorea tokoro*. A 53-yearold male who had consumed raw tuber of *D. tokoro* boiled in water and drank the mix was presented with numbness and spasm of both hands and feet. Laboratory results showed hypocalcemia and hypoparathyroidism. During the hospital stay, colitis, acute kidney injury, and toxic encephalopathy developed. He was treated with calcium gluconate intravenous infusion and oral calcium carbonate with alfacalcidol. His symptoms improved gradually but hypocalcemia persisted despite the calcium supplementation. Our case shows that ingestion of insufficiently detoxified *Dioscorea* species can be harmful with effects including gastrointestinal complications, AKI with toxic encephalopathy, and hypocalcemia with hypoparathyroidism. It should be noted that certain herbs used in traditional medicine can cause serious health effects if taken inappropriately and that doctors and family physicians should educate their clients on the proper use of certain herbs and plant medicines.

#7891 : Atypical presentation of abdominal aortic aneurysm complicated with shock.

Preferred format : ePoster

Authors:

Ching-Fang Chao (1)

1. Emergency department, Chang-Hua Christian H., Chang-Hua City, TAIWAN

Keywords: aortic aneurysm,shock.

Abstract :

Introduction

Abdominal aortic aneurysms (AAAs) contribute significantly to disease burden in developed countries. Ruptured abdominal aortic aneurysm (rAAA) is characterized by the presence of blood outside the adventitia of the dilated aortic wall. Free rupture, with egress of blood into the peritoneal cavity, is distinct from covered rupture, in which there is less blood loss because the periaortic hematoma is enclosed by retroperitoneal tissue.

Case Report

A 77-year-old male patient was brought to our emergency department by emergency medical services (EMS) a history of short of breath, ECG showed sinus tachycardia. Laboratory studies with Artery Blood Gas analysis revealed metabolic acidosis (PH:7.165, HCO3:10.9mmol/L),WBC:12500/uL,Lactate:12.2mmol/L, a normal Hemoglobin and normal troponin level . His BP initially was 50/41mmHg and dyspnea.

In the absence of abdominal pain, a chest CT scan with contrast scan was arranged to confirm the diagnosis of pulmonary Embolism. The CT scan revealed rupture of abdominal aortic aneurysm with massive hematoma in the para-aortic and left retroperitoneal space. He was transferred directly to operation room.

During operation, we found abdominal aortic aneurysm 8 cm in diameter rupture with shock and bilateral iliac artery stenosis post PTA (percutaneous transluminal angioplasty) procedure. The patient made a recovery and he was admitted to SICU of following respiratory insufficiency.

Discussion

For someone with unknown reason of shock, rAAA should be kept it in mind.

#7892 : TARN - BEYOND SUBMITTING DATA TO NATIONAL DATABASES

Preferred format : ePoster

Authors:

Laura Balica (1), Andrei Carpiuc (1), Richard Smith (1)

1. Northwick Park Hospital, London NorthWest Healthcare NHS Trust, London, UK

Keywords: TARN data, audit, action plan, guidelines, quality improvement

Abstract :

Objectives and Aims: We looked at how we are using the data we submitted to TARN for improving the local management of trauma patients.

Background: Submitting data to national databases is a difficult task. It involves resources, time, training and engagement of different members of the team. It is so difficult to keep up a good pace in submitting data and to ensure the quality of the data that implementing the changes required after analysing this data is sometimes forgotten. After a concerted effort of the network and our local trauma management team, we now have a sufficiently large data input and we can start looking at how we use this information for improving the management of the trauma patients in our trauma unit.

Material and method: Data analysis and initiation of local audits based on TARN, with specific action plans and deadlines. We present two local audits we conducted with the aim of improving our patient management and, subsequently, our compliance.

We conducted an audit on head injury patients, looking in particular at the times to CT and times to CT reporting. The audit showed that only 70% of our head injury patients had the CT done within one hour. We conducted an analysis of the subgroup of patients with delays, we identified the areas of improvement and we now have an action plan with specific deadlines.

The second audit we present looked at the TARN eligible trauma patients seen by an ST3+. We were not fully compliant, so we wanted to see if this is only because of the incomplete data submission or it was real. And, if it was real, what was the subgroup of patients involved and how we can improve their management.

Conclusions: Having a robust data set submitted on national databases has a significant importance only when it reflects back into the activity and the data is used for improving the pathways or for developing new pathways.

#7893 : Ophthalmoplegic Migraine: A Case

Preferred format : Oral presentation

Authors:

Musa Kaya (1), Arif Duran (1), Faruk Kurt (1), Mansur Kürşad Erkuran (1)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY

Keywords: Ophthalmologic migraine, headache, diplopia.

Abstract :

AIM: Migraine is a frequent neurologic disease which is presented with headache and some accompanied symptoms such as phonophobia, photophobia, nausea and vomiting(1). Sometimes, findings like diplopia, ptosis, pupillary abnormalities and limitation of eye movements can be determined as unusual. In such a case, it is called ophthalmoplegic migraine and it is seen rarely.
CASE: A forty nine year old male patient applied to our emergency service by complaining of headache and diplopia. Nausea was another coexistent complaint.The patient expressed that he used to have this type of headache episodes previously. He had no any medical history and medications. Vital signs were noted as normal. Blood pressure was 110/80 mmHg, heart beat was 76 bpm and body temperature was measured as 36. 7°C degrees. Limitation of abduction of the left eye was determined by examination (figure 1). There was no any abnormal result for laboratory test. Brain MR was assessed as normal (figure2). Besides, brain CT also didn’t reveal us any significant finding (figure3). 1000 mg of Paracytamol was supplied as intravenous to relieve headache. The patient was consulted to Neurology and Ophthalmology.
CONCLUSION: Consequently, we want to emphasize that ophthalmoplegia should be assessed in terms of OM if accompanies to migraine-like headache, nausea and vomiting.

#7894 : Correlation of P-wave dispersion with pulmonary embolism in emergency medicine patients

Preferred format : Oral presentation

Authors:

Arif Duran (1), Serkan Öztürk (2), Mansur Kürşad Erkuran (1), Tarık Ocak (3), Musa Kaya (1)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , Abant Izzet Baysal University Medicine Faculty, Department of Cardiology, Bolu / Turkey, Bolu, TURKEY
3. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY

Keywords: emergency medicine, P-wave dispersion, pulmonary embolism

Abstract :

AIM: P wave dispersion is caused by underlying heterogeneity of atrial myocardial conduction, which leads to P wave variations on surface ECG. This suggests that it is a valuable parameter to predict risk of atrial fibrillation in different patient groups. Patients diagnosed as having pulmonary embolism represent a considerable part of all applications to emergency services. P-wave dispersion (Pwd) was researched in pulmonary embolism cases with a randomized controlled study.
MATERIAL-METHOD: After local ethics committee approval, patients with pulmonary embolism (group A, n: 101) and those without pulmonary embolism (group B, n: 50), who applied to emergency service of Abant Izzet Baysal University Training and Research Hospital, were included to the study. Their ECG papers were transferred to computer after scanning by high resolution and measurements were done in this way. The beginning of P-wave was defined the point of the first abrupt from isoelectric line and the end of P-wave was described where it returned to the isoelectric line. The duration of P-wave was counted from all leads. The longest P-wave was named as Pmax whereas the shortest one was Pmin. Pwd was calculated by subtracting Pmin from Pmax. The formula of Pwd/ was used to calculate corrected Pwd.
RESULTS: For age and gender, there wasn’t statistically significant difference between A and B groups. In group A, Pwd and corrected Pwd values were 51.86±20.72 ms and 65.57±27.61 ms, respectively. On the other hand, for group B, Pwd was 42.59±20.21 ms and corrected Pwd was 52.69±19.87 ms. There was a statistically significant difference between two groups for both Pwd (p:0.029) and corrected Pwd (p:0.003) values. Furthermore, a significant difference was determined also for heart rates of two groups.
CONCLUSION: Atrial fibrillation has an important place for etiology of pulmonary embolism. Pwd gives an idea about atrial dilatation. Even if ECG on presentation doesn’t reveal atrial fibrillation and atrium size isn’t known, Pwd may have an important role as a marker.

#7895 : Evaluation of QT Dispersion in emergency medicine patients with pulmonary embolism

Preferred format : Oral presentation

Authors:

Arif Duran (1), Serkan Öztürk (2), Mansur Kürşad Erkuran (1), Tarık Ocak (3), Musa Kaya (1)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , Abant Izzet Baysal University Medicine Faculty, Department of Cardiology, Bolu / Turkey, Bolu, TURKEY
3. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY

Keywords: Intensive care, mortality, stand by time

Abstract :

AIM: Patients with pulmonary embolism take an important place in emergency service. Prolongation of QT interval may cause ventricular arrhythmias (especially torsades de pointes) and sudden cardiac death. QT interval shortens when heart rate increases and elongates when heart rate decreases. QT interval was investigated in pulmonary embolism patients.
MATERIAL-METHOD: Patients, who applied with dyspnea and were diagnosed as having pulmonary embolism in the emergency medicine of Abant Izzet Baysal University Training and Research Hospital, were included to the study after local ethics committee approval. A few complete beats, the longest ones in leads DII and V5-6, were measured, for calculating QT interval. Moreover, corrected QT interval was registered by calculating QT interval at a heart rate of 60 bpm. Bazzett formula: QTc = QT / was used for calculation. Durations of QT > 440 ms and > 460 ms were assumed as prolonged for men and women, respectively.
RESULTS: There was no a significant difference between the group with patients diagnosed as having pulmonary embolism and the group without pulmonary embolism, in terms of age and gender. For the group of the patients with pulmonary embolism, QT interval duration was 377.10±44.63 ms and QTc interval duration was 464.03±59.00 ms. For the group of patients without diagnosis of pulmonary embolism, QT interval duration was 364.41±46.25 ms, where QTc interval duration was 421.81±55.70 ms. There was a statistically significant difference between the groups, for both QT interval (p: 0.046) and QTc interval (p:0,0001) values. Furthermore, when clinical significance of QT interval duration was considered, it was found that there was a statistically significant difference (p: 0,004) between the groups according to QTc interval. There was also a statistically significant difference between two groups for heart rates (p: 0.002).
CONCLUSION: Patients diagnosed as having pulmonary embolism must be evaluated more carefully for mortal arrhythmias such as ventricular tachycardia, ventricular fibrillation and sudden cardiac death associated with shorter QT interval durations.

#7896 : Diagnostic Importance of Hypocalcemia for Pulmonary Emboli in the Emergency Department

Preferred format : Oral presentation

Authors:

Arif Duran (1), Tarık Ocak (2), Fahrettin Talay (3), Mansur Kürşad Erkuran (1), Zehra Yaşar (3)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY
3. , Abant İzzet Baysal University Faculty of Medicine, Department of Chest Diseases, Bolu, Turkey, Bolu, TURKEY

Keywords: Calcium Levels, diagnosis, Pulmonary Embolia

Abstract :

AIM: An acute pulmonary embolism (APE) is a life-threatening cardiopulmonary condition, and diagnosis of the disease in the emergency department is difficult. The aim of this study was to conduct a retrospective analysis of the plasma Calcium (Ca) levels of patients with an APE diagnosis in the emergency department.
MATERIALS-METHODS: Patients presenting to the Abant University Education and Research Hospital emergency clinic with a PE between January 1, 2008, and December 2012 were included in the study. The values of patients with an APE diagnosis and those who presented to the emergency clinic with dyspnea but who were diagnosed with an APE were analyzed.
RESULTS: Two hundred twenty-one patients 67.94±15.49 (112 men and 109 women) with a diagnosis of APE and 165 patients 54.80±18.76 (94 men and 71 women) without APE diagnosis (NPE) were included in the study. The group with the APE diagnosis displayed lower serum electrolyte values compared to NPE diagnosis. In relation to Calcium Levels, the values of the APE group were statistically significant ($p<0.05$).
CONCLUSION: Abnormalities in serum electrolyte levels are more frequently observed in APE patients, and hypocalcaemia is a frequent occurrence in these patients. There is a relationship between Calcium Levels and PE.

#7897 : Diagnostic value of Tpeak-to-Tend interval in patients with acute pulmonary embolism in emergency medicine

Preferred format : Oral presentation

Authors:

Arif Duran (1), Serkan Öztürk (2), Tarık Ocak (3), Mansur Kürşad Erkuran (1), Musa Kaya (1)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , Abant Izzet Baysal University Medicine Faculty, Department of Cardiology, Bolu / Turkey, Bolu, TURKEY
3. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY

Keywords: acute pulmonary embolism, Diagnostic value, Tpeak-to-Tend interval

Abstract :

AIM: Acute pulmonary embolism (APE) is a common and potentially lethal condition. Despite diagnostic advances, delays in diagnosis of pulmonary embolism are common and it is an important subject. The aim of this study was to examine the Tpeak-to-Tend interval (Tpei) and corrected Tpeak-Tend interval (cTpei), which is an indicator of via electrocardiogram in patients with APE.
MATERIAL-METHODS: The study consist of 148 subjects which they applied emergency service because of dyspnea. Study population divided two groups according to diagnosis. Eighty nine patients diagnosed with APE (group name: APE) and 59 patients not diagnosed with APE (group name: normal). Tpe/cTpe intervals were calculated from the electrocardiograms with a computer program after using a ruler or vernier caliper manual measuring tool to obtain highly sensitive measurements. cTpei was calculated through the formula (cTpei = Tpei /). Two groups were compared Tpei and cTpei and this parameters were statistically (Roc curve) analyzed for diagnostic value.
RESULTS: APE group consist of 36 females and 53 males, with a mean age of 66.9 ± 17.2 years. Normal group were consist of 21 females and 38 males, with a mean age of 64.3 ± 11,7 years. Tpei was founded 92.85 ± 25.49 ms and cTpei was founded 114.86±33.76 ms in APE subjects. Tpei was founded 80.68 ± 21.32 ms and cTpei was founded 93.92±27.60 ms in normal subjects. A statistically significant relationship were found between the groups) for Tpei and cTpei (p=0.007 and p=0.001). Optimal cTp-e cutoff value for diagnosis of APE was determined as 85 ms with ROC analysis. cTp-e cutoff value of 85 ms had %78.6 sensivity and %64.4 specificity for acute pulmonary embolism.
Conclusıons: Corrected Tpe interval could be a useful tool in early diagnosis and risk stratification in patients with APE

#7898 : Alcohol Withdrawal That Contains Severe Mental And Nervous System Changes: A Case Report

Preferred format : Oral presentation

Authors:

Musa Kaya (1), Arif Duran (1), Mansur Kürşad Erkuran (1), Tarık Ocak (2)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY

Keywords: Delirium tremens, cardiovascular collapse, death

Abstract :

AIM: Acute alcohol withdrawal syndrome leads to fluctuating changes in mental status and it is no uncommon to be reason of cardiovascular collapse and death. We report a patient who dies due to delirium tremens.
CASE: A 43 year old male patient with a history of reduction alcohol after prolonged intake was brought to our emergency service. The patient had no current medical history of epilepsy and had no any medication. He had a history of approximately twenty-year alcohol-use. He was admitted to our emergency service because of intractable seizures. The patient was monitored and airway was ensured. Despite positive inotropic agents, hypotension remained as it has already existed in emergency unit. After all these problems, cardiovascular collapse occurred and the patient didn't respond to CPR administered for 45 minutes. Finally, he died despite all clinical interventions.
CONCLUSION: As a result, serious cardiovascular instability is no uncommon for DTs and to be aware of vital problems of DTs is essential for physicians.

#7899 : Amlodipine Intoxication: A Poisoning Case Requiring Intensive Follow-Up

Preferred format : Oral presentation

Authors:

Mansur Kürşad Erkuran (1), Erhan Düzenli (2), Tarık Ocak (3), Arif Duran (1), Hakan Bayır (4)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , Mehmet Akif İnan Eğitim Araştırma Hastanesi, Acil Tıp Kliniği, Şanlıurfa / Turkey, Bolu, TURKEY
3. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY
4. , Abant İzzet Baysal Üniversitesi Tıp Fakültesi, Anesteziyoloji Ve Reanimasyon Ana Bilim Dalı, Bolu / Turkey, Bolu, TURKEY

Keywords: Amlodipine, Intoxication, İntensive care unit

Abstract :

AIM: Calcium channel blockers are drugs used in hypertension, arrhythmia and coronary heart diseases by blocking L type calcium channels. At high concentrations, calcium channels are blocked and calcium entry from L type channels is totally prevented.. In our study, we aimed to present the changes and the treatment approaches for the hospitalization period of a patient who applied to the emergency unit following the intake of high dose of calcium channel blocker, until the discharge
CASE: 18 year old female patient has taken 30 pieces of Amlodipin (5mg) at 18:30. After the patient was brought to public hospital at 20:00, gastric lavage and activated charcoal has been performed. The patient applied to our emergency unit at nearly 23:00 and she was conscious, cooperative and oriented. Vital signs were normal. Infusion of Dopamine, Dobutamine and Adrenaline was stopped in the fourth day in ICU because the blood pressure began to be normal. The patient was extubated and then discharged with recovery.
CONCLUSION: Mortal complications are inevitable unless intoxication is realized in early stages. Therefore, close hemodynamic follow up is essential for these patients in ICU.

#7900 : Bilateral Perforating Eye Injury during Mole Hunting

Preferred format : Oral presentation

Authors:

Tarık Ocak (1), Arif Duran (2), Mesut Erdurmuş (3), Ümit Yaşar Tekelioğlu (4)

1. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY
2. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
3. , Abant Izzet Baysal University Medicine Faculty, Department of Eye Diseases, Bolu / Turkey, Bolu, TURKEY
4. , Abant Izzet Baysal University Medicine Faculty, Department of Anesthesiology and Reanimation, Bolu / Turkey, Bolu, TURKEY

Keywords: Bilateral Eye Perforation, emergency medicine, Mole Gun

Abstract :

AIM: Trauma of eye can cause significant morbidity and effects on human life. Perforating eye injuries due to trauma are almost always unilateral. In this case report, bilateral eye perforation is caused by a primitive tool, a mole gun.
CASE: A 63-year-old male patient applied to the emergency service after the mole gun, a pistol used to trap moles, accidentally discharged and caused eye injury. He was conscious, cooperative and his vital signs were stable. On examination, both eyelids were edematous. Several buckshot inlet holes and gunshot residue were present on his face and eyelids. Serious subconjunctival edema (chemosis) and subconjunctival hemorrhage findings were determined. The operations which the patient underwent were correction of the perforation of the right eye, posterior vitrectomy and removal of the intraocular foreign object. The left eye wasn’t operated because, there was no any expectation for vision.
CONCLUSION: Bilateral eye perforation, which has a very low incidence, may lead to serious morbidity. Increasing work safety and refinement of training programmes about consciousness-raising will reduce a considerable part of eye traumas.

#7901 : Emergency Upper Gastrointestinal Endoscopy in the Emergency Department of Izzet Baysal Hospital: Analysis of 269 Patients

Preferred format : Oral presentation

Authors:

Arif Duran (1), Tarık Ocak (2)

1. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
2. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY

Keywords: Emergency Upper Gastrointestinal Endoscopy in the Emergency Department of Izzet Baysal Hospital: Analysis of 269 Patients

Abstract :

AIM: To document various endoscopic findings in patients undergoing an emergency upper gastrointestinal endoscopy (EUGIE) in the Izzet Baysal Hospital emergency department (ED).
MATERIALS-METHODS: The data of 269 patients who underwent an emergency upper gastrointestinal endoscopy in the Emergency Endoscopy Unit of Izzet Baysal Hospital from June, 2008 to March, 2009 were analyzed. Demographic features, reasons for referral, and endoscopic diagnoses were noted.
RESULTS: The mean age of male patients was 52.2±2 years as compared to 50.4±1.9 years for female patients. Abdominal pain was the most common clinical indication in 90 (33.5%) of the patients admitted for a EUGIE. The clinical reasons for emergency admission were significantly related to endoscopic diagnostic yield. Non-erosive gastritis was the most common diagnosis in 76 (28.3%) of EUGIE patients. Erosive duodenitis and gastric ulcer were found to be the other most common clinical indications in 69(25.7%) and 31(11.5%) of EUGIE patients, respectively. Abdominal pain was the most common complaint in women. The majority of patients who presented with abdominal pain and loss of appetite were between the age of 41 and 60 years, while a significant number of patients presenting with the same symptoms did so during the winter season. Non-erosive gastritis was found to be more common in females. We also found a significant relationship between erosive gastritis and erosive duodenitis with admittance during the winter season.
CONCLUSION: An emergency endoscopy is the procedure of choice for the investigation of upper gastrointestinal complaints. An emergency endoscopy is not only a diagnostic tool but also a therapeutic modality.

#7902 : Frequency of MEFV mutation and genotype–phenotype correlation in cases with dysmenorrhea

Preferred format : Oral presentation

Authors:

Zeynep Ocak (1), Tarık Ocak (2), Arif Duran (3), Tülay Özlü (4), Ertuğrul Mevlüt Kocaman (5)

1. , Department of Medical Genetics, Suleymaniye Maternity Hospital for Research and Training, Istanbul / Turkey, Bolu, TURKEY
2. , İstanbul Kanuni Sultan Süleyman Training and Research Hospital Emergency Medical Training Clinic, İstanbul/ TURKEY, İstanbul, TURKEY
3. , Abant Izzet Baysal University Medicine Faculty, Department of Emergency Medicine, Bolu / Turkey, Bolu, TURKEY
4. , Abant İzzet Baysal University Faculty of Medicine, Department of Obstetrics and Gynecology, Bolu / Turkey, Bolu, TURKEY
5. , Abant İzzet Baysal University Faculty of Medicine, Department of Medical Genetics, Bolu / Turkey, Bolu, TURKEY

Keywords: Mediterranean Fever Gene, Menstruation, Severe dysmenorrhea

Abstract :

AIM: We aimed to investigate the relation between mutations and polymorphisms playing roles in the onset of clinical findings of Familial Mediterranean Fever (FMF) and clinical phenotypic reflections manifesting with painful episodes, such as dysmenorrhea.
MATERIAL-METHODS: A total of 1000 female patients who had not responded well to non-steroidal antiinflammatory drugs in the menstrual period, and who had presented to the emergency room with the complaint of recurrent pain episodes were included in the study. All the patients were Turkish women living in Istanbul. In this study, the mutations most frequently seen in the Mediterranean Fever Gene (MEFV), namely M694V, E148Q, M680I(G/C), V726A, P369S, R761H, A744S, M694I, K695R, F479L, M680I(G/A), and I692del were examined using the DNA sequence analysis following DNA isolation.
RESULTS: The number of individuals who had a mutation in at least one allele for FMF was 511 out of 1000 patients. Of these 511 patients, homozygous mutations were found in 21% (n = 109), compound heterozygous mutations were found in 27% (n = 136), and heterozygous mutations were found in 52% (n = 266). The most frequent homozygous genotype seen in our study population was M694V/M694V. The most common compound heterozygote genotypes were M694V/M680I, M694V/V726A, M694V/E148Q, and M680I/V726A; and 11.7% (n = 60) of the families in whom mutations were found had consanguinity.
CONCLUSION: Women who present to the emergency room with the complaint of dysmenorrhea that is irresponsive to non-steroidal anti-inflammatory drugs may have several types of MEFV mutations that are responsible for FMF.

#7904 : Still a challenge: pain evaluation and management

Preferred format : ePoster

Authors:

Ieva Paliokaite (1), Kestutis Stasaitis (1)

1. , -, Kaunas, LITHUANIA

Abstract :

Background and objectives

Pain associated with both acute and chronic medical conditions is one of the main causes patients seek medical care. However the problem of inadequate analgesia in prehospital emergency setting and emergency departments (ED) still remains. Inability to assess pain could be an important barrier to the provision of analgesia. The need for analgesia is often unrecognized, patient evaluation of pain is underrated. The aim of our study was to evaluate pain management skills, knowledge of pain assessment among prehospital emergency caregivers and emergency department triage nurses.

Methods

A questionnaire regarding pain assessment habits was completed by emergency medical service (EMS) personnel and ED nurses in tertiary care university affiliated hospital. Also prehospital and ED records of patients with conditions that potentially causes pain reviewed. Data collected included demographic information, localisation/cause of pain, pain evaluation scores, treatment choices, reassessment. Records of patients under eighteen years and patients with altered state of consciousness were excluded.

Results

The knowledge and application of standardised pain assessment tools is not satisfactory in prehospital and ED setting of investigated area. Disparities exist among both EMS providers‘ and ED nurses‘ knowledge and usage of pain evaluation techniques. There are differences between pain scores of the same patients evaluated by EMS personel after arrival to the ED and ED triage nurse. Lack of documenting pain scores and reassessment of pain after treatment are seen in many cases.

Conclusion

Existing disparities in pain assessment among emergency care providers, lack of knowledge of standardised techniques can lead to oligoanalgesia. A focus on strategies to improve pain management is necessary. Quality control programme is needed including audit on pain management, training of pain management in prehospital and ED setting. It would be the next step of this study. Further evaluation and research is needed after introduction of quality improvement programme.

#7905 : A rare case of Ramsay Hunt syndrome

Preferred format : ePoster

Authors:

María Cuadrado Fernández (1), Isabel Fernández Marín (1), Ana Belen Carlavilla Martínez (1), Luz Tamara Vázquez Rodriguez (1), Alicia Paloma García Marín (1), Eva Muro Fernández de Pinedo (1), Lorena Castro Arias (1)

1. Emergency Department, Hospital Universitario 12 de Octubre, Madrid, SPAIN

Keywords: Varicella, Ramsay Hunt syndrome, facial palsy

Abstract :

A 56-year-old man, with history of tonsillectomy, was admitted in the emergency department because of fever and skin lesions.

The patient had been well until 7 days before admission, when he began with fever, malaise, and sore throat, starting treatment with amoxicillin clavulanic. Five days later, fever persisted, and the patient developed skin lesions in form of papules and vesicles, affecting first face, scalp and oral mucosa, and then extremities and trunk. Dizziness, headache and loss of balance accompanied the skin lesions, so the patient went to our hospital.

On arrival at the Emergency Department, the patient appeared ill. On examination, the temperature was 37 ºC, and the blood pressure, pulse and oxygen saturation were normal. Vesicles and pustules in different stage of development involved all the skin, affecting also scalp and mucosae. In neurological examination, the patient was conscious and alert, with normal speech; rightbeat nystagmus was present, as well as mild dysmetria with left extremities and wide base gait. The remainder of the examination was normal.

Blood test revealed mild elevation of transaminases (GPT 66U, GOT 40U, GGT 118U) and PCR 2,8. Other results were normal. Cranial computed tomography was normal. A lumbar puncture was performed; the opening pressure was 10cm of water, and the results of the cerebrospinal fluid showed 95 white cells (95% lymphocytes), glucose 69mg/dl and proteins 0.61g/l.

A diagnosis of suspected chickenpox with associated rhombencephalitis was made, and treatment with intravenous Acyclovir was initiated. Despite of the treatment, in the next hours the patient developed progressive left peripheral facial palsy, without affecting other cranial nerves, except of persistent nystagmus and tinnitus.

Suspected diagnosis: Ramsay Hunt syndrome due to Varicella-zoster virus (VZV) primoinfection.

Discussion: Ramsay Hunt syndrome typically includes facial palsy, ear pain and vesicles in the auditory canal due to VZV reactivation. Taste perception and hearing (tinnitus, hyperacusia) are usually affected, and vestibular disturbances (vertigo) are frequently reported, so this syndrome is usually considered a polycranial neuropathy. Nevertheless, peripheral facial palsy due to VZV primoinfection is a rare condition. The pathogenesis of this peripheral neuropathy is not completely understood; it could be explained by a direct nerve lesion due to VZV, or to meningeal inflammation in the course of varicella meningitis. Treatment of this complication is also unclear, and should be individualized.

Our patient was transferred to Neurology department, and treatment with Acyclovir and Methylpredonisolone was administered. Magnetic resonance imaging of the brain showed enhancement of the left VII and VIII cranial nerves, with the remainder of the brain structures without lesions. Serologic test confirmed VZV primoinfection (positive IgM). The patient improved and was finally discharged, with completely recuperation of facial palsy.

#7906 : Triage training in mass casualty incidents: the added value of virtual simulation in e-learning and classroom teaching

Preferred format : Oral presentation

Authors:

Sofie-An Van Biesen (1), Nima Tabrizi-Hosseinpour (1), Joost Bierens (1), Ives Hubloue (1)

1. Emergency, UZ Brussel, Brussels, BELGIUM

Keywords: Virtual simulation, e-learning, triage, START triage, disaster medicine

Abstract :

Background: The traditional model of education in medical schools is based on the belief that students will successfully transfer knowledge gained in classroom lectures, completed by self-education trough e-learning. More educational programs are also starting to integrate simulation based learning into their teaching methods. Several studies suggest that clinical simulation is an effective teaching strategy, although it is very depending on the context, topic and method. Finding out what is the most impactful methodology leading to the best learning and knowledge retention over time is desirable.

The present study was designed to evaluate the added value of virtual simulation programs in teaching START triage to medical students, compared with e-learning and classroom teaching.

Methods: Twenty medical students were randomly assigned into two groups: group A and group B. Both groups were given the same classroom lecture, supported by a PowerPoint presentation on how to perform START triage in Mass Casualty Incidents (MCI). Immediately following this lecture, a 30-item paper-based test was administered to assess the student's ability to understand and apply START triage.

Both groups received a more extensive online presentation with examples and video's through e-learning. Group B had an additional interactive session with virtual simulation training and professional feedback.

One month later a new test was given to assess and compare knowledge between both groups.

Simple descriptive statistics were used to analyse findings, with the independent samples T-test to compare groups where appropriate. For further analysis nonparametric statistics were used due to some indications of possible non-normality.

Alpha was set at $p < 0,05$ to determine statistical significance. All analyses were conducted using SPSS® software.

Results: The baseline test showed a mean score of 15,65 out of 30. For the second test, taken after the thirty-minute classroom teaching session an average score of 26,15 out of 30 was observed. This statistically significant change (Independent-SamplesMann-Whitney-U test, $p < 0,001$) showed a strong improvement in knowledge after a brief classroom teaching session. After one month of e-learning group A had an average score of 28,6 out of 30. Group B, who received the additional virtual simulation session, scored 28,875 out of 30.

This result didn't reveal any statistically significant difference between both groups (Independent-Samples Mann-Whitney-U test, $p = 0,696$).

Also examined was the number of over- and undertriaged casualties, but no significant differences were found between either group. No differences between men and women were noted.

Conclusion: Although virtual simulation training has been described in literature as an effective teaching strategy, no significant differences in scores on knowledge tests were found between two test populations of which one received - in addition to classroom lecture and e-learning - a computer-based virtual reality simulation training.

Nevertheless, certain findings in this study were surely intriguing opportunities for further research. A comparable study with a larger test group, a more extensive teaching subject and/or a longer time interval between the tests could be interesting pathways to investigate.

#7908 : Developing a European Geriatric Emergency Medicine Curriculum

Preferred format : ePoster

Authors:

Sarah Turpin (1), Simon Conroy (2)

1. Clinical Fellow in Geriatric Emergency Medicine, University Hospitals of Leicester, Leicester, UK
2. Geriatrician and Honorary Professory, University of Leicester, Leicester, UK

Keywords: collaboration; delphi; geriatric; emergency; curriculum; validation; training

Abstract :

Introduction
Older people represent a growing proportion of attendees in Emergency Departments across Europe. Traditionally Emergency Departments have not focused on care for older people especially those with frailty. Similarly, geriatric services have not traditionally focused upon the care of older people in Emergency Departments. This work seeks to bring together the two disciplines of Geriatric and Emergency Medicine through a defined and validated curriculum on Geriatric Emergency Medicine.

Methods
Domains and items for inclusion in the curriculum were derived through a combination of literature reviewing and a nominal group workshop. The domains and items underwent validation using a Delphi technique involving the European Societies of Geriatric and Emergency Medicine.

Results
In the development stage, 100 individual learning outcomes were identified, reflecting 16 domains. Following the stage 2 validation process, 98 items remained.
All items were approved by the relevant EU societies. In the final validation step, the curriculum was formally approved by the UEMS sections for Geriatric Medicine and Emergency Medicine (responsible for curriculae in the respective disciplines).

Key Conclusions
This curriculum was developed as a formal collaboration between EUSEM and EUGMS (European Task Force in GEM) and reflects the need to match the educational development of a workforce with the changing demographic of the patient population. The next challenge is ensuring it is embedded into practice. Future work to address these challenges is underway through the development of a GEM conference, GEM textbook and dissemination of information through journal publication and conference presentations.

#7909 : ACCORDING TO CARDIAC DYSFUNCTION, WHAT GROUP HAS INCREASED MORTALITY DURING HOSPITAL STAY?.

Preferred format : ePoster

Authors:

PATRICIA SUAREZ-BEKE (1), PAULA LAZARO-ARAGUES (1), JOSE ANDRES SANCHEZ-NICOLAS (1), IRENE PAGAN-GOMEZ (2), JOSE LUIS OTERO URIBE (3), RAFAEL QUITANILLA-LOPEZ (1), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: CARDIAC DYSFUNCTION, Acute heart failure, MORTALITY

Abstract :

Introduction
Acute heart failure (AHF) is a common reason for consultation in the emergency services and the leading cause of hospitalization in the elderly. This leads to increased mortality, use of emergency services and health spending.

objective
Knowing hospital mortality according to the type of heart failure in our emergency department.

Material and methods
It is a prospective, observational, descriptive study without intervention in patients who come to our emergency department in the period 2012-2014 choosing two randomized months per year, with a diagnosis of heart failure according to Framingham criteria. Within the inclusion criteria included patients older than 18 years with acute heart failure and give their signed consent. The study variables were: sex, type of heart failure echocardiography as previously described in your medical record (systolic, diastolic, mixed or unknown) and hospital mortality.

Results
During 2012-2014 consulted selected from 119 patients with acute heart failure, of which 57 were women (47.9%) and 62 men (52.1%).
Depending on the type of cardiac dysfunction: 31 patients (26%) had systolic failure, 10 patients (8.5%) diastolic failure, 52 patients (43%) mixed failure and 26 patients (21.84%) of unknown origin.
The hospital mortality was 10.93% (13 patients: 6 men and 7 women), within this group, 2 patients had systolic dysfunction (15.38%), 2 diastolic (15.38%), 4 mixed (30, 77%) and 5 unknown (38.67%).
The hospital mortality compared to the total of all patients diagnosed with heart failure in our emergency department, it was observed that 20% had diastolic heart failure, systolic dysfunction 6.45% and 7.69% mixed dysfunction.

Conclusions:
- Do not objectify a big difference in sex.
- Diastolic heart failure may be a risk factor for hospital mortality.
- Almost half of the patients with previous ultrasound, have a mixed heart failure.
- ICA-hospital mortality is 10.93%, still very low compared to total mortality.
- No differences in hospital mortality observed for systolic HF and mixed.

#7910 : Evaluation of the heterogeneity of sublingual microcirculation in acute cardiac patients

Preferred format : Oral presentation

Authors:

Gabrielius Jakutis (1), Vitalija Polevoda (1), Rokas Serpytis (2), Pranas Serpytis (3)

1. Vilnius University, Faculty of Medicine, Vilnius, LITHUANIA
2. Vilnius University Hospital Santariskiu Clinics, Centre of Cardiology and Angiology, Vilnius, LITHUANIA
3. Vilnius University Faculty of Medicine, Clinic of Cardiovascular Diseases, Vilnius, LITHUANIA

Keywords: Microcirculation, cardiogenic shock, myocardial infarction

Abstract :

Introduction: Microvascular alterations can play an important role in the development of organ failure in critically ill patients. Microcirculatory changes are observed in septic shock as well as in acute cardiac conditions such as myocardial infarction (MI), unstable angina (UA) and other. Patients with acute cardiac pathology are at risk for developing cardiogenic shock. We aimed to assess the heterogeneity of microcirculation in this cohort of patients and evaluated whether early changes in sublingual microcirculation might serve as a predictor of worsening clinical condition or developing hemodynamic deterioration.

Methods: We have carried out a prospective, non-randomized study of 23 patients admitted to the intensive cardiac care unit of a university hospital. The inclusion criteria were: acute myocardial infarction (last 24 hours), unstable angina pectoris, cardiogenic shock (CS), myocarditis or severe arrhythmia. Patient groups were defined based on the admission diagnosis: MI group, CS group and other acute cardiac pathology (OACP) group. Real time patients' microcirculation was assessed with The MicroScan Video Microscope system, data was processed with Automated Vascular Analysis 4.0 research software. Data was analyzed using SPSS v23 statistical package. Independent samples T-tests and analysis of variance (ANOVA) was used to compare the results amongst individual groups.

Results: 16 (69,5%) patients were male and 7 (30,5%) female. MI group consisted of 15 (65,2%) patients, CS group of 5 (21,7%) and OACP group of 3 (13,1%) patients. Mean total vessel perfusion was 89,83 ± 15,25% in the CS group, 91,96 ± 9,34% in the MI group and 99,54 ± 0,76% in the OACP group ($p>0,05$). Both small and medium vessel perfusion was most altered in the CS group (93,04 ± 10,05% and 83,31 ± 32,97% respectively). De Backer vessel density showed no significant difference between three groups (10,35 ± 2,03 in CS group vs. 10,91 ± 1,67 in MI group vs. 11,14 ± 1,05 in OACP group). Total vessel density was 8,06 ± 3,08 in the CS group vs. 6,67 ± 1,51 in the MI group and 4,99 ± 1,84 in the OACP group. Perfused vessel density was 7,42 ± 3,63 in the CS group vs. 6,12 ± 1,53 and 4,97 ± 1,85 in the MI and OACP groups respectively.

Conclusions: Altered sublingual microcirculation can serve as a valuable predictor of worsening condition and developing cardiogenic shock after acute MI, however the method still needs further investigation with a larger cohort of patients. Certain inconsistencies of microcirculation are visible between patient groups with different acute cardiac pathologies, nonetheless current cohort is yet not sufficient to analyze the significance of these alterations. Further research is needed to establish the role of microcirculation in the development of CS.

#7911 : WHO DIED MORE, MEN OR WOMEN WHEN THEY CONSULT IN OUR EMERGENCY DEPARTMENT WITH DIAGNOSED OF ACUTE HEART FAILURE?

Preferred format : ePoster

Authors:

PATRICIA SUAREZ-BEKE (1), PAULA LAZARO-ARAGUES (1), JOSE ANDRES SANCHEZ-NICOLAS (1), IRENE PAGAN-GOMEZ (2), JOSE LUIS OTERO URIBE (3), RAFAEL QUITANILLA-LOPEZ (1), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: Heart Failure , gender, mortality

Abstract :

Introduction
Acute heart failure (AHF) is a common reason for consultation in the emergency services and the leading cause of hospitalization in the elderly. This leads to increased mortality, use of emergency services and health spending.

objective
Describe the differences in mortality during follow-up of a year, patients who consulted for acute heart failure in our emergency department (ED).

Material and methods
Prospective observational study without intervention in patients who come to our emergency department in the period from 2012-2014 choosing two randomized months per year with a diagnosis of acute heart failure according to the Framingham criteria. Inclusion criteria: over 18 years, diagnosis of acute heart failure and give their signed consent. The study variables were: sex, hospital mortality, mortality at 30 days, one year mortality and total mortality falls within that period.

results
During the 2012-2014 selected 119 patients consulted for acute heart failure of which 57 were women (47.9%) and 62 men (52.1%).
The hospital mortality was 13 patients (29.55%), 46.15% men and 53.85% women.
At 30 days they killed 10 patients (22.73%), 80% men and 20% women.
Year mortality was 21 patients (47.72%) of which 13 were men (61.9%) and 8 women (38.1%).
Total mortality was 44 patients (36.98%), 27 men (61.36%) and 17 women (38.64%).

conclusions:
- Do not objectify a big difference in gender, of patients who come to our emergency department.
- In-hospital mortality were no major differences in sex were observed. However, in follow-up at 30 days and one year, increased mortality in men versus women was observed, sex being a likely risk factor for mortality from acute heart failure.

#7912 : GEMCON16: The first Geriatric Emergency Medicine conference in Europe

Preferred format : ePoster

Authors:

Sarah Turpin (1), Simon Conroy (2)

1. Clinical Fellow in Geriatric Emergency Medicine, University Hospitals of Leicester, Leicester, UK
2. Geriatrician and Honorary Professory, University of Leicester, Leicester, UK

Keywords: conference, design, feasibility, geriatric, emergency, collaboration, social media, networks

Abstract :

Introduction

“Geriatric Emergency Medicine” (GEM) is an area of growing interest within geriatric and emergency medicine circles across Europe, Australia and North America. There are increasingly formal collaborations between societies within emergency medicine and societies within geriatric medicine. The topics addressed by such collaborations address both the development of improved systems of care for frail older people in urgent settings, and improving the education and training of clinical staff working with frail older people in emergency care settings.

We report here on the conceptualisation, design and delivery of the first European Geriatric Emergency Medicine conference in Europe.

The aims of the conference were:

1. Raise the profile of GEM
2. Enhance clinical knowledge
3. Provide a platform for networking and inter-professional discussions

Methods

A stakeholder meeting was held to determine the key objectives, the target demographic, and the timescale for delivery. A review of the educational content of existing North American GEM fellowships, and the recently published European GEM curriculum was performed to devise a balanced conference agenda. The conference was supported by a website and twitter account. Professional societies were used to disseminate information. A learning needs assessment was built into the booking process to direct future events.

Results

Places booked steadily over five months to “fully booked”; demand was such that additional places were added and a waiting list was created. The number of twitter followers and website views steadily increased over this time period. 57% of delegates are doctors and 43% are nurses or allied health professionals. There is a wide range of delegates from across the UK and Europe.

Key conclusions

As an initial feasibility test, the booking pattern and delegate distribution for this conference support the observation that there is significant interest in the field of GEM from across a range of healthcare professionals working within a range of healthcare systems. Future efforts should be made to sustain inter-professional networks and national forums to share good practice and innovation within the field of GEM.

#7913 : Descriptive analysis of the comorbidities associated with acute heart failure patients who consult our Emergency Department

Preferred format : ePoster

Authors:

PAULA LAZARO-ARAGUES (1), JOSE ANDRES SANCHEZ-NICOLAS (1), PATRICIA SUAREZ-BEKE (1), IRENE PAGAN-GOMEZ (2), JUAN JOSE BALLESTER LOPEZ (1), EMILIO SANCHEZ-PARRA (1), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: Heart Failure , Emergency Department , Comorbidity

Abstract :

Introduction:

Acute heart failure is a common reason for consultation in the emergency department (ED), and the leading cause of hospitalization in the elderly. With high mortality and large number of reconsultations that impact both economically and in the health of patients visiting EDs.

Objective:

Describe the co-morbidities associated with acute heart failure patients who consulted in our Emergency Department.

Material and methods:
Prospective observational study without intervention was performed in patients who came to our SU for acute heart failure (AHF) according to Framingham criteria in the period 2012-2014 choosing two randomized months per year. Inclusion criteria: patients older than 18 years with ICA and give their written consent. The study variables were: Hypertension (HTN), diabetes mellitus (DM), dyslipidemia (DLP), ischemic heart disease (IHD), chronic kidney disease (CKD), Fibrillation Blood (FA), Arteriorpatia, atheromatous plaques in supra-aortic trunks , valvular heart disease, chronic obstructive pulmonary disease (COPD), dementia, neoplasia, cirrhosis and the presence or absence of episodes of previous heart failure.

Results:
During the 2012-2014 selected 119 patients consulted by ICA of which 115 patients (96.6) were hypertension, 64 patients (53.7%) DM, 52 patients (43.6%) DLP, 45 patients (37 , 8%) CI, 48 patients (49.1%) CKD, 23.5% ACV 28 patients, 65 patients (54%) FA, 15 patients 12.6% of supra-aortic trunks artery disease, valvular heart disease 24 patients 20,1% 35 COPD patients 29.4%, 16.8% dementia 20 patients, 17 patients 14.2% neoplasms, 1 patient 0.84% cirrhosis and 94 patients 78.9% prior ICC.

Conclusions:
- The main pathologies associated with acute heart failure high to low frequency were hypertension, episodes prior to consultation FA, diabetes, dyslipidemia and ERC
- The existence of a previous diagnosis of heart failure appear to be a factor favoring new episodes of acute heart failure.

#7914 : Analysis of destination of patients presenting with acute heart failure in our emergency department after being cared

Preferred format : ePoster

Authors:

PAULA LAZARO-ARAGUES (1), PATRICIA SUAREZ-BEKE (1), JOSE ANDRES SANCHEZ-NICOLAS (1), IRENE PAGAN-GOMEZ (2), ELENA SANTAMARIA-HERNANDEZ (1), CESAR CINESI GOMEZ (3), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: Heart Failure , Emergency Department , Hospitalization, discharge

Abstract :

INTRODUCTION
Acute heart failure is a common reason for consultation in the emergency department (ED), and the leading cause of hospitalization in the elderly. With high mortality and reconsultations involving a large increase in health spending.

Objective: To assess the need for hospital admission depending on the type of heart failure assessed by echocardiography and destination at discharge from the emergency department.

Material and methods:
Prospective observational study without intervention in patients who come to our ED for acute heart failure (AHF) according to Framingham criteria in the period 2012-2014 choosing two randomized months per year. Inclusion criteria: age 18 years with ICA and give their written consent. The study variables were: Destination income (Cardiology, Internal Medicine, Short Stay Unit, other services and high direct from the Emergency Department Observation), type of heart failure (systolic, diastolic, mixed and unknown)

results:
During the 2012-2014 selected 119 patients consulted by ICA of whom 57 were women (47.9%) and 62 men (52.1%). 31 patients (26%) had systolic heart failure, 10 patients (8.4%) diastolic, 53 patients (43%) mixed and not the kind of dysfunction was known in 26 patients (21.84%)
24 patients were discharged directly from the emergency department (20.19%) and 94 patients admitted to our hospital (79%) of which 24 had systolic HF (25.53%), 10 diastolic (8.5%), 37 mixed (39.36%) and 23 unknown (24.45%).
77% of systolic dysfunction (24 patients) were admitted, 100% of the diastolic, 71% of mixed (37 patients) and 88.4% of type unknown origin (23 patients).
By Services: 17 patients were admitted to cardiology (14.2%), in Internal Medicine 61 patients (51.2%) in Short Stay Unit 13 patients (10,92) and other services 4 patients (3.36 %)

conclusions:

- 100% of diastolic heart failure were admitted to hospital
- More than 55% were admitted to Internal Medicine while only 14.2% were admitted in Cardiology
- Up to 20% of patients who come to our Service are discharged directly, without requiring hospital admission.

#7915 : Is bedside point-of-care testing by emergency department nurses as accurate as central lab testing by lab technologists?

Preferred format : Oral presentation

Authors:

Adam Singer (1), Braden McIntosh (1), Jay Bock (2), Jirina Vasek (3), Henry C Jr Thode (1)

1. Emergency Medicine, Stony Brook Medicine, Stony Brook, NY, USA
2. Pathology, Stony Brook Medicine, Stony Brook, USA
3. Hospital Chemistry, Stony Brook Medicine, Stony Brook, USA

Keywords: point of care, accuracy

Abstract :

BACKGROUND

Point-of-care bedside testing (POCT) reduces lab turn around and has the potential to improve process of care and timely diagnosis and management in the emergency department. However, concerns remain regarding the accuracy of POCT relative to traditional central laboratory testing. We compared the accuracy of nurse performed POCT for a panel of electrolyte versus central lab testing by trained laboratory technologists.

METHODS

Study design—prospective, observational study. **Setting**—academic, tertiary care, level 1 trauma center with over 100,000 annual ED visits and a dedicated 15 bed critical care unit. **Subjects**—50 critical care ED patients in whom a POCT for a basic electrolyte panel was ordered by the ED physician. **Interventions**—in all study patients a 5-10 ml blood sample was collected in one lithium containing vacutainer and one EDTA vacutainer, using standard technique. The sample was tested for Na, K, Cl, TCO_2, glucose, creatinine, BUN, and hematocrit. Each sample was tested twice by the treating nurse at the bedside using the Chem8+ cartridge and the iStat testing device (Abbott Point of Care). Duplicate additional samples were tested by trained laboratory staff in the central lab using the COBAS 6000 (Roche) and Sysmex analyzers. **Data Analysis**—paired comparisons of test results were performed using Pearson's correlation coefficients and Bland Altman analyses. We hypothesized that values measured by the iStat would have excellent correlations with levels measured by the central lab and that the differences between paired iStat-central lab measurements would not be significantly greater than the paired differences between the duplicate central laboratory testings.

RESULTS

Samples from 50 ED critical care patients were analyzed. Values for each of the 9 analytes measured were not significantly different between bedside and central lab testing. Correlation coefficients were excellent (0.88-1.00) and did not differ for all pairwise comparisons. Bland-Altman plots for the ED and central lab measurements showed similar results. Mean (range) paired differences between iStat and central lab were Na 0.3 (-6 to 4) mEq/L, K -0.1 (-0.40 to 0.15) mEq/L, Cl 2.1 (-3 to 10.3) mEq/L, TCO_2 -1.7 (-4 to 2) mEq/L, Glucose 2.5 (-9 to 9) mg/dL, BUN, 1.7 (-4 to 9) mg/dl, Creatinine 0.13 (-0.10 to 0.87), and hematocrit -0.4 (-7.2 to 4.2)%.

CONCLUSIONS

Bedside point-of-care testing using the iStat platform is as reliable and accurate as central lab testing.

#7916 : Do we treat the men like women with acute heart failure in our emergency department ?.

Preferred format : ePoster

Authors:

JOSE ANDRES SANCHEZ-NICOLAS (1), PATRICIA SUAREZ-BEKE (1), PAULA LAZARO-ARAGUES (1), IRENE PAGAN-GOMEZ (2), ELENA SANTAMARIA-HERNANDEZ (1), EMILIO SANCHEZ-PARRA (1), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: Heart Failure , Emergency Department , treatment

Abstract :

Introduction:
Acute heart failure (AHF) is a common reason for consultation in the emergency department (ED), it is generally characterized by pulmonary congestion, although in some patients decreased cardiac output and tissue hypoperfusion may occur. Is the leading cause of hospitalization in the elderly, with high mortality and reconsultations producing a large increase in health spending.

Objective:

Determine whether there are differences in the acute treatment received in our emergency department about sex.

Material and methods:
Prospective observational study without intervention in patients who come to our SU in the period from 2012-2014 choosing two randomized months per year for ICA according to the criteria of Framingham. Inclusion criteria: age 18 years with ICA and give their written consent. The variables studied were: Sex: Male (M), Female (M), applied therapy: vasoactive drugs (dobutamine, dopamine, norepinephrine), beta blockers, diuretics, nitrates, morphine, bronchodilators B2, antibiotics, steroids, digoxin, amiodarone, antiplatelet agents, oral anticoagulants, statins, ACE inhibitors, ARBs, transfusion.

results:

During the 2012-2014 selected 119 patients consulted by ICA of whom 57 were women (F) (47.9%) and 62 men (M) (52.1%).

Vasoactive drugs (dobutamine, dopamine, norepinephrine) did not say no patients, beta blockers 6.45% M, 26.31% F, diuretics 75.8% M 87.7% F, nitrates 12,9 M 7,01 F, morphine 3 22% M, 1.35% F, bronchodilators B2 38.7% M,% ", 63 F, antibiotics 36.8% M 16.1% F, corticosteroids 25.8% M, 29.8% F, statins 16,1% M 14.03% F, digoxin 16.1% M, 17.54% F, amiodarone 7.01% M, 3.22% F, transfusion 1.61% M, 3.5 F, antiplatelet agents 27,4%M 27,4% F, ORAL ANTICOAGULATION 32,25% M 42,1% F, ACE inhibitors 35.08% M 24.19% F

conclusions:
• The most widely used treatment in our emergency department are diuretics, both men and women. The second most frequently used drug are bronchodilators B2, while receiving twice as many women than men
• None of our patients required vasoactive drugs in the acute episode
• There is a difference in the use of beta-blockers on sex, indicated 4 times more beta-blockers in women than in men.
• 4 out of 10 women consulting in the emergency department treated with antibiotics and only 2 out of 10 men.

#7917 : What are the characteristics, evolution and monitoring of patients with acute heart failure who come to our emergency department?

Preferred format : ePoster

Authors:

JOSE ANDRES SANCHEZ-NICOLAS (1), PATRICIA SUAREZ-BEKE (1), PAULA LAZARO-ARAGUES (1), IRENE PAGAN-GOMEZ (2), ANTONIO MARTINEZ-GARCIA (1), ESTHER TOMAS-JIMENEZ (1), PASCUAL PIÑERA SALMERÓN (3)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. LABORATORY SERVICE, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
3. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: Heart Failure , Emergency Department , evolution

Abstract :

INTRODUCTION
Acute heart failure (AHF) is a common reason for consultation in the emergency department (ED), and the leading cause of hospitalization in the elderly. With high mortality, increasing in the tables of acute pulmonary edema. Producing a large number of queries and reconsultations that increase health spending.

Objective: To describe the characteristics, evolution and follow-up of patients who come for ICA to our emergency department.

Material and methods:

Prospective observational study without intervention in patients who come to our SU in the period from 2012-2014 choosing two randomized months per year for ICA according to the criteria of Framingham. Inclusion criteria: age 18 years with ICA and give their written consent. The study variables were: sex, comorbidities, treatment received, hospital mortality at 30 days and one year, destination.

results:

During the 2012-2014 selected 119 patients consulted by ICA of whom 57 were women (F) (47.9%) and 62 men (M) (52.1%).
115 patients (96.6) were hypertension, 94 patients previous AHF 78.9%, 65 patients (54%) atrial fibrilation, 64 patients (53.7%) Diabetes, 52 patients (43.6%) dyslipidemia, 45 patients (37.8%) ischemic heart disease

vasoactive drugs (dobutamine, dopamine, norepinephrine) did not say no patients, beta blockers 6.45% M, 26.31% F, diuretics 75.8% M 87.7% F, nitrates 12,9 M 7,01 F, morphine 3,22% M, 1.35% F, corticosteroids 25.8% M, 29.8% F.

The hospital mortality was 10.93% (13 patients), at 30 days was 8.4% (10 patients) and the year was 17.65% (21 patients).

By Services: 17 patients were admitted to cardiology (14.2%), in Internal Medicine 61 patients (51.2%) in Short Stay Unit 13 patients (10,92) and other services 4 patients (3.36 %) and 24 patients were discharged directly from the emergency department (20.19%).

Conclusions:

- More than 55% were admitted to Internal Medicine while only 14.2% were admitted to Cardiology.

- The main pathologies associated with heart failure high to low frequency were hypertension, atrial fibrillation episodes prior to the consultation, diabetes, dyslipidemia.

- 100% of diastolic heart failure is admitted to hospital

- The intrahospitalria mortality was 10.93%.

- The most widely used treatment in our emergency department are diuretics, followed by steroids and beta blockers.

#7919 : Evaluation of point-of- care INR results in the Emergency Department. 'Is a hasty decision always the best?'

Preferred format : ePoster

Authors:

Crispijn van den Brand (1), Maartje Vernooij (2), Mischa Veen (1), Rolf Verheul (3)

1. Emergency Physician, MCH-Bronovo, The Hague, THE NETHERLANDS
2. Emergency Medicine Resident, MCH-Bronovo, The Hague, THE NETHERLANDS
3. (Senior) Clinical Chemist, Clinical Chemistry and Hemotologic laboratory, Lab West, location MCH-Bronovo, The Hague, THE NETHERLANDS

Keywords: Point of Care, coumarins, INR, CVA, emergency room

Abstract :

Introduction

In the emergency department (ED) it is possible to check the INR of patients with a point of care device (POCT). There has been some discussion about the use of POCT results in decision making for acute situations. Many factors can influence the POCT result and its reliability. We aimed to evaluate the differences in POCT and lab tested 'conventional' INR results and their impact on treatment decisions.

Method

Data was retrospectively collected from the laboratory system and the electronic patient record. The POCT measurements (Coaguchek XS Pro, Roche®) recorded in the ED were compared to a conventional INR result (Sysmex CS2100®). Patients with a difference of >15% between measurements, and patients who did not have a conventional INR result, were analyzed separately by chart review on treatment decisions.

Results

Over six months, 187 POCT measurements were taken. 61.5% of patients were admitted to ED with suspected CVA.147 of POCT measurements were confirmed with a conventional INR. 18 of these had >15 % difference in INR. Evaluation of lipid spectrum and hematocrit revealed a possible reason for these differences in only 1 patient. 70.5% of these differences in measurements had a POCT-INR >2.7. There was no clear change in decision making for this group, despite the sometimes substantial difference in INR result (e.g. 3.8 vs 1.7). No patients with an INR ≤1.0 used coumarins. Of 40 patients with only POCT-INR, 7 received a hemostatic intervention (e.g. Vitamin k, Cofact®, Merocel® or LMWH) 3 patients received thrombolysis.

Conclusion

The differences in measurements have no clear effect on decision making in the ED. In high POCT values (POCT >1.5) it is advised to confirm by conventional INR. With a POCT-INR of ≤1.0, it is safe to start treatment without waiting for lab results, saving time and costs.

#7920 : ANTIBIOTIC TREATMENT DISCHARGE TO EMERGENCY SERVICE IN PATIENTS OVER 75 YEARS OF INFECTIOUS CAUSES COPD EXACERBATIONS

Preferred format : ePoster

Authors:

BLANCA DE LA VILLA ZAMORA (1), MARIA CORCOLES VERGARA (1), NURIA RODRIGUEZ GARCIA (1), FERNANDEZ-CAMACHO DANAE (2), MARIA CONSUELO QUESADA MARTINEZ (1), CESAR CINESI GOMEZ (1), PASCUAL PIÑERA SALMERÓN (1)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, ANTIBIOTIC, EXACERBATION

Abstract :

INTRODUCTION
Chronic obstructive pulmonary disease (COPD) is a lung disorder It characterized by the existence of an obstruction of the airways usually progressive and irreversible. The exacerbation of COPD (COPD exacerbations) is defined as a sustained worsening of respiratory symptoms, beyond its daily variation, and its most frequent infectious cause. The frail elderly or high risk is one that has a high probability of suffering an adverse process and therefore have higher morbidity and mortality. In them, strict control of COPD exacerbations is, if anything, more important.
OBJECTIVES
Evaluate the use made of antibiotics in acute exacerbation of COPD exacerbations of infectious origin in patients over 75 years discharged from the emergency department.
MATERIAL AND METHODS
descriptive, observational and retrospective study General Hospital Universitario Reina Sofia. 1172 patients diagnosed with COPD by spirometry who came to the emergency department of HGURS from January 2012 to June 2015 were included.
RESULTS
1172 patients of which 643 (57.67%) were older than 75 years were analyzed. 592 (92%) were discharged home with a diagnosis of respiratory infection. Of these, 151 (28.9%) were prescribed antibiotic from the Emergency Department.
529 (42.33%) patients were younger than 75 years, of which 495 (93.58%) were discharged from the emergency department with a diagnosis of respiratory infection. Of these, 157 (31%) were Standard antibiotic from the Emergency Department.
CONCLUSIONS
Patients over 75 are considered high risk when severe complications from infectious diseases, so that, if necessary, appropriate infection control is essential to prevent further complications. For prescribing antibiotics should stick to the criteria ruled by experts. In our case, we can see that the differences in prescribing in older or under 75 years are not significant so the fragility based on this almost age does not seem to be a criterion to be taken into account by EPs when antibiotic treatment prescribed at discharge from the Emergency Department.

#7921 : ANTIBIOTIC TREATMENT IN DISCHARGE OF EMERGENCY DEPARMENT IN PATIENTS WITH COPD EXACERBATIONS AS GOLD SEVERITY RATING

Preferred format : ePoster

Authors:

DANAE FERNANDEZ-CAMACHO (1), BLANCA DE LA VILLA ZAMORA (2), MARIA CORCOLES VERGARA (2), NURIA RODRIGUEZ GARCIA (2), MARIA CONSUELO QUESADA MARTINEZ (2), PASCUAL PIÑERA SALMERÓN (2)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: ANTIBIOTIC TREATMENT, COPD EXACERBATIONS.

Abstract :

Introduction
Chronic obstructive pulmonary disease (COPD) is an irreversible, progressive disease characterized by chronic airflow obstruction. The use of antibiotics in exacerbations of COPD (COPD exacerbations) has precise indications reflected in the latest Clinical Practice Guidelines, although there is controversy.

objective
Analyze the antibiotic treatment at discharge from the Emergency Department patients with COPD exacerbations and the relationship between antibiotic prescribing and the severity level.

Material and methods
observational, retrospective study conducted at the University General Hospital Reina Sofía. patients diagnosed with COPD were included by spirometry for COPD exacerbations attended between January 2012 and July-2015. antibiotic treatment prescribed at discharge and its relation to gravity Stadium was analyzed according GOLD (FEV> 80% mild, moderate 50-80%, 30-50% severe and <30% very severe).

results
1029 patients with COPD exacerbations value. They received antibiotic treatment 35% of patients with FEV> 80% (20 patients), 33.8% with FEV 50-80% (290 patients), 31.2% with FEV 30-50% (446 patients) and 23.4% with FEV <30% (273 patients). 9.6% was discharged with amoxicillin clavulanate, Moxifloxacin 6.7%, 13.7% Levofloxacin, Ciprofloxacin 1.5%, 0.9% Cefditoren, Ceftriaxone 0.2%, 0.9% versus active Cephalosporin Pseudomonas and 3% with other antibiotics and the rest were discharged without antibiotic or were admitted.

conclusions
The Levofloxacin was the most used antibiotic, amoxicillin clavulanate followed, corresponding largely as described in the Clinical Practice Guidelines.
In response to gravity, we note that in the case of patients with severe very severe stage (FEV <30%) and (FEV 30-50%) only treatment prescribed at discharge in 23.4% and 31.2% of cases respectively. This could be explained by the fact that most patients with advanced stage disease are admitted, being discharged only those with a stable clinical condition and, in principle, no criteria antibiotic therapy. It would be interesting to extend the study to assess these results.

#7922 : Emergency Management And The Relationship Between Serum Lactate Level in Sepsis

Preferred format : Oral presentation

Authors:

Selen Ada Sürer (1), Zeynep Kekec (1)

1. Department of Emergency Medicine, Cukurova University, School of Medicine, Adana, TURKEY

Keywords: sepsis, lactate, emergency, mortality

Abstract :

Aim: In this study; we aimed to evaluate of the varying lactate levels in the process of changing metabolism due to sepsis and determine effectiveness on emergency diagnosis and treatment in patients admitted to the emergency department.

Materials and Methods: This study was performed with 107 patients followed by sepsis between dates of 31.10.2014 - 16.02.2016. Age, sex, symptoms, vital and physical examination findings, SIRS criteria, general changes, inflammatory changes, hemodynamic changes and organ dysfunction changes, tissue perfusion changes, infection localization, treatment status, mortality rates were evaluated in terms of relations with lactate level. Data were analyzed using SPSS version of Windows 18. The distribution of variables was checked with the Kolmogorov-Smirnov test. In analyzing the data, Mann Whitney U, Kruskal Wallis and Pearson correlation tests were used. $p<0,05$ was considered statistically significant.

Results: In our study, the median age of patients was 63 years, 60,7% were male. The most common physical finding detected in patients was fever. The most common infection focus was the respiratory system. The median lactate level of the patients was detected 2,4 mmol / L. Lactate levels had no relationship with comorbid diseases, the number of SIRS criteria, the focus of infection, positive culture, emergency follow-up period and duration of hospitalization ($p> 0,05$). Lactate levels were significantly higher in patients with lower mean arterial pressure and systolic blood pressure levels ($p <0,05$). Lactate levels were significantly higher in patients with bronchospasm, acute lung injury, ARDS, blood coagulation disorders, decreased capillary refill / spotting and unexplained metabolic acidosis ($p <0,05$). A negative correlation was observed between hypoglycemia and lactate levels ($p <0,05$). Increased lactate levels were detected when clinical of patients got worse ($p <0,05$). The mortality rate of the patients was 15%, lactate levels were significantly higher in patients with mortal prognosis ($p <0,05$).

Conclusions: The height of the lactate level of patients with sepsis admitted to the emergency clinic is a sign of bad clinic and high mortality rate.

#7923 : Which autonomous portable infusion warmer should we use on the field?

Preferred format : Oral presentation

Authors:

Vincent des Robert (1), Christophe Lebleu (2), Jean-Stéphane David (3), Karim Tazarourte (4), Romain Kedzierewicz (5)

1. Ecole du Val de Grace, French military health service academy, Paris, FRANCE
2. Medical center, 13th french alpine hunter Battalion, Barby, FRANCE
3. Department of anaesthesiology and critical care medicine, Edouard Herriot Hospital, Lyon, FRANCE
4. Department of emergency medicine, Edouard Herriot Hospital, Lyon, FRANCE
5. Emergency medical service, Fire Brigade of Paris, Paris, FRANCE

Keywords: fluid therapy, hemorrhagic shock, hypothermia, infusion warmer

Abstract :

Background: In the wilderness or on the battlefield, when a hemorrhagic shock occurs, fluid therapy may be necessary to sustain life. Hypothermia is one of the determinant of the lethal triad. The infusion of warm fluids is probably a key point in the management of injured patients. Infusion warmers using batteries are heavy to carry and batteries don’t last very long in cold environments.

Methods: The aim of our study was to evaluate different autonomous portable infusion warmers (Aptonia® and Grabber® air activated disposable hand warmers, Grabber® crystallization-type reusable hand warmer, Badabulle® and Babysun® baby bottle warmers) in comparison to Trekmates® flameless cook box (using a reaction similar to heat packs of Meals Ready to Eat) on 250 and 500 ml 17°C intravenous (IV) bags (7.5% hypertonic or 0.9% normal saline and 6% tetrastarch 130/0.4). Temperatures were measured inside IV bags using a thermocouple. The endpoint was the time to reach 45°C or the temperature reached after 30 min of warming process. The experiment was repeated eight times. Four disposable hand warmers were used for 250 ml IV bags, six for 500 ml bags. Two reusable hand warmers and one baby bottle warmer were used for 250 or 500 ml IV bags.

Results: Trekmates® flameless cook box was the only device able to heat fluids up to 45°C in less than 30 min (250 ml: 5 min 8 s; 500 ml: 8 min 15 s; $p = 0.03$). Disposable hand warmers heated 250 ml bags up to 23°C (± 1.3) and 24.9°C (± 1.3) and 500 ml bags up to 21.5°C (± 0.4) and 23.4°C (± 0.9). Reusable hand warmers heated 250 ml bags up to 34°C (± 3.1) and 500 ml bags up to 27.4°C (± 1.5). Baby bottle warmers heated 250 ml bags up to 29.9°C (± 2.3) and 33.4°C (± 2.4) and 500 ml bags up to 27.8°C (± 2.3) and 29.9°C (± 2.3). For devices not efficient enough to reach 45°C, the temperature reached in 30 min was 3.1°C greater with 250 ml IV bags than with 500 ml bags ($p < 10^{-3}$). The composition of IV fluids didn’t make any difference on the heating efficiency.

Discussion, conclusion: Trekmates® flameless cook box is the most efficient infusion warmer. However, while using it, the temperature of the fluid should be checked before the infusion to make sure that the fluid isn’t too hot. Rescuers should also take into account the cooling process along the IV line. Reusable hand warmers or baby bottle warmers are the second best option to heat fluids but the heating process is long and should be anticipated. Heating first 250 ml of hypertonic saline is probably the best option (lighter to carry and faster to heat with the greatest volume expansion capability), than 500 ml of tetrastarch if a long lasting expansion effect is required due to delayed evacuation.

#7924 : Changes of emergency department workers' perceptions of effectiveness and reported compliance of infection control measures after middle east respiratory syndrome outbreaks

Preferred format : ePoster

Authors:

Gabyong Jeong (1), Tae Rim Lee (1), Min Sub Sim (1), Sung Yeon Hwang (2), Won Chul Cha (2), Tae Gun Shin (2), Ik Joon Jo (1), Keun Jeong Song (1), Joong Eui Rhee (1), Yeon Kwon Jeong (2)

1. , Samsung medical center, seoul, KOREA, REPUBLIC OF
2. , Samsung medical center, seould, KOREA, REPUBLIC OF

Keywords: MERS, middle east respiratory syndrome, hand hygiene, personal protective equipment, compliance, perceptions of effectiveness

Abstract :

Emergency department workers' perceptions of effectiveness and reported compliance of infection control measures after middle east respiratory syndrome outbreaks

Purpose : Middle east respiratory syndrome (MERS) outbreaks occurred in Korea on 2015 with 186 patients in relatively short time. The epidemiological pattern in South Korea was hospital-associated. Infection control plans for all hospitals was implemented to stop the spread of MERS infection and to protect healthcare workers from infections. Enhanced guidelines for infection control measures might affect healthcare workers. The purpose of this study was to determine changes of tertiary emergency department healthcare workers' perception and compliance to hand hygiene and personal protective equipment (PPE) before and after MERS outbreaks.

Methods : A written questionnaire was administered to members in the emergency department at the Samsung Medical Center. Participants were asked to rate the combined overall effectiveness of hand hygiene and PPE and to report compliance on a 5 point scale. This survey conducted during 11-26 September 2015.

Results : The number of participants was 123. Perception of effectiveness before and after MERS outbreaks was that hand hygiene (4.05 vs 4.44, $p<0.05$), N-95 mask (4.02 vs 4.44, $p<0.05$), gown (3.03 vs 3.53, $p<0.05$), eye protection (2.98 vs 3.70, $p<0.05$), glove (3.30 vs 3.87, $p<0.05$) and surgical mask (3.65 vs 3.68, $P=0.714$). Respondents showed statistically higher compliance with hand washing and PPE after MERS outbreaks, specifically, hand hygiene (3.79 vs 4.50), surgical mask (3.37 vs 4.43), N-95 mask (2.23 vs 4.06), gown (2.12 vs 4.45), eye protection (1.72 vs 4.28), glove (2.61 vs 4.09). Compliance with hand hygiene and PPE depending on patient symptoms - only fever or fever with upper respiratory symptom compared to no fever and no respiratory symptom – reported statistically increased except surgical mask. The most highly rated reason for doing hand hygiene and using PPE before and after MERS outbreaks was to protect oneself from respiratory infectious disease, which was 50.41% and 82.11%, respectively. Protection guideline of hospital was secondly rated reason, which decreased 39.80% to 11.80% after MERS outbreaks. But regarding reference source for choosing specific infection control measures, hospital guideline was 89.43% and individual decision was 9.76%.

Conclusion : Infection control measures except surgical mask was perceived to be more effective than before MERS outbreaks. Emergency department's workers reported increased compliance on hand hygiene and PPE except surgical mask. Even though reported compliance for eye protection was statistically higher after MERS outbreaks, its compliance rate was relatively low compared to other PPE measures.

#7925 : The Role of feedback during evaluation: Does it matter in promotion of emergency medicine residents' competencies ?

Preferred format : Oral presentation

Authors:

Mostafa ALAVI MOGHADDAM (1), Ali VAFAEI (2)

1. Emergency Medicine Department-, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC
2. Emergency Medicine Department, Shahid Beheshti University of Medical Sciences, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Student Evaluation,Feedback, Competency, Emergency Medicine

Abstract :

Background:Student evaluation is one of the most important educational interventions in promotion effectiveness of clinical education.This study was performed to determine the role feedback during residents' evaluation on promotion their competencies in chest sonography (CS) among trauma patients.

Methods: This was a switching replications design, quasi-experimental study.The study population included 30 second-year emergency medicine residents (EMR) from two university affliated hospitals.Before the study ,background knowledge of the EMR regarding CS was measured by a standard MCQ.EMR were assigned into two groups: A related to first and B related to second hospital.A standard check list (SC) was designed to evaluate EMR's competencies regarding CS in trauma patients.Validity of SC was approved by the expert panel and it's reliability was confirmed by the test- retest exams in a pilot study.Resident evaluation in each hospital had three phases, with 4 months apart between the first and last phases.In group A, at the first phase, SC was used with feedback to the EMR and at the second phase, SC was used without feedback.In group B, at the first phase, SC was used without feedback to the EMR and at the second phase, SC was used with feedback.Final phase of evaluation conducted simultaneously in both hospitals, two months later the second phase of evaluation by using SC without feedback. Also at the final phase of study, EMR were requested to comment to this phrase according to the 5 scale likert questionaire: ''Giving feedback to EMR during evaluation ,could promote EMR's competencies regarding CS.'' The performance score(PS) of the EMR were calculated in each phase of study according to direct observation by one of the attending of emergency medicine department while the EMR showed their skill about CS in a trauma patient.Min and Max of the PS were respectively 0 and 20 based on the SC.During the study the EMR were blinded to the time of evaluation and the type of competency which was supposed to be evaluated.

Results: There were 15 participants in each group of study.There was no statistically significant difference between two groups regarding demographic variables and background knowledge of the EMR about CS in trauma patients.(p value= 0.565) The PS of the EMR in each group showed statistically significant improvement in the phase in which the previous phase of evaluation was performed by using SC with feedback to the EMR. (P value< 0.001) Twenty three percents of EMR were agree with and 73% of EMR were strongly agree with Phrase.

Conclusion: According to the study , using feedback to the EMR during evaluation, had an essential role in promotion of EMR's competencies regarding CS in trauma patients.Though giving feedback to the targeted medical students is embeded in "Direct Observed Procedural Skills" (DOPS) as a tool of evaluation, it seems that it could be used to promote EMR's competencies regarding procedural skills.

#7926 : HOSPITAL ADMISSION IN PATIENTS WITH EXACERBATION OF COPD ACCORDING TO TRIAGE LEVEL AND AGE

Preferred format : ePoster

Authors:

DANAE FERNANDEZ-CAMACHO (1), MARIA CORCOLES VERGARA (2), MARIA CONSUELO QUESADA MARTINEZ (2), NURIA RODRIGUEZ GARCIA (2), BLANCA DE LA VILLA ZAMORA (2), PASCUAL PIÑERA SALMERÓN (2), CESAR CINESI GOMEZ (2)

1. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: triage, exacerbations, copd

Abstract :

Introduction

Chronic obstructive pulmonary disease (COPD) is a progressive and irreversible disease characterized by chronic airflow obstruction. The development of exacerbations and comorbidities may increase its severity.

Objective

Assess the classification of triage patients presenting with exacerbation of COPD (COPD exacerbations) to the emergency room and analyze the relationship with the patient's age and subsequent hospitalization.

Material and methods

Observational, retrospective at the Reina Sofia Hospital Emergency Department. We included patients diagnosed with COPD attended by heightening between January 2012 and June-2015.

We analyze the classification of triage model used is Manchester (Nivel1 - Resuscitation -Red: immediate attention; Level 2 - Emergency - Yellow: wait until 10-15 minutes; Level 3 - Urgency - Orange: wait until 60 minutes Level 4 - less urgent - Green: waiting up to 2 hours) and its relationship with age (> 75 years and <75 years) and hospitalization.

Results

A total of 1021 patients consulted for COPD exacerbations. They were classified according triage: Level 1; 52 (5.1%), Level 2; 116 (11.4%), Level 3; 839 (82.2%) and Level 4; 14 (1.4%). By age <75 years (503 patients): Level 1; 28 (5.6%), Level 2; 56 (11.1%), Level 3; 412 (81.9%) and Level 4; 7 (1.4%). Those of> 75 years (518) were classified as Level 1; 24 (4.6%), Level 2; 60 (11.6%), Level 3; 427 (82.4%) and Level 4; 14 (1.4%).

In relation to admission: Level 1; 95.7%, Level 2; 64.3%, Level 3; 55.2% and Level 4; 50% They were admitted

Conclusions

There are no significant differences in levels of triage by age. There is a correlation between the results and income level triage patients being classified as Level 1 at the greatest percentage of income (95.7%) and Level 4 the lowest percentage (50%). It is noteworthy that up to 50% of patients entering Level 4 which can reveal a problem in the standings with certain patients. Therefore we can say that the rating level on arrival to the ER is in line with the seriousness if we exclude patients with Level 4.

#7927 : Microbiological isolations, focal infection, and empiric therapy : patients admitted to the emergency department for sepsis

Preferred format : ePoster

Authors:

Maria Gil Lopez (1), Elena Prado Mel (2), Antonio Bernabé Rojas Ramirez (1)

1. Emergency Service, Andalusian Health System, Seville, SPAIN
2. Hospital Pharmacy Service, Andalusian Health System, Seville, SPAIN

Keywords: Emergency Medical Services , sepsis, focal infection

Abstract :

Objective: to perform a descriptive study of focal infection, microbiology isolates and empiric treatments admitted as sepsis in the emergency deparment. The objective is to determine the septic patient characteristics and stablish which measures implement to enhance patient atention and health outcomes.

Metodology: patients admitted with sepsis in the emergency department during the period January 2014 to November 2015 were enrolled. Following data were collected:

- Socio-demographic (sex, age).

- Sepsis type (sepsis, severe sepsis and septic shock)

- Focal infection

- Take blood culture (Yes, No)

- Microbiological isolates of blood culture and microbiological isolates of other culture.

- Empiric antibiotic therapy.

- Exitus (Yes;No)

A descriptive study of these variables was performed using SPSS v.10 stadistic package.

Results: 32 of them were men, the average age of all patients was 75.69 years (SD 14.63). 13.5% had sepsis, almost 52% were severe sepsis and septic shock were 34.6%. In more than 50% (29 patients) the focus was urinary, respiratory focus followed by 21.2%. The blood culture was taken at 84.6%, there were 8 patients who were not taken, in 3 cases were septic shock with death within hours in the emergency department. urine cultures were taken in 33 patients (63.4%), others cultures were taken as ulcer exudates, sputum, septic abscesses, oriented by focal infection. The 61.33% of the blood cultures were negative, among the most frequent microorganisms isolated bacteria were Enterobacteriaceae (E. coli [6], Proteus [2], Klebsiella [1]), there were 2 blood cultures insulated 2 bacteria, one of them abdominal focus (E.Coli and S.gallolyticus subsp pasteurianus), the other one urinary focus (E.Coli and Enterococcus faecalis). There were only two isolates of S. aureus, one of them by a central catheter.Only in 4 cases, the same microorganism was isolated in blood and urine cultures or culture of exudate. As for antibiotic therapy, in 6 patients empirical antibiotic therapy was not recorded in the medical record digital . In patients with urinary focus, the antibiotic combination more used was Tobramycin + Ceftriaxone IV (9 patients) , followed by Imipenem IV (7 patients) and Ceftriaxone IV monotherapy (7 patients) . In patients with respiratory focus the most common empirical antibiotic was Ceftriaxone IV monotherapy (4 patients) , with high variability of antibiotic treatment in other cases . As for the combinations of antibiotics used , 2 of which is a highlight , Ceftriaxone + Imipenem + Vancomycin in respiratory focus and Piperacillin / Tazobactam + Metronidazole in soft tissue infection .23 Patients Were finally exitus , 9 of them died within the first 48 hours .

Conclusions: Sepsis is a syndrome that requires a high organization in the emergency services to get the best health outcomes. Taking blood cultures must be established structurally in all cases of sepsis before administration of the antibiotic . Regarding antibiotic therapy is essential to establish guidelines empirical antibiotic therapy according comorbidities and septic foci to standardize clinical practice, improve the approach of infection and reduce the risk of selection of resistant microorganisms.

#7928 : Educational Experiences in Disaster Medicine

Preferred format : ePoster

Authors:

Alena Dudekova (1), Viliam Dobias (1)

1. Chair of Emergency Medical Care, Slovak Medical University, Bratislava, SLOVAKIA

Keywords: Disaster Medicine, education, exercise, student comparison

Abstract :

Experiences with education in the field of disaster medicine, which we gained during the previous four years, enable us to provide other institutions facilitating similar education with useful information. Bachelor programme “emergency pre-hospital care” trains students as paramedics, which qualifies them for providing Emergency and Disaster Medicine.

The major part of the education is focused on the subjects as Emergency Pre-hospital Care, Emergency Medicine and Disaster Medicine. Education of Disaster Medicine is included in the presentations called Health and Crisis Management, precisely during the second and third year of study. Full-time students attend 72 hours in sum and 12 hours of practical training. It includes also 40 hours which focusi on the Integrated Rescue System. External students have to complete 40 hours. Besides formal education we usually manage to convince 33,4% of students to participate in competitions, practices related to mass disasters. Generally we can conclude, that students can handle the theoretical part of their studies. According to the results of simulated tasks focused on triage, the problem is caused by incorrect triage of patients. They tend to have doubts concerning the likelihood of their own decision.

The main aim of this poster is to contribute with our experiences in the field of education, which is focused on the triage of injured patients at mass casualty incidents.

In 2012 we received an instrument from a medicine student in Olomouc, which was designed to simplify the education of triage of injured people while applying START method. From that year, we have started to use this instrument and gradually we can confirm its positive effect. Our results of triage are at the level of 98,94%. The significance of results lies in the evident improvement in the accuracy of triage after using the instrument at different levels of difficulty. We can say that Bill Bowerman´s claim (2016), turned out to be accurate: *“No teacher is smart enough to not be able to learn from their students.”* To contribute and compare our results, we have decided to move our students in a centre of a military training camp called Lešť. The camps main tasks are: “*to fulfil tasks related to the security and defence of the state, conducting health care, sound assurance of special preparations, especially in the case of special armed forces. The camp’s are has 145,5 km2 and its temperature is around 6-8 C (Lešť,2012).* On the basis of evaluating forms, which were filled by them during different types of tasks, we will evaluate the results of practices and competitions attended in the training area.

The results of percentages of absolute and relative frequency we have arranged in transparent graphs and tables. The significance of the results we see in the description of education in the field of emergency health care and in the evaluation of theory and practice in the education of triage of injured. Education at universities show that its direction is balanced and the educational institutions should improve the form of education by active practice together with professional organizations.

#7929 : ANTIBIOTIC TREATMENT IN THE EMERGENCY DEPARTMENT IN PATIENTS WITH EXACERBATION OF COPD ACCORDING TO THE CRITERIA OF ANTHONISEN

Preferred format : ePoster

Authors:

NURIA RODRIGUEZ GARCIA (1), DANAE FERNANDEZ-CAMACHO (2), BLANCA DE LA VILLA ZAMORA (1), MARIA CONSUELO QUESADA MARTINEZ (1), MARIA CORCOLES VERGARA (1), PASCUAL PIÑERA SALMERÓN (1), MARIA ENCARNACION SANCHEZ-CANOVAS (2), CESAR CINESI GOMEZ (1)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: antibiotic, Anthonisen, Exacerbation, COPD

Abstract :

Introduction
Exacerbations of COPD (COPD exacerbations) represent today the main reason for consultation in the emergency of these patients. The use of antibiotics have precise indications but no longer in dispute.

Objetive:
Evaluate the use made of antibiotics in patients with COPD exacerbations of infectious origin according to the criteria Anthonisen.

Material and methods
Observational, retrospective study in a General Hospital with an area of 200,000 inhabitants and 275 urg / day. The medical records of patients with a previous diagnosis of COPD exacerbation had consulted January 2012 to July 2015 were reviewed.

Results:
A total of 1027 were included with COPD exacerbations. Of the 1027 patients studied 283 (27.6%) did not meet the criteria Anthonisen and 744 (72.4%) did the meet. Of those who did not present criteria Anthonisen 83 (29.3%) went with antibiotic therapy at discharge and 200 (70.3%) left without antibiotic therapy at discharge. Of the patients who were Anthonisen criteria were with antibiotic therapy at discharge 224 (30.1%) and 520 (69.9%) left without antibiotic therapy at discharge.

Conclusions:
Over 70% of patients with COPD exacerbations presented criteria for the use of antibiotics. Our results reveal that the use of antibiotics in the Emergency Department is independent of the criteria Anthonisen because we use exceeds 30% of cases where it would be justified if their use. It seems that if we better leave without antibiotic treatment to those who have no criteria where only prescribe antibiotics to 29% of patients. These results should make us reflect on this aspect that is really improved in accordance with the recommendations.

#7930 : HHOSPITAL ADMISSION OF PATIENTS WITH COPD EXACERBATIONS IN AN EMERGENCY ACCORDING TO THE CRITERIA OF SEVERITY

Preferred format : ePoster

Authors:

NURIA RODRIGUEZ GARCIA (1), MARIA CONSUELO QUESADA MARTINEZ (1), MARIA CORCOLES VERGARA (1), DANAE FERNANDEZ-CAMACHO (2), BLANCA DE LA VILLA ZAMORA (1), PASCUAL PIÑERA SALMERÓN (1), MARIA CARMEN MOLINA MORAZO (2), CESAR CINESI GOMEZ (1)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, EXACERBATION, HOSPITAL ADMISION

Abstract :

Introduction
Exacerbations of COPD (COPD exacerbations) represent today the main reason for consultation in the emergency of these patients. The use of antibiotics have precise indications but no longer in dispute.

Objetive:
Rate hospitalization of patients visiting an emergency ward for exacerbation of COPD taking into account the severity criteria both clinical and analytical.

Material and methods:
Observational, retrospective study in a General Hospital with an area of 200,000 inhabitants and 275 urg / day. The medical records of patients with a previous diagnosis of COPD exacerbation had consulted January 2012 to July 2015. clinical severity criteria (cyanosis, impaired consciousness, respiratory arrest, tachypnea and use thoracic accessory muscles) and analytical (pO2 <50, pCO2> 70, pH> 7.30, high HCO3)

Results:
1021 included patients with exacerbation of COPD of which 823 (80.6%) had severity criteria for attention in the emergency department and 198 (19.4%) had no severity criteria. Of those with severity criteria; 482 (73.6%) required hospitalization and 341 (41.4%) were discharged home. Of those without severity criteria; 173 (87.4%) required hospitalization and 25 (12.6%) were discharged home.

Conclusions:

As the literature suggests most of our patients with exacerbation of COPD they showed clinical and laboratory criteria where a percentage of them than seventy percent required hospitalization. The severity of our patients that consistent with published hospitalization needs most the same as the blibliografia point.

#7931 : Performing a blood gas analysis to patients who come for exacerbation of COPD in Emergency Service

Preferred format : ePoster

Authors:

NURIA RODRIGUEZ GARCIA (1), MARIA CONSUELO QUESADA MARTINEZ (1), BLANCA DE LA VILLA ZAMORA (1), DANAE FERNANDEZ-CAMACHO (2), MARIA CORCOLES VERGARA (1), PASCUAL PIÑERA SALMERÓN (1), ANTONIO MARTINEZ-GARCIA (2), CESAR CINESI GOMEZ (1)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, EXACERBATION, blood gas analysis

Abstract :

Introduction

Chronic obstructive pulmonary disease is a pulmonary disorder that is characterized by being a blockage usually progressive and irreversible airway. The clinical practice guidelines (CPG) recommend assessing the severity of each episode, for which propose a classification that identifies the risk of death if the exacerbation is severe or very severe. Two of these criteria are hypercapnia ($PaCO_2$> 45 mmHg) and respiratory acidosis (pH <7.30). Knowing this also influences the subsequent treatment. Thus, it is important to blood gases to patients presenting with this pathology.

Objetive

Gas analysis is performed to assess whether patients diagnosed with COPD who come to the emergency department with an exacerbation.

Material and methods

observational, retrospective study in a General Hospital with a population of 200,000 and 275 urg / day. COPD are classified according to GOLD Guide and according to their FEV in FEV> 80% very severe mild, moderate 50-80%, 30-50% severe and <30%. performing blood gas analyzes all serious and very serious patients who consult with exacerbation of COPD January 2012 to June 2015 and $PaCO_2$ and pH values.

Results

Rated 1173 patients, 539 (45.95%) had FEV 30-50% and 282 (24.04%) had FEV <30%. Gas analysis was performed to 1058 (90.19%).

Of patients with FEV 30-50%, to 447 (82.93%) they were asked gases, having a $PaCO_2$> 45 mmHg 39 of them (8.72%) and 29 of them (6.49%) of them pH <7.30.

Of patients with FEV <30% to 207 (73.4%) they were asked gases, having a $PaCO_2$> 45 mmHg 25 of them (12.07%) and a pH <7.30 25 of them (12.07%).

Conclusions

Performing a blood gas analysis to patients who come for exacerbation of COPD is improved if we follow the recommendations of the Clinical Practice Guidelines (CPG), especially in severely ill patients.

The results provided by the gas analysis help determine the severity of the patient and influence subsequent treatment, it is important to make to COPD patients who come to the emergency room for a sharpening as recommended by the GPC

#7934 : Non-Traumatic Spontaneous Posterior Interosseous Neuropathy

Preferred format : ePoster

Authors:

Kenneth Boon Kiat Tan (1), Corinne Yee Lyn Lau (2)

1. Department of Emergency Medicine, Singapore General Hospital, singapore, SINGAPORE
2. Department of Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE

Keywords: posterior interosseous nerve, weak finger extension, neuropathy, radial nerve.

Abstract :

Posterior interosseous nerve (PIN) neuropathy accounts for 0.7% of upper limb peripheral nerve compression syndrome with an annual incidence of 0.003% (1,2,3). We present a case of a 55 year old lady who presented with acute and progressive weakness of her left hand extensors. Examination revealed complete loss of extension of all the fingers of the left hand and mild weakness in wrist dorsiflexion(4). Tenderness was noted over the left radial head . Xray of the elbow showed no abnormalities. She was diagnosed with PIN neuropathy and discharged with oral vitamin B, analgesia and an early neurology appointment. PIN neuropathy is rare(1,2,3). It is thus important to understand the anatomical course of the radial nerve with its deep terminal branch , the PIN , including its clinical presentation to avoid misdiagnosis and to initiate proper treatment for these patients.

#7935 : A case of Myocarditis presenting with Hyperventilation

Preferred format : ePoster

Authors:

Amar Satyam (1), Sohil Pothiawala (1)

1. Emergency medicine, Singapore General Hospital, Singapore, SINGAPORE

Keywords: myocarditis, dyspnoea, hyperventilation

Abstract :

Introduction:

Hyperventilation syndrome is a relatively common emergency department (ED) presentation in which minute ventilation exceeds metabolic demands. It is associated with a wide range of symptoms without a clear organic precipitant. Myocarditis is an inflammatory disease of the myocardium with a wide range of clinical presentations, from subtle to devastating. It is caused by a wide variety of infectious organisms, autoimmune disorders, and exogenous agents,

Case report:

A 37 year old Egyptian lady who was 12 weeks pregnant presented to the ED with sudden onset of hyperventilation and chest discomfort. She also complained of numbness in the limbs but denied any other complaints. Clinically, she appeared well and her vitals were stable. Examination of heart and lungs was normal. ECG show normal sinus rhythm and ABG showed signs of hyperventilation (PH 7.54, PCO2 23mmHg, HCO3 20mmol/L and SaO2 99%). Chest x-ray was normal and bedside Echo did not show evidence of myocardial dysfunction, valvular abnormalities or massive pulmonary embolism. Troponin T was 426ng/L (normal < 30ng/L).

Discussion:

Diagnosing myocarditis is challenging in view of its varied presentations. There is no definite clinical feature that is diagnostic of myocarditis. It is typically seen in patients around age of 20-50 years and the variability in presentation reflects the variability in histological disease severity, etiology, and disease stage at presentation. Many cases go undetected because they are subclinical or present with nonspecific signs. Patients of myocarditis usually present with mild symptoms of chest pain, fever, sweats, chills, and dyspnea secondary to heart failure. This is a rare case where patient presented with shortness of breath which was not secondary to heart failure but only showed signs of hyperventilation of clinical examination and ABG.

Conclusion :

Emergency physicians treat young patients who present with shortness of breath secondary to hyperventilation/psychogenic dyspnoea. A high degree of suspicion is needed to diagnose myocarditis which can occasionally present with atypical symptom like hyperventilation.

#7939 : Ectopic Pregnancy After Tubal ligation

Preferred format : Oral presentation

Authors:

LEVENT KOCA (1), VOLKAN ÜLKER (1), ABDULLAH CÜNEYT HOCAGİL (1), HİLAL HOCAGİL (1)

1. EMERGENCY MEDİCİNE DEPARTMENT, BULENT ECEVİT UNİVERSİTY, FACULTY OF MEDİCİNE, ZONGULDAK, TURKEY

Keywords: Abdominal Pain, Childbearing Age Women, Ectopic Pregnancy, Emergent Surgery, Tubal Ligation

Abstract :

Introduction

Abdominal pain is the most common cause of emergency room visits. Ectopic pregnancy is one of the most important cause of abdominal pain that have thousands causes should be considered in female patients of childbearing age. Ectopic pregnancy is among the leading causes of mortality among pregnant women Ectopic pregnancy, has been increasing in number and approximately accounts for 1-2% of all pregnancies. While these patients are evaluated considering of risk factors are important. Risk factors of ectopic pregnancy are conception with an intrauterine device (IUD) in place, conception while using a progesterone only contraceptive method, genital tract infection, genital tract surgery, previous ectopic pregnancy, and in utero exposure to diethylstilbestrol. İn this case we aimed to remind that tubal ligation is used as protection methods is one of the risk factor for ectopic pregnancy rarely.

Case report

A 28-year-old woman presented with acute lower abdominal pain and dysuria. She was admitted to the Emergency Department of the Bülent Ecevit University, Faculty of Medicine (Zonguldak, TURKEY). In the previous year, her fallopian tubes were ligated for sterilization. Patient was examined, her vitals were stable. Abdominal palpation revealed only mild tenderness in the right upper and lower abdomen. Other physical examinations were normal.

Her laboratory exams had, mild leukocytosis; 11100 K/mm³, mild anemia: 10,8 g/dL, platelets:321000 /µL, urinary examination; leukocyturia and no pregnancy. We made transvaginal ultrasonography, she had 3 cm cyst and surrounded hematoma at left ovary and right ovary was normal. She had also 54 x 30 mm hematoma at rectovaginal space.

The patient underwent emergency surgery with the diagnosis of ectopic pregnancy.

Conclusion

Childbearing age patients are should be regarded as risk factors for acute abdominal pathology that need emergent surgery like ectopic pregnancy. Women's pregnancy status should be evaluated by emergency physicians.

#7940 : Focused ultrasound in the real world – should we really learn FAST?

Preferred format : ePoster

Authors:

Gerhard Tiwald (1)

1. Region of Sealand, Holbæk Hospital, ED, Holbaek, DENMARK

Keywords: point-of-care ultrasound, FAST, lung-ultrasound, focused echocardiography, ultrasound training

Abstract :

Aim: Point-of-care ultrasound is a game-changer in the evaluation and treatment of acute ill and injured patients and is becoming more and more popular especially in emergency medicine. Traditional ultrasound programs typically start by learning FAST (focused assessment with sonography for trauma), which value has been challenged (1). This study has been conducted to identify the most used protocols in our ED.

Methods: prospective registration of all point-of-care ultrasound activities of a single user (consultant emergency and internal medicine) at a rural ED in Denmark (about 43.000 admissions/year) over a 3-month-period January to April 2016. The user is trained in abdominal ultrasound, echocardiography, F-LUS (focused lungultrasound), MUS (musculoskeletal ultrasound), FAST, e-FAST, focused heart ultrasound, LCU (limited compression ultrasound for deep vein thrombosis), ultrasound-guided interventions (pleuracentesis, ascitesdrainage, vascular access). A General Electrics S8 ultrasound scanner was used most of the times, some intervention were done using a General Electrics V-scan. Ultrasound pictures and clips were stored on a hard-disc anonymous with a study-number.

Results: I the study period 178 patients were examined with ultrasound. As there were used more than one protocol in some patients, a total of 224 examinations or interventions were registered. FAS (focused abdominal sonography) was used 60 times, F-LUS (focused lung ultrasound) 48 times, FATE (focused assessed transthoracic echocardiography) 38 times, LCU 25, MUS 13, FAST 6, e-FAST 4, 1 scanning was not specified in the records. 29 ultrasound-guided interventions, mostly venous and arterial access, were registered. 14 patients underwent a F-LUS and focused echocardiography as part of a randomized controlled trial (RCT 1.4 ultralyd i akutmodtagelsen).

In 71 patients a significant pathology was noted, all from abdominal aortic aneurism, pleural- and pericardial effusions, appendicitis, ileus, ovary masses, ectopic pregnancies, ruptured tendons, cholecystitis and – lithiasis, low EF, acute dilated right heart, spleen haematomas, free peritoneal fluid, a lot of DVTs and Baker-cysts, lung consolidations. All but one interventions (venous catheter, arterial puncture and catheter, pig-tail drain in pleura and peritoneal cavity) were successful.

Discussion: Most often, a focused abdominal ultrasound was performed, followed by focused lung-ultrasound, FATE and LCU. Only very few FAST, e-FAST or MUS were done in the study period. It was possible to identify significant pathologies with point-of-care ultrasound. Limitations for single centre and singe user must be take into account.

As a result of this study, it seem more reasonable to focus ultrasound-training on abdominal and lung ultrasound, followed by focused echocardiography and LCU . Also ultrasound-guided vascular access seems to be a very useful tool in the ED. FAST and e-FAST may have a role in special settings, but not in our ED. Research in point-of-care ultrasound should be encouraged.

1) Stengel D, Rademacher G, Ekkernkamp A, Güthoff C, Mutze S.

Emergency ultrasound-based algorithms for diagnosing blunt abdominal trauma.

Cochrane Database of Systematic Reviews 2015, Issue 9. Art. No.: CD004446

#7942 : Prehospital transfusion of red cell concentrates in a paramedic staffed helicopter emergency medical system

Preferred format : Oral presentation

Authors:

Stefan Heschl (1), Anthony de Wit (2), Emily Andrew (3), Stephen Bernard (2), Karen Smith (3)

1. Ambulance Victoria, Medical University of Graz, Graz, AUSTRIA
2. Air Ambulance Victoria, Ambulance Victoria, Melbourne, AUSTRALIA
3. Ambulance Victoria, Ambulance Victoria, Melbourne, AUSTRALIA

Keywords: Helicopter Ambulances, Paramedics, Red Blood Cell Transfusion

Abstract :

Background

Prehospital use of red cell concentrates (RCCs) has shown promising results. However, the administration of blood products is limited to physicians in many jurisdictions. We sought to describe the characteristics of RCC transfusions in a paramedic staffed helicopter emergency medical system in Victoria, Australia.

Methods

We performed a retrospective analysis of all cases where paramedics consulted the responsible physician for approval of RCC transfusion between April 2011 and June 2014 in Victoria, Australia. Ambulance data was retrieved from electronic patient care records and hospital and outcome data was retrieved from a statewide trauma registry.

Results

A total of 120 primary missions were identified where paramedics requested approval for transfusion of RCCs during the study period. A total of 98 patients received prehospital RCCs, of which 94 suffered trauma. The majority of these patients was male (63.8%) and was involved in a car accident (56.4%). Only two patients (2.1%) had an Injury Severity Score <12. The median heart rate of the trauma patients remained stable but median systolic blood pressure (80mmHg vs. 90mmHg, p=0.011) and shock index (1.49 vs. 1.30, p=0.002) improved from time of consultation to arrival at hospital. Overall, mortality for trauma patients was 29.8%. There were no transfusion related complications identified.

Conclusions

Prehospital transfusion of RCC by paramedics is feasible and safe. The majority of patients receiving RCC in the field are major trauma patients and the transfusion of blood helped stabilising the patients´ vital functions.

References

Holcomb JB, Donathan DP, Cotton B a, et al. Prehospital Transfusion of Plasma and Red Blood Cells in Trauma Patients. *Prehosp Emerg Care* 2014;19:1-9

#7943 : Paramedic airway management in paediatric traumatic brain injury: A 9-year observational study

Preferred format : Oral presentation

Authors:

Stefan Heschl (1), Ben Meadley (2), Emily Andrew (3), Warwick Butt (4), Stephen Bernard (2), Karen Smith (3)

1. Ambulance Victoria, Medical University of Graz, Graz, AUSTRIA
2. Air Ambulance Victoria, Ambulance Victoria, Melbourne, AUSTRALIA
3. Ambulance Victoria, Ambulance Victoria, Melbourne, AUSTRALIA
4. The Royal Children's Hospital, The Royal Children's Hospital, Melbourne, AUSTRALIA

Keywords: Endotracheal intubation, Traumatic brain injury, Paediatrics, Paramedic

Abstract :

Introduction

Prehospital airway management of the paediatric patient with traumatic brain injury (TBI) is controversial. Endotracheal intubation of children in the field requires specific skills and has potential benefits but also implies potentially serious complications. We aimed to compare mortality and functional outcomes after six months between children with TBI who either underwent prehospital RSI by a paramedic or received no intubation.

Methods

We conducted a retrospective study of patients aged ≤14 years with suspected TBI. Patients were either transported via helicopter and received rapid sequence intubation (RSI) (2005-2013) or via road ambulance and received no intubation (2006-2013). Prehospital data was linked to hospital and 6 months follow up data to assess mortality and functional outcome.

Results

A total of 106 patients were included in the study of which 87 received RSI by paramedics and 19 did not receive intubation. Baseline characteristics were comparable between the groups. Overall intubation success rate was 98.9% with a first-pass success rate of 93.1%. Overall, there was no difference in mortality, ICU and hospital length of stay and functional outcome after six months between the two groups. Major trauma patients who received RSI were more likely to have favourable neurological outcome after six months compared to patients who were not intubated (66.1% vs. 16.7%, p=0.03). Prehospital RSI was also associated with a significant decrease in length of hospital stay in this group (523.0h vs. 1938.8h, p=0.03).

Discussion

Prehospital RSI in paediatric patients with TBI can safely be performed by paramedics. Overall, outcome was not significantly different between patients who receive prehospital intubation and those who did not, however our study is not powered to detect a significant difference. Intubation prior to transport might be beneficial for major trauma patients.

References

Gausche M, Lewis RJ, Stratton SJ, Haynes BE, Gunter CS, Goodrich SM, et al. Effect of out-of-hospital pediatric endotracheal intubation on survival and neurological outcome: a controlled clinical trial. JAMA 2000;283:783–90.

Gerritse BM, Draaisma JMT, Schalkwijk A, van Grunsven PM, Scheffer GJ. Should EMS-paramedics perform paediatric tracheal intubation in the field? Resuscitation 2008;79:225–9.

#7944 : Aurora Bridge Bus Crash review of a mass casualty event pre-hospital and hospital response, lessons learned.

Preferred format : Oral presentation

Authors:

Stephen Morris (1), Andrew McCoy (2), Joshua Jauregui (2)

1. Acting Assistant Professor of Emergency Medicine, University of Washington School of Medicine, seattle, USA
2. , University of Washington Division of Emergency Medicine, seattle, USA

Keywords: Disaster, MCI, Trauma

Abstract :

At 11:11 on September 24, 2015, an amphibious DUKW (a two-ton vehicle, was refurbished in 2005 for tourist use) with 37 people on board lost control due to a catastrophic left front axle mechanical failure. The vehicle crossed the center line into oncoming traffic and struck a charter bus transporting 50 members of an international college group including students and staff.[i] This event occurred on an urban bridge with heavy traffic. A Mass Casualty Incident response was activated at the levels of EMS, the inter-hospital coordinating system: Disaster Medical Control Center (DMCC), the regional inter-hospital coordination group Northwest Healthcare Response Network (NWHRN) and the City of Seattle.

There were 62 reported injuries, however this number might be low due to reported delayed self-directed medical attention care seeking after the event. The incident had many unique features that affected the incident response including: location on a bridge with limited access points, involvement of an amphibious DUKW vehicle, involvement of two commercial vehicles mandating investigation of the National Traffic Safety Board, and large numbers of foreign nationals. This mass casualty event demonstrates the challenges to a complex mass casualty response and how many aspects of our disaster response system met those challenges.

There were four victims pronounced dead on the scene and another victim died three days later of his injuries. A total of 51 victims were triaged and transported via the EMS system to 8 area hospitals. These included 12 triaged red (emergent), 11 yellow (urgent) and 28 green (delayed). The four on scene fatalities were triaged stripped (expectant). A pre-hospital county issued EMS MCI triage tag was used to help patient tracking.

Many small but not irrelevant elements were in play that made this tragic accident unfold in a manner that maximized healthcare and good outcome for the patients as well as a supportive and informed environment for the victims' families and the general population of Seattle. Years of coordination and collaborative agreements and planning, as well as drills came to play as patients were appropriately managed in the field, distributed appropriately to area hospitals who were aware of and prepared for their arrival, their whereabouts were tracked and available to public officials who were able to inform and support family and the public. Several elements also contributed to the event in a negative manner. As a commercial tourist vehicle and a commercial transportation vehicle neither vehicle was required to or had seat belts. The DUKW vehicle, having been involved in prior mass casualty accidents, does not meet current safety standards, and concerns over the vehicles size, shape, blind spots and buoyancy have also been raised.[ii][iii][iv] Despite the robust response of our community's EMS, city and hospital based emergency services, it is likely many of these injuries and fatalities may have been averted with improved safety guidelines and implementation.

[i] Preliminary Report National Transportation Safety Board: HWY15MH011, http://www.ntsb.gov/investigations/accidentreports/pages/HWY15MH011_preliminary.aspx

[ii]http://www.cnn.com/2010/US/09/17/duck.boat.safety/

[iii] http://www.ntsb.gov/_layouts/ntsb.recsearch/Recommendation.aspx?Rec=M-00-005

[iv]http://www.wnwlaw.com/ride-the-ducks-wrongful-death/

#7945 : Prevalence and outcomes of endotracheal intubation in the pediatric emergency department

Preferred format : Oral presentation

Authors:

ALI YURTSEVEN (1), EYLEM ULAŞ SAZ (1)

1. Pediatric Emergency Medicine, Ege University School of Medicine, Izmir, TURKEY

Keywords: endotracheal intubation pediatric

Abstract :

Background and Objectives

Intubation is a core airway skill in Pediatric Emergency Departments. There are limited data on pediatric endotracheal intubation in the emergency department especially in developing countries. This study was designed to describe the frequency, clinical features and outcomes of pediatric intubation in a large children's hospital.

Methods:

We performed a retrospective analysis of emergency department medical records between January 2014 and December 2015 that involved attempted intubation of children younger than 18 years. Medical records were reviewed to describe the intubation process, demographics, clinical features and outcomes.

Results:

A total of 115,000 patients visited our emergency department during the study period. Eighty-six of them (1/1300) were intubated. The mean age was 3.4 years, (F/M: 1) and 23 patient was younger than 12 months. Cardiopulmonary arrest was the most common indication for intubation (36%), followed by status epilepticus, sepsis-shock and respiratory failure respectively (27%, 20% and 17%). Cardiopulmonary resuscitation was administered for 20 patients more than 10 minute, and they all died. While poor outcome was associated with sepsis-shock, better outcome was associated with status epilepticus with a p value of 0.03 and 0.001 respectively.

Most intubations were successful with 1–2 laryngoscopy attempts, while 13(15 %) were diffi-cult. A majority of tracheal intubations involved use of an intravenous anesthetic induction agent and/or a sedative 55 (64%] a benzodiazepine, 46 (53%) fentanyl, and 10 (12%) ketamine. Rocuronium bromide as a neuromuscular blockade agent was administered in 15 (21%) of endotracheal intubations. While infants had the highest mortality rate with a 48%, fifty-four percent of all patients were discharged from the hospital.

Conclusions

The most common lifesaving intervention in our pediatric emergency department was endotracheal intubation. A significant rate of intubation was successful. Favorable outcome has been related to duration of CPR (less than 10 minute), age (>1 year) and primary clinical features (status epilepticus).

#7946 : Another Life Saved. Integrated use of Ultrasound In pulse pause of Adult life support.

Preferred format : ePoster

Authors:

Asif Mushtaq (1), Akhtar Munazah (2), Julian Webb (3)

1. Speciality Doctor Emergency Medicine/ MRCS, East Surrey hospital, Redhill, UK
2. Speciality doctor/Research lead, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK
3. Emergency Medicine, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK

Keywords: Pulseless electrical activity, Ultrasound ,Cardiac Arrest.

Abstract :

Diagnosing and treating a cause of cardiac arrest has been challenging for Emergency physicians for years since clinical signs of most reversible causes (4H and 4T) are either absent or difficult to interpret in noisy Resus and often due to continuous chest compressions . Use of integrated Ultrasound has helped Emergency Physicians to solve this clinical dilemma.

We are reporting an unusual case of cardiac tamponade and pleural effusion in a 77years old female who was diagnosed and drained during PEA cardiac arrest in our resusitation /emergency department. Integrated Ultrasonographic approach was used to get satisfactory images and to insert drains during pulse pause of Adult life support.Successful drainage of 200mls of pericardial fluid and 1500mls of pleural fluid lead to return of spontaneous circulation(ROSC). Patient was sucessfully resusitated and stabilised and transferred to intensive care unit for furthur management. She was consecutively discharged after 18days of hospital admission. However on furthur imaging it was revelaed that she had Adenocarcinoma of the lung which was the primary cause of her disease process.

Our case report highlights the importance of training and skills required by Emergency Physicians to perform Integrated Ultrasound during Life support scenarios which aid us in diagnostic management of patients. We demonstrate that acquiring such skills are life saving.

#7947 : First Manifestation of Diabetes Mellitus Diabetic Ketoacidosis accompanied by Pulmonary Embolism

Preferred format : Oral presentation

Authors:

Hassan Amiri (1), Seyed mohammad Hosseini kasnavieh (1), Mohammad reza Yasinzadeh (1), Nader Tvakoli (1), gholamreza masoumi (1), Samana Nabi (1), mohammad Baghaei (1), samane Rezaei (1)

1. Iran University of Medical Sciences, Tehran, Iran, Iran University of Medical Sciences, Tehran, Iran, tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Pulmonary Thromboemboli, Diabetic Ketoacidosis

Abstract :

DKA is a life thearetening manifestation of diabetus mellitus as a hypercoagolable state. venous and arterial thromboambolism are complications of DKA treatment .pulmonary thromboembolism (PTE) is the most seriouse manifestation of venous thromboembolic desease .this article reportsthe case of 52 years old woman with massive thromboambolism presented with DKA.

case report:A 52 years old woman was broughte to emergency departeman at tehran 'haftetir hospital with a chife complain of acute dyspnea .She stated that after a few minuetes running in a short distance ,she had exprienced a shortnnes of breath,sweating,dizzenes,and drop attack.No significant sicknes was found in her past medical history .She no had history of recent of long-distance travel ,obecity and smoking .However she was ill,pail,prispring ,cyanotic and anxious with cold extermites .her heart rate was 124beats/min and BP WAS 70/30mmHg.Puls oximetry was shoud o2 saturation 75% in room air she had tachypnea of 32 breat /min.her lung sound was normal

#7948 : Comparing Intraosseous And Intravenous Access For Out-of-Hospital Cardiac Arrest In Singapore

Preferred format : Oral presentation

Authors:

Yun Xin Chin (1), Kenneth Boon Kiat Tan (2), Zhi Xiong Koh (2), Yih Yng Ng (3), Nur Ain Zafirah Bte Md Said (3), Masnita Rahmat (3), Stephanie Fook (4), Marcus Eng Hock Ong (2)

1. , Duke-NUS Medical School, Singapore, SINGAPORE
2. Department of Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
3. Medical Department, Singapore Civil Defence Force, Singapore, SINGAPORE
4. Division of Medicine, Singapore General Hospital, Singapore, SINGAPORE

Keywords: Out-of-hospital cardiac arrest, emergency medical services, epinephrine, intraosseous, intravenous

Abstract :

Background

Vascular access in out-of-hospital cardiac arrest (OHCA) patients is challenging. Locally, emergency ambulance paramedics have a 50% success rate of obtaining an intravenous (IV) access in order to administer epinephrine. The aim is to evaluate the use of intraosseous (IO) in addition to IV to determine if there is an improvement in return of spontaneous circulation (ROSC).

Methods

This is a prospective, parallel group, cluster-randomised, crossover study comparing ‘IV only’ against ‘IV+IO’ in medical and traumatic OHCA cases in Singapore. In the ‘IV+IO’ arm, if 2 IV attempts failed or took more than 90 seconds, paramedics may have 2 attempts of IO. Inclusion criteria for IO were OHCA adult (body weight ≥40kg) and paediatric (body weight between 3 to 39kg) patients. Exclusion criteria were contraindications to IO. The primary outcome was ROSC. Secondary outcomes were insertion success rate, epinephrine administration, time taken for 1st dose of epinephrine and survival outcome.

Results

Based on phase 1 results (prior to crossover) from 1 September to 31 December 2014, there were 251 cases in the ‘IV only’ group and 307 cases in the ‘IV+IO’ group. Baseline characteristics were similar in both groups. There were more successful vascular access and prehospital epinephrine administered in ‘IV+IO’ compared to ‘IV only’ (69.4% vs 53%, $p<0.001$, 62.5% vs 47.8%, $p<0.001$ respectively). There were 38 IO attempts in the ‘IV+IO’ group, of which 5 failed as the 1st attempt was unsuccessful but a 2nd attempt was not made. Median time to epinephrine was similar in both ‘IV+IO’ and ‘IV only’ groups (10 min [IQR 7-16 min] vs 11 min [IQR 7-18 min] respectively, $p=0.104$), also ROSC whether it was prehospital ROSC (8.5% vs 10% respectively, $p=0.558$) or hospital ROSC (25.7% vs 26.7% respectively, $p=0.847$), as well as survival to discharge or 30 days (3.9% vs 5.6% respectively, $p=0.421$) and good neurological outcome of cerebral performance category (CPC) ≤2 (2.6% vs 4.8% respectively, $p=0.178$).

Conclusions

The use of IO in addition to IV led to higher vascular success rate and prehospital epinephrine administration. However, it was not statistically significant for ROSC, survival to discharge or 30 day survival, or good neurological outcome.

Acknowledgments

We would like to thank the SCDF paramedics for their participation in this study. We have no conflicts of interest to declare. This study was funded by NMRC New Investigator Grant and AM-ETHOS Duke-NUS MSRF Grant.

#7949 : Initial assessment and treatment of refugees in the Mediterranean Sea - A secondary data analysis concerning the initial assessment and treatment of 2656 refugees rescued from distress at sea in support of the EUNAVFOR MED relief mission of the EU.

Preferred format : Oral presentation

Authors:

Martin Kulla (1), Florent Josse (1), Bjoern Hossfeld (1), Lorenz Lampl (2), Helm Matthias (3)

1. Anesthesiology and Intensive Care Medicine - Section Emergency Medicine, Bundeswehrhospital Ulm, Ulm, GERMANY
2. Anesthesiology and Intensive Care Medicine, Bundeswehrhospital Ulm, Ulm, GERMANY
3. Anesthesiology and Intensive Care Medicine - Section Emergency Medicine, Bundeswehrhospital Ulm, Ulöm, GERMANY

Keywords: Refugee, Asylum seeker, Mediterranean Sea, Triage, initial treatment,

Abstract :

Background

The flow of migrants from Africa/Middle East towards Europe via the Mediterranean has led to the need for an extensive European Union humanitarian support mission (EUNAVFOR MED)[1,2]. Germany is participating in this mission with two Navy vessels. The key medical challenges have included the urgent initial assessment[3,4] and treatment of hundreds of rescued persons in distress at sea per refugee boat. The crew of one of the frigate was staffed with an additional anesthesiologist and an additional surgeon. We analyzed the medical requirements of such rescue missions as well as the potential benefit of various additional monitoring devices in identifying sick refugees within the primary medical assessment process.

Material/Methods

Retrospective analysis of the data collected from May–September 2015 at a German Naval Force frigate within the primary medical assessment and treatment process of refugees rescued from distress at sea. (Ethics Commission University of Ulm, Germany No.:284/15). Descriptive statistics, univariate analysis as well as multivariate analyses were performed.

Results

A total of 2656 refugees had been rescued from 10 refugee boats. 77.1% were male, 0.7% infants, 10.3% children, 88.5% adults and 0.5% elder people. 16.9 % of them were classified as “medical treatment required”. 3.1% needed a treatment in the emergency field hospital. The demographic data as well as the health status were significantly different between the refugee boats.

In addition to the clinical assessment by a physician, PR, CBT and SpO_2 were evaluated. Sick / injured refugees displayed a statistically significant higher PR (114/min vs. 107/min; $p<0.001$) and CBT (37.1°C vs. 36.7°C; $p<0.001$). There was no significant difference in SpO_2-values. The same results were found for the subgroup of patients classified as “treatment at emergency hospital required”. However a much larger difference of the mean PR and CBT (35/min resp. 1.8°C) was found when examining the subgroups of the corresponding refugee boats. A cut-off value of clinical importance could not be found. Predominant diagnoses have been dermatological (55.4%), followed by internal diseases (cardiovascular 22.1%, pulmonary 4.5%, abdominal infection 1.1%) and surgical conditions (trauma 7.6%, orthopedic 4.5%). Infrequent conditions were ENT / OMS (1.8%), ophthalmological (1.8%) and gynecological problems (1.1%). One child was given birth on board the frigate. None of the refugees classified as “healthy” within the primary assessment process changed to “medical treatment required” during further observation.

Conclusions

Most of the refugees were male adults, and approximately 1/6 of them received initial care. 1/5 of them needed treatment at an improvised emergency field hospital. Aggravated preexisting conditions due to lack of hygiene or violence are the main causes. The initial assessment of people in distress at sea has proven effective if an experienced physician carries it out. PR, SPO2, and CBT were not suitable for distinguishing between healthy and sick / injured people.

References

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#7950 : A parody- Anterior shoulder dislocation

Preferred format : ePoster

Authors:

Asif Mushtaq (1), Julian Webb (2), Akhtar Munazah (3)

1. Speciality Doctor Emergency Medicine/ MRCS, East Surrey hospital, Redhill, UK
2. Emergency Medicine, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK
3. Speciality doctor/Research lead, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK

Keywords: Dislocation, pain, Reduction

Abstract :

Acute shoulder dislocations are a common clinical correndrum/ presentations in our emergency departments worldwide. Statistics show that shoulder joint dislocations are 90% common with acute anterior shoulder diclocations accounting for 50% of cases. In our busy emergency departments it is important that we use a simple,reliable, less traumatic and time modulated procedure. Over decades we have seen various methods of anterior shoulder reduction procedures being implemented, which have been modified later as pain and time managemnt have always been an issue.

We have found a relaible and modified method of anterior shoulder reduction. Our first author implemented this technique initially with our support. it involves traction parallel to body (either sitting or lying down position) with one hand and manipulation in affected axilla of humeral head into the glenoid cavity with other hand which leads to successfull repositioning of shoulder if adequate analgesia and muscle relaxtion have been achieved. The process is completed by internal rotation and placing a broad arm sling on the reduced shoulder.

Twenty (20)patients with acute anterior shoulder dislocations were evaluated between Januaury2014 till March 2016 at East Surrey hospital in United Kingdom . The patients were evaluated for the effectiveness of the procedure in achieving reduction, duration of reduction attempt and post procedural complications. The method was not compared with any other method. However the exclusion criteria were polytrauma and fracture dislocations.

Our results wre quite encouraging as eighteen (18) out of twenty(20) patients achieved successfull redcution through this procedure in five minutes of attempt. However in two patients it was not successfull. There were no reported complications.

This method is in its initial stages and needs more research and time . it is a small non-comparative study ,however we feel it has paved a new way ahead.

#7951 : Improving multidisciplinary team meetings in Geriatric Emergency Medicine

Preferred format : ePoster

Authors:

Sonal Kumar (1), Thomas Morris (1), Amina Kaval (1), Salsabila Madi (1), Abdul Matin (1), Mary Ren (1), Sarah Turpin (2)

1. FY2, University Hospitals of Leicester, Leicester, UK
2. Clinical Fellow in Geriatric Emergency Medicine, University Hospitals of Leicester, Leicester, UK

Keywords: Multidisciplinary, meeting, efficiency, quality improvement, geriatric emergency medicine

Abstract :

Introduction

Multidisciplinary team (MDT) communication is key to providing comprehensive geriatric assessment. Frail older people attend emergency departments with increased frequency and have higher conversion rates than younger people. Effective MDT working within the ED area as part of a collaborative apporach with ED physicians and nursing staff, "The Emergency Frailty Unit" has been shown to reduce conversion rates and reduce readmission/reattendance rates in patients aged over 80. Leicester's Emergency Frailty Unit (EFU) aims to deliver two brief MDT meetings per day to aid communication and efficient patient assessment and management. Historical meeting attendance rates were variable, which negatively impacted on the efficiency of communication between team members and was felt to slow down patient flow through the unit and main department . A QI project was designed to optimise the frequency and attendance at meetings, aiming to improve communication and reduce variability.

Methods

Quality improvement methodology was used (PDSA cycles). Baseline data collection was continuous; during this period including the number of handovers per day, attendance of MDT members and length of meeting. Two planned interventions occurred:

1. MDT meeting rates and attendance was then published, alongside an email explaining the rationale for the project (intervention 1).
2. All team members were all encouraged to take shared ownership and initiation of the MDT meetings (Intervention 2).

Results

Both interventions resulted in a measurable improvement in the frequency and attendance of MDT meetings.

· Occurrence of an MDT on any given day improved from 25% to 100%.

· Proportion of MDT present during a meeting improved from 25% to 70%

· Length of meetings decreased from 88.7 seconds to 79.1 seconds per patient

Key Conclusions

Using established QI methodology, this project has identified that the frequency and attendance of rapid MDT meetings in an emergency medicine setting can be improved with no adverse impact on the duration of the meeting.

#7952 : Flail chest, a rare complication of cardiopulmonary resuscitation

Preferred format : Oral presentation

Authors:

Adnan Yamanoglu (1), Ozan Sahin (1), Sumeyye Cakmak (1), Neslihan Saclı Bozkurt (1), Ozgur Sogut (1)

1. Emergency Medicine, Haseki Education and Research Hospital, Istanbul, TURKEY

Keywords: flail chest, cardiopulmonary resuscitation, serial rib fracture

Abstract :

Introduction: Flail chest is an injury that often follows blunt chest trauma. It results when each of three or more ribs is broken at two separate sites and moves in a floating manner, independent of other chest regions. It can also occur when the ribs are broken proximally and there is simultaneous disarticulation of the costochondral cartilages distally. Flail chest is diagnosed by observing the paradoxical motion of the affected region on physical examination. Flail chest is more common after high-energy traffic accidents and blunt trauma, such as falls from a height. Flail chest complicates 5~6% of patients surviving cardiopulmonary resuscitation (CPR), although the duration of hospital stay is not significantly affected by flail chest complicating CPR.

Here, we report a male patient suffering from flail chest following the return of spontaneous circulation after CPR.

Case report: A 50-year-old man had been admitted to a secondary healthcare centre with fainting, cold sweats, and chest pain. He subsequently developed cardiopulmonary arrest and regained spontaneous circulation after CPR, defibrillation, and tracheal intubation. He was then transferred to our institution. During transport, he suffered another cardiac arrest, but spontaneous circulation was successfully re-established. On admission he had a blood pressure of 100/60 mmHg, peak heart rate of 122/min, and body temperature of 36°C. An ECG taken in the emergency department revealed ST segment elevation in leads V2, V3, and aVF. Based on these findings, the patient was diagnosed with an acute inferior myocardial infarction and preparations were made for urgent coronary angiography. At this time, paradoxical chest wall movements were noted and a video recording of them was made. CT of the chest showed multiple rib fractures in the left hemithorax. Based on the physical examination and radiological studies, the patient was considered to have a left-sided unilateral flail chest, probably secondary to blunt chest trauma during CPR.

Conclusion: In this case, repeat CPR was performed while travelling on ambulance. During transport, it can be difficult to perform CPR with chest compressions directed to the correct anatomic site, and chest compressions may be applied more deeply than needed. Therefore, we attributed the flail chest to the performance of ambulance CPR. In such situations, it may be useful to use mechanical CPR devices to apply chest compressions to the correct, fixed anatomic site. We believe that using mechanical CPR devices for ambulatory CPR procedures may prevent the rare complication of CPR-induced flail chest.

#7953 : Relationship between professional background and prescription behavior of low molecular weight heparin's

Preferred format : Oral presentation

Authors:

Tom Schmitz (1), Lien Mestdagh (2), Annelies Vandewege (1), Ives Hubloue (1)

1. Emergency Departement, UZBrussel, Brussel, BELGIUM
2. Emergency Departement, UZbrussel, Brussel, BELGIUM

Keywords: LMWH, VTE, Trauma Care, Guidelines, Clinical decision

Abstract :

INTRODUCTION

Not prescribing LMWH for patients with lower leg immobilization (LLI) and at risk for venous thromboembolic events (VTE) can be life-threatening. The basic speciality of the prescriber influences his or her behaviour when prescribing medication. For crucial medication as VTE profylaxis it is necessary to know the level of this influence. The actual incidence of VTE in patients with LLI is estimated between 5 - 39%.

METHODS

Physicians working in EDs in Belgium were asked about their prescribing behavior and the influence of their professional background on this behavior. The data was gathered using an online questionnaire. Approval was obtained from the ethical committee.

RESULTS

75 questionnaires were completed. These physicians, 32% residents and 65.3% attendings, had different backgrounds: surgery (21,3%), internal medecine (8%), anesthesiology (9,3%), emergency medecine (54,7%). Information of 32 hospitals was collected from which 2 were university teaching hospitals (UH). The most (65) of the inclusions came from hospitals (86,7%) where Dutch was the common language. 76% of the response originated from non-university hospitals (NUH), in which 21% of the responders were residents. In the UH the percentage of residents was 72%, from which 78% came from the emergency medecine program. For the NUH the number of residents from the emergency medicine program was 47%. Of the total number of attendings, 52% were emergency medecine physicians and working in general in NUH (93%).

44% would always prescribe LMWH in patients with LLI. This would varies among specialties: surgeons 75%, emergency physicians 29,2%, internal medecine 16,7%, anesthesiologists 71,4%.

96% agree that treatment with LMWH should end with removal of LLI and 38% are prescribing LMWH for the entire duration of treatment.

CONCLUSION

The difference seen between surgeons, anesthesiologists and internal medicine physicians in prescribing behavior was expected but the low prescription rate for the emergency physicians identifies a clear point of focus for education and training. We noticed a higher concentration of attendings in NUH and in those centers guidelines were more commonly available. This difference is possibly created by the young status of the emergency medicine program in Belgium and the fact that there is a selection bias. Only 2 hospitals were university teaching hospitals.

Based on these results, we can conclude that a lot of respondents aren’t familiar with the use of LMWH in the ED even if guidelines are available.

Further research is planned based on these results and an international multi-center study is planned to follow this national enquiry.

#7954 : Positive or negative? that is the question

Preferred format : ePoster

Authors:

Carmen Rodriguez (1), Karina Valdez (1)

1. Emergency deparment, Hospital Son Espases, palma de mallorca, SPAIN

Keywords: Allen's test, radial artery

Abstract :

The Allen test was described in 1929 by Dr. Allen, whose original description was used in the diagnosis of thromboangiitis obliterans. With the advent of radial artery cannulation and other techniques, physicians are reevaluating their method of assessing an adequate radial flow and although it has limitations (inadequate patient cooperation-unconsciousness-overextension of the wrist). It is a simple and non-invasive test, and recommended by many authors before arterial cannulation. Evaluating the patency of collateral arteries in the hand via the ulnopalmar arches is of the utmost importance before contemplating invasive transradial approaches or radial artery harvesting. 87 years after Allen´s description of the test, it continues to be one of the most common tests performed.

Many tests in medicine are reported as either positive or negative, and generally, positive indicates abnormal. Curiously, in his original description, Dr. Allen shows how to perform the test but does define a positive or negative result nor did he give a time frame for the appearance of maximal blushing.

A search is performed with the term "Allen's test " and 169 items are obtained, of which 22 are clinical trial and Review. In this, Allen´s test appear as positive or negative to describe the normality or abnormality interchangeably, which generates confusion. Reviewing different articles and documents dating back to 1929 we find that a positive test means normal or abnormal in other regardless of the time. In this same period we also find items that simply describe it as normal or abnormal in a similar proportion to previous, regardless of the time. In 1980, a letter was published by Peters KR and Chapin JW in Anesthesiology, where they denounce the confusion created by describing if the test is pathological or not in that way.

However, 36 years after, we continue with the same situation. In recent years, with the use of the radial artery as an alternative to the femoral artery catheterization, many studies have been published using the Allen test to assess the safety of the radial artery use in which positive and negative means normal or abnormal indistinctly. In 2014, the RADAR trial, compared the best medical treatment versus best medical treatment plus renal artery stenting, and they used the negative Allen test to rule out, and in which a negative test result is abnormal is questioned. In this study, a negative Allen’s test indicates abnormality.

As we continue without unification of criteria, considered more appropriate to describe the test as normal or abnormal allen to avoid confusion as it has been done with other tests, such as Babinsky increasingly more often described as flexor or extensor.

#7955 : Socioeconomic and demographic determinants of emergency departments inappropriate use : findings from a National Survey in France.

Preferred format : Oral presentation

Authors:

Diane Naouri (1), Guillaume Ranchon (2), CEQ group SFMU (3), Carlos El Khoury (4), Youri Yordanov (1)

1. Services des Urgences, Hôpital Saint Antoine, Paris, FRANCE
2. Services des Urgences, Hôpital Privé de l'Est Lyonnais, Saint Priest, FRANCE
3. CEQ group, SFMU, Paris, FRANCE
4. Services des Urgences, Hôpital Lucien Hussel, Vienne, FRANCE

Keywords: Emergency medicine, Health services research, Health economics

Abstract :

INTRODUCTION. The number of emergency department (ED) visits is constantly rising. The proportion of inappropriate visits was described to be up to 10% to 30% of ED total visits. Inappropriate use causes a surge on health care costs and increase the risk of ED overcrowding. Overcrowding is known to be associated with a higher burden of work among emergency physicians and most importantly it is associated to an increased morbi-mortality and increased frequency of medical errors. The aim of this study was to explore socioeconomic and demographic determinants of emergency departments inappropriate use based on the results of a national survey in France.

METHOD. The French Emergency Survey is a nationwide cross-sectional survey with a two-levels design, aiming to portray hospital-based emergency care in France by describing ED organization and patients. Data were collected on the June 11th 2013, simultaneously in all adult or pediatric EDs in France. All patients visiting the ED on that date were included. Data collected included ED level questions, pertaining to the organization of the participating emergency department, and patients level questions allowing to collect individual's characteristics and details of care management. In total, the French Emergency Survey included 48,711 patients questionnaires and 734 EDs questionnaires. In our study we focused on adult patients (>15 years). Appropriateness of the ED visit was assessed by the caring physician based on a Likert scale (0 being not appropriate to 10 being appropriate). We considered all visits with a score lower than 4 as being inappropriate. Descriptive statistics and logistic regression were performed to examine ED inappropriate use determinants.

RESULTS. Among the 30,675 patients of our sample, 24% (n=XX) of the visits were considered as inappropriate use. Being a woman (*AOR=1.15; 95CI%=1.08-1.22*), not having aprivate complementary health coverage (*AOR=1.31 ; 95CI%=1.17-1.46*), universal suplementary health coverage (*AOR=1.16 ; 95CI%=1.05-1.29*), homelessness (*AOR=1.86 ; 95CI%=1.33-2.61*) and symptoms being several days old (*AOR=1.67 ; 95CI%=1.57-1.78*) were associated with a higher likelihood of inappropriate use. On the other hand, high level of education (*AOR=0.86 ; 95CI%=0.79-0.93*), trauma (*AOR=0.65 ; 95CI%=0.61-0.69),* having a general practitioner (*AOR=0.82 ; 95CI%=0.74-0.92*), being addressed by a doctor (*AOR=0.56 ; 95CI%=0.49-0.63*) and intermediate (*AOR=0.88 ; 95CI%=0.78-0.98*) or high (*AOR=0.91 ; 95CI%=0.86-0.96*) medical densities were associated with a lower likelihood of inappropriate use.

DISCUSSION. Our results underline that inappropriate use of ED is associated with some socioeconomic and demographic characteristics. Socially vulnerable populations and areas with a low medical density had higher rates of inappropriate use. This can make us question the concept of appropriateness, as these populations seem to have few other choices than referring to the ED (lack of healthcare coverage of lack of physicians). This study could help formulate public policies to improve the use of ambulatory care, especially for the most vulnerable people, and thus reduce the inappropriate use of ED.

#7956 : Evaluation of the emergency Echocardiography services in a middle east tertiary hospital, review of an audit.

Preferred format : ePoster

Authors:

Ramy Abdelkader (1), sherif Helmy (2)

1. Emergency, HMC, doha, QATAR
2. Echocardiography departmet, HMC, doha, QATAR

Keywords: emergency, echocardiography, tertiary hospital

Abstract :

Background:

In HGH, the non-invasive cardiology department present an emergency echocardiography service which is available 24 hours a day. The aim of this service is to early diagnose and manage any cardiac emergency within the trauma, emergency, ICUs and inpatient departments. Our study aims were to evaluate demand for the service, participation, indications, echocardiography outcomes, and its effect on patient management. [(1)]

Aim of the study

Evaluate number of echocardiography studies requested by each department and their indication.

Assess the findings and impact of the Echocardiography study done on patient management.

Adherence to American society of echocardiography protocol. [(2)]

Methods:

Data from request forms, echocardiography reports and patient's files were retrospectively analyzed on management of 262 consecutive patients (1-26 October 2015) for indication, findings, final diagnosis and ejection fraction in addition to impact on management. [(3)]

Results

Two hundred and sexty two files have been reviewed with 190 males (73%) compared to 72 females (27%).age group between 45 and 75 represented more than 50% of the cases. Of the 36 nationalities included in the study ,25% of cases were Qatari followed by 16% Indians.47% were inpatient where 36% of patients were Critical care and ICU cases while the rest are ED cases.

The indication in 71% of the cases was Left Ventricular assessment, where 59% of the scanning studies were normal and the ejection fraction of 199 patients (75%) was between 50-55% i.e. Normal ejection fraction. The echocardiography scanning done affected the management in 56% of patients.

Conclusion:

More than 50% of the echocardiography study done were normal and affected the management of 56% of patients only, so decreasing unnecessary requests will decrease time of request and burn out of echocardiographers.

This can be done through training of ED and ICU doctors on the bed side echo machines I addition to having guidelines on indications of echocardiography which is the second part of our project.

Refrences:

1- van Heur et al. Evaluation of an open access echocardiography service in the Netherlands: a mixed methods study of indications, outcomes, patient management and trends BMC Health Services Research 2010, 10:37

2-Pamela S. Douglas et al., Appropriateness Criteria for Transthoracic and Transesophageal Echocardiography, J Am Coll Cardiol. 2007;50(2):187-204

3-Jeyaseelan S, Goudie B, Pringle S, Donnan T, Sullivan F, Struthers A: A critical re-appraisal of different ways of selecting ambulatory patients with suspected heart failure for echocardiography. Eur J Heart Fail 2007, 9:55-61

#7957 : Prevalence of Ambulatory Care Sensitive Conditions in the Emergency Department

Preferred format : Oral presentation

Authors:

Johann Frick (1), Anna Slagman (1), Julia Searle (1), Martin Möckel (1)

1. Department of Emergency and Acute Medicine (CVK, CCM), Charité - Universitätsmedizin Berlin, Berlin, GERMANY

Keywords: ACSC, Emergency Department

Abstract :

Background
Crowding is a challenge for Emergency Departments (ED´s) caused by increasing case numbers. One approach to explore this tendency is the concept of Ambulatory Care Sensitive Conditions (ACSC´s). This means that hospitalizations related to ACSC´s (e.g. chronic diseases) could be prevented by an effective and early treatment in primary care.

Objective
The objective was to examine the prevalence of ACSC´s in the ED.

Methods
We analyzed routine data from the hospital information system of 34,444 patients in two ED´s at the Charité - Universitätsmedizin Berlin for the period between February 2009 and February 2010. We included hospitalized patients, who received one of 19 hospital main diagnoses according to the International Classification of Diseases (ICD-10). The ICD-Codes are used by the National Health Service to describe ACSC´s. In addition we analyzed the hospital main diagnoses of hospitalized patients with the first diagnoses of patients in the ED.

Results
In total 2,962 of 13,536 (21.9%) hospitalized patients were identified with ACSC´s in their main hospital diagnoses (median age 68 years, IQR 57-76; female 43%). The five most common ACSC´s were angina pectoris (6.6%), convulsions and epilepsy (3.4%), influenza and pneumonia (3.0%), congestive heart failure (2.8%) and hypertension (2.1%). The cumulative frequency of these five diagnoses among hospitalized patients with ACSC´s (n=2,962) was 81%.
The in-hospital mortality for all patients with ACSC´s was lower in comparison to all inpatients (3% vs. 4.7%), but in detail the mortality rates varied among ACSC related diagnoses (e.g. angina pectoris 0.3%; influenza and pneumonia 9.2%). Comparable results could be found in the utilization of intensive care beds, which happened less often in patients with ACSC´s in comparison to all inpatients (14.8% vs. 18.2%). In similarity to inpatients 4,266 of 20,797 (20.5%) outpatients were identified with ACSC´s (median age 50 years, IQR 34-69; female 53.3%). The five most common ACSC´s were hypertension (4.1%), dehydration and gastroenteritis (3.5%), ear, nose and throat infections (2.8%), angina pectoris (2.7%), convulsions and epilepsy (2.0%). The cumulative frequency of these five diagnoses among outpatients with ACSC´s (n=4,266) was 74.4%.
Among patients with ACSC´s in their first ED diagnoses (n=7,090), the main causes of hospitalization (n=2,824) were angina pectoris (21.3%), epilepsy (10.2%) and congestive heart failure (6.4%).

Conclusion
Every fifth hospitalized patient received a hospital main diagnoses, which was related to ACSC´s. Most of them consisted of five ACSC´s. Although not every hospitalization can be prevented, the results suggest that a more effective primary care could reduce the case number in ED´s. In similarity to inpatients 20% of the treated outpatients received ICD-codes related to ACSC´s. Outpatients deviate from inpatients in diagnoses, age and gender. Improving primary care could disburden ED´s.

#7958 : Cost of delivering intravenous opioid analgesia in emergency departments throughout the United States

Preferred format : Oral presentation

Authors:

John House (1), Karen DiDonato (2), Pamela Palmer (3)

1. Statistics, Premier Database, Inc., Charlotte, USA
2. Medical Affairs, AcelRx Pharmaceuticals, Burlingame, USA
3. Anesthesiology, AcelRx Pharmaceuticals, Redwood City, USA

Keywords: intravenous, opioid, costs, trauma, emergency department, pain management

Abstract :

OBJECTIVES

The majority of Emergency Department (ED) patients require treatment for painful medical conditions or injuries. While IV opioids have been utilized for decades to rapidly treat moderate-to-severe acute pain in the ED, very little data exists regarding the costs of administering a typical dose of IV opioid in this setting. This study analyzed the current costs to administer a single dose of commonly utilized IV opioids in EDs throughout the United States.

METHODS

Descriptive analyses using the Premier database (2013-2014) of > 600 US hospital EDs were conducted on the cost of starting an IV and delivering an initial dose of an IV opioid in EDs. Average costs of each component were aggregated for total costs. Direct acquisition and indirect cost (labor, pharmacy, etc.) were included.

RESULTS

Over 24 months, 7,327,299 patients received IV opioids in 614 EDs in the US (approximately one-tenth of EDs in the US). Of these patients, 58% were not admitted to the hospital. Morphine (56%), hydromorphone (45%) and fentanyl (25%) were the most frequently administered IV opioids. Average [median; interquartile range] costs include initiating an IV ($62 [$62; $60-66]), IV catheter ($4 [$3; $2-3]), infusion pump tubing ($15 [$18; $8-21]), infusion pump to maintain IV patency ($37 [$26; $23-64]), 250 mL saline bag ($15 [$13; $9-19]), 2% lidocaine for local anesthesia for line placement ($5 [$4; $3-6]) and the cost of a single dose of morphine 5 mg ($6 [$4; $2-7]), hydromorphone 1 mg ($7 [$5; $3-9]) or fentanyl 100 mcg ($7 [$6; $4-10]). Aggregated mean IV opioid total costs per patient for a single standard dose of opioid were $143 (morphine), $144 (hydromorphone) and $145 (fentanyl).

CONCLUSIONS

The cost of setting up an IV line to administer an opioid is substantial. Since the majority of patients receiving IV opioids are discharged from the ED, the ultimate use for this IV line is limited. The development of a rapid-acting, non-invasive analgesic for ED use could be advantageous from both a cost and patient-benefit standpoint.

#7959 : Predictive value of somatosensory and visual evoked potentials in cardiac arrest patients treated with hypothermia

Preferred format : ePoster

Authors:

Seung Pill Choi (1), Jung Hee Wee (1), Jeong Ho Park (1), Chun Song Youn (2), Kyu Nam Park (2)

1. Department of Emergency Medicine, Yeouido St. Mary's Hospital, The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF
2. Department of Emergency Medicine, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF

Keywords: somatosensory evoked potentials, visual evoked potential, cardiac arrest, hypothermia

Abstract :

Purposes: It is not certain if somatosensory (SEPs) and visual evoked potentials (VEPs) can predict neurological outcome of cardiac arrest (CA) patients treated with hypothermia. The aim of this study was to investigate the prognostic value of SEPs and VEPs and whether VEPs would increase the predictive power of SEPs for the patients treated with hypothermia.

Methods: This retrospective cohort study included comatose patients resuscitated from CA and treated with hypothermia between March 2007 and July 2015. SEPs and VEPs were recorded during hypothermia and after rewarming in these patients. Neurological outcome was assessed at the time of discharge by the Cerebral Performance Category (CPC) Scale.

Results: One hundred fifteen patients were included. A total of 175 SEPs and 150 VEPs were performed. Five SEPs during hypothermia and nine SEPs after rewarming were excluded from outcome prediction by SEPs due to N20 indeterminable with technical error. Using 80 SEPs and 85 VEPs during hypothermia, absent SEPs yielded a sensitivity of 58% and a specificity of 100% for poor outcome (CPC 3-5) and absent VEPs predicted poor outcome with a sensitivity of 44% and a specificity of 96%. Combining SEPs and VEPs had a higher predictive power than either alone (an accuracy of 72% for SEPs and 61% for VEPs vs. 80% for combination). After rewarming, absent SEPs and absent VEPs predicted poor neurological outcome with a specificity of 100%. When SEPs and VEPs were combined, VEPs increased the predictive power of SEPs alone slightly. Although one patient with absent VEP during hypothermia had a good neurological outcome, none of the patients with good neurological outcome had an absent VEP in the normothermic period.

Conclusion: Absent SEPs and absent VEPs predicted poor neurological outcome with high specificity during hypothermia as well as in normothermia. VEPs could increase the predictive power of SEPs during both periods for the patients treated with hypothermia.

#7960 : Disaster Training Needs and Expectations among Turkish Emergency Medicine Physicians – a National Survey

Preferred format : Oral presentation

Authors:

Erkan Gunay, MD MPH (1), Murat Ersel, MD PhD (2), Justin A Yax, DO DTMH (3), Kerim Car, MD (4), Gunnur Karakurt, PhD LMFT (5), Johnathan Sheele, MD MPH MHS (3), Scott H Frank, MD MS (6)

1. Emergency Medicine, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, TURKEY
2. Emergency Medicine, Ege University, Izmir, TURKEY
3. Emergency Medicine, Case Western Reserve University, Cleveland, USA
4. Emergency Medicine, Menemen State Hospital, İzmir, TURKEY
5. Psychiatry, Case Western Reserve University, Cleveland, USA
6. Family Medicine, Case Western Reserve University, Cleveland, USA

Keywords: disaster, emergency preparedness

Abstract :

Natural disasters, especially earthquakes, landslides and floods are the most frequent natural disasters in Turkey. In addition, the Turkish people have been dealing with terrorist related events since the beginning of the 1980’s compounding their need for disaster preparedness. Residency trained emergency physicians have played important roles in the management of past disasters in Turkey, and Disaster Medicine is an important area of research for the country to improve future disaster management and preparedness efforts. The main purpose of this study is to understand the expectations of Turkish attending emergency physicians for Disaster Medicine training programs and to evaluate their residency training in adequacy of Disaster Medicine topics.

A study questionnaire was administered by the research team and an online survey tool was used for survey administration after receiving Institutional Review Board approval. A total of 937 emergency physicians were contacted to participate the study using the most recent database of emergency medicine physicians in the Emergency Medicine Association of Turkey.

There were 191 survey responses (20.4% response rate). Most participants (68.1%) were from an academic institution and 69.2% had practiced as an attending for 5 years or less. Mass immigration, refugee problems and War/Terror attacks were considered higher risk topics for the country by the participants. A majority (94.8%) of the participants agreed that Disaster Medicine trainings should be given during residency trainings. Regular drills, exercises, and weekly/monthly trainings were the most preferred educational modalities. A high percentage (84.8%) of respondents declared that they would be interested in advanced training in Disaster Medicine. This was higher for those who have worked less than five years as an attending. Academic residency programs were not considered adequate for various Disaster Medicine topics.

Disaster medicine and emergency preparedness shown to be crucial for Turkey with increased conflicts around its borders, and terror/war attacks within the country. This study demonstrated that residency trained emergency physicians especially those who work less than five years are interested in getting advanced training in disaster medicine and emergency preparedness. On the contrary UH and TRH EM residency programs were evaluated as not adequate for various related topics. Current residency training programs should be improved in order to fulfill these interests within the specialty. Regular drills and exercises weekly/monthly regular training programs are the preferred training methods and participants declared these trainings should be organized by Ministry of Health in collaboration with all of the responsible groups. Earthquakes are considered highest risk for facility level risk perception but additional research is needed to understand this apprehension including the structural preparedness of the healthcare facilities.

These results can be used as first step to understand the needs of Turkish EM physicians about the implementation of disaster medicine training programs. Future academic trainings can be developed with the guidance of these results in order to increase disaster preparedness levels of healthcare workers.

Emily Ciliacus

#7961 : Relivopan for procedural pain management in children

Preferred format : Oral presentation

Authors:

Emily Ciliacus (1), Stacey Mans (2), Lisette Mignot (2)

1. Emergency department, Maxima medisch centrum Veldhoven, Veldhoven, THE NETHERLANDS
2. Emergency department, Maxima Medisch Centrum Veldhoven, Veldhoven, THE NETHERLANDS

Keywords: Pediatric, children, trauma, anxiety, pain relief, relivopan, entonox, Nitrous Oxide

Abstract :

Aim:

The purpose of this study is to assess the efficiency of Relivopan for procedural pain relief in children (3-17y) in the emergency department.

Introduction:

Children are a vulnerable segment of the patient population because they are less able to rationalize pain, for this it can be difficult to cope with pain. Adequate pain relief and prevention is important. [1]

Relivopan can be used for anxiety and short-term pain relief during a range of procedures. It is an equimolar mixture of nitrous oxide and oxygen (50/50%).[2]

Methods:

Forty-three children were included between July 24th 2015 and April 23th 2016.* Pain scores were obtained using the Wong-Baker faces rating scale or the NRS before and after the procedure. The FLACC scale was used during procedures.

Results:

Forty-four children with a mean age of 9y and 6 months received Relivopan for short procedures e.g. facture reduction (n=24), suturing wounds (n=6), joint reposition (n=8) and other procedures (n=6). 66% of the children received pain medication a priori; paracetamol (n=10), paracetamol+NSAID (n=10), paracetamol+opioid (n=3), opioid (n=4), paracetamol+NSAID+opioid (n=2).

In 93% the introduction of Relivopan was successful. In total 86% of the procedures succeeded in the emergency department. 40% of the children experienced no to mild pain (FLACC 1-3) and 40% moderate pain (FLACC 4-6). Severe pain (FLACC 7-10) was reported in 2 cases. In 6 cases (15%) the FLACC score was not reported, but the experience of the child was written down by the nurse after the procedure. Total amnesia for the procedure occurred in 54%. Mild side effects like bad dreams occurred in 3 cases and resolved rapidly without intervention.

Conclusion:

Relivopan seems very helpful and safe in the emergency department for procedural anxiety reduction and mild analgesia without heavy sedation or major side effects. The majority of children experienced no or little pain. Possibly a combination of Relivopan and short term analgesia such as intranasal fentanyl can diminish pain even more.

* More patients will be included in the following months.

(1) Manegement of pain in childhood. J. Emily Harrop. Arch Dis Educ Pract Ed 2007.

(2) Manipulation and reduction of paediatric fractures of the distal radius and forearm using intranasal diamorphine and 50% oxygen and nitrous oxide in the emergency department. T. Kurien et al.

#7962 : Disaster Preparedness and Emergency Management within Turkish Healthcare System

Preferred format : ePoster

Authors:

Erkan Gunay, MD MPH (1)

1. Emergency Medicine, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, TURKEY

Keywords: disaster preparedness. emergency management, healthcare system

Abstract :

Turkey is facing regular natural and man-made disasters because of its geological and geographical position. Earthquakes, landslides and floods are the most frequent natural disasters. In addition to these Turkey had terrorism problems and lost more than 35000 people to terrorist events since 1980s. Since the beginning of Syrian civil war in 2011 Turkey experienced an increased number of terrorist bombings, including the deadliest attack in its history at the capital on October 2015, with more than 100 casualties. This paper aims to describe disaster management and emergency preparedness within healthcare system of Turkey and review recent mass casualty events.

Disaster management policies in Turkey have developed following major disasters and focuses mainly on response and recovery. Disaster and Emergency Management Authority has been developed after 1999 Golcuk earthquake and currently has 81 provincial branches across Turkey and coordinates all emergency response and recovery efforts during disasters. In addition, Ministry of Health has its own disaster and emergency response directorates and has multiple medical management and training responsibilities. National Emergency Response System is working under Ministry of Health and responsible for medical care during emergency situations and disasters. National Medical Rescue Team is responsible for on-site medical management and rescue efforts during disasters also a part of Ministry of Health. In addition to these government organizations local municipalities have their own emergency response centers.

Major shortages within healthcare system for disaster preparedness and management were described as lack of investment on building infrastructure and deficiency of preparedness levels of the healthcare workers.

In order to improve disaster readiness capabilities of the hospitals Ministry of Health provided hospital disaster plan templates and materials for healthcare facilities by the end of 2015. Hospital administrations are required to ensure the safety of the facilities according to this plan and improve resiliency to all hazards. In addition to these plans major investments were planned for improving healthcare facility infrastructures.

The results of the studies that investigated disaster preparedness levels among Turkish healthcare workers revealed that disaster preparedness levels are less than desired and lack of training was an important anxiety factor for healthcare workers at a possible disaster response involvement. Increased number of terror related incidents since 2013 emphasized the importance of a developed all hazards approach for healthcare systems and adequate training for healthcare workers.

In order to improve healthcare system readiness number of issues should be addressed. Implementation of new disaster plan templates within hospitals should be investigated. Quality and practicality of hospital disaster plans and readiness levels of the healthcare facilities and their workers need further research. National disaster plan should be revised with an all hazards approach addressing healthcare readiness problems including infrastructure issues and training deficiencies of healthcare workers. Lack of training for disaster preparedness within healthcare professionals is a major problem. This may be addressed by creating advanced disaster medicine programs in order to improve scientific developments and increase disaster preparedness levels among healthcare workers.

#7963 : Use of external cooling system with hazmat personal protective equipment to increase operational time of Hospital Hazmat Responders

Preferred format : ePoster

Authors:

Mark Leong (1)

1. Emergency Medicine, Singapore General Hospital, Singhealth, SINGAPORE, SINGAPORE

Keywords: Personal Protect equipment; Hazmat

Abstract :

It is a physiological challenge to don and work in Hazmat personal protective equipment (PPE) in an equatorial/tropical environment. Our institution's previous hospital decontamination exercises have resulted in responders who have physical/heat exhaustion, and syncopal attacks. Our hypothesis is that having a system or device that cools and lower our core temperature may help reduce the physiological load on the responder, and possibly increase their operational efficiency and productivity.

An external cooling device, used in targeted temperature management of post cardiac arrest patients, was deployed as a tight fitting vest as a pilot trial during our monthly hospital decontamination station training. Physiological parameters are measured and monitored pre and post donning of hazmat PPE. Observations are made on any change in operational effectiveness or degradation for responders with and without the cooling vest. Qualitative feedback was also obtained from those who worked with the vest on.

The result and report of this pilot study will help policy and decision makers decide on whether the expense and other issues related to use of external cooling devices will result in better operability of our hospital hazmat responders

#7964 : Clinical Bedside Teaching – educati□ng our junior colleagues in a busy clinical setting

Preferred format : ePoster

Authors:

Mark Leong (1)

1. Emergency Medicine, Singapore General Hospital, Singhealth, SINGAPORE, SINGAPORE

Keywords: Medical Education; Clinical Teaching; Microskills

Abstract :

This poster reviews the many different techniques/tools which can be adopted and used by clinical faculty in a patient care environment to teach junior physicians in training. The techniques/tools include 1 minute preceptor, SNAPSS, ED STAT, MiPLAN, Aunt Minnie Model, SPIT and others.

The objective of this poster is to put published and commonly use techniques into one single handy resource (when produced as a card) for clinical faculty use as appropriate.

#7965 : Reliability of the FRENCH triage scale

Preferred format : Oral presentation

Authors:

Youri Yordanov (1), Guillaume Ranchon (2), Antoine Duclos (3), Eleonore HERQUELOT (3), CEQ Group SFMU (4), Pierre Taboulet (5), Carlos El Khoury (6)

1. Emergency Département, Hôpital Saint-Antoine, Assistance Publique-Hôpitaux de Paris, ., Paris, FRANCE
2. Emergency Department, Service des Urgences Hôpital Privé de l'Est Lyonnais Saint Priest, Lyon, FRANCE
3. Pôle Information Médicale Evaluation Recherche des Hospices Civils de Lyon - EA 7425 Health Services and Performance Research lab, Université de Lyon, ., Lyon, FRANCE
4. Emergency Department, SFMU, Paris, FRANCE
5. Emergency Department, Hopital ST Louis - Aphp, Paris, FRANCE
6. Emergency Department and RESCUe Network, Lucien Hussel Hospital, EA 7425 Health Services and Performance Research lab, Université de Lyon, ., Vienne, FRANCE

Keywords: Triage, Nurse, Emergency department

Abstract :

Background: In situations where the demand is notably higher than the available resources, the question of rationing quickly arises. Such conditions imply that not all needs will be satisfied immediately. In an emergency department setting the scarceness of resources can have some tragic consequences for patients. We therefore need to be able to allocate health care resources to those who need to be treated immediately, and delay the treatment of those who can safely wait. Initial subjective evaluation by a fosterling nurse, without a triage tool, have low sensititvy and specificity. No universal triage scale is available to assess for patients acuteness. It is therefore important to develop triage systems that are tailored for their users environment, and then properly evaluate them.

Objective: The aim of our study was to measure the inter-rater and intra-rater reliability of the SFMU (French Society of Emergency Medicine) triage scale, better know as the third version of the FRench Emergency Nurses Classification in Hospital scale (FRENCH v3).

Methods: A sample of 16 nurses, working in different emergency settings, from different French cities, were assembled on January 15th 2016. They all received educational material beforehand and attended a 3-hour standardized training session. The FRENCH v3 is a 6 levels triage scale, with a hundred symptoms and modifiers usefull for the triage of pediatric and adult patients. All nurses had to independently assess the same 60 case-scenarios randomly selected among 150 scenarios developed by a panel of experts, based on real-life patients. Inter-rater reliability was evaluated on these 60 case-scenarios. Intra-rater reliability was evaluated by a single nurse, picked at random amoung the original sample two weeks after initial evaluation, and reassessing the same 60 case-scenarios. Inter and intra-rater reliability was measured using a weighted kappa. The numbers of nurses and cases were calculated on the basis of previous versions of FRENCH evaluations. Participants did not receive financial incentives to participate. According to French law, no ethical approval was necessary, but all the participants signed a waiver of consent.

Results: Datas from 15 nurses were usable. One third (n=5) graduated from nursing school in the last 10 years, one third (n=5) between 10 and 20 years the last third more than 20 years ago. The majority of the nurses (73%, n=11) received previous training on triage. All of them (100%, n=15) work in their EDs resuscitation room, and 47% (n=7) work also in pre-hospital emergency medicine. The majority (60%, n=9) only received adult patients, as opposed to adult and pediatric. Inter-rater reliability was substantial [K=0.78 (95% CI: 0.71-0.83)]. Intra-rater reliability was almost perfect [K=0.88 (95% CI: 0.80-0.94)]. When comparing the nurses triage to the experts triage, 47 to 56 cases (78%-93%) were correctly triaged. Agreement did not significantly differ with respect to the nurses experience, previous training or work environment.

Conclusion: Our findings demonstrate that FRENCH v3 is a reliable tool to assess triage case-scenarios, developed based on emergency department patients. This new scale should now be evaluated in a real life setting.

#7966 : Fournier Gangrene.

Preferred format : ePoster

Authors:

Elisa Ruiz Olivares (1), Sonia Ballestín Sorolla. (2), Ana Belén Marín Floría (2), Carola Medina Sainz (3), Begoña Gargallo Planas (3), Silvia Gangutia (3), Pilar Sarasa Claver (3)

1. Emergencies, H. Royo Villanova., Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova, zaragoza, SPAIN
3. Emergencies, H. Royo Villanova, Zaragoza, SPAIN

Keywords: Gangrene, necrotizing, urogenital, morbility.

Abstract :

Flournier gangrene.

Introduction. Fournier’s gangrene disease is a rare but potentially lethal, if not done quikly diagnose and urgent treatment. This is an necrotizing subcutaneous infection by aerobic and anaerobic germs.

Usually originate in the urogenital or anorectal area, depending no de trigger factors, and can spread to the genital area, perineum and previous abdominal wall.

Clinical case. The case of a 40 years old patient who come to emergency room for pain and inflamation in perineal area. In the exploration presents swelling and erythema perianal, no fluctuating. After nine hours of evolution the patient presents septic situation whith extension to scrotal area. It was necesary to make an urgent debridement in a skin and subcutaneous area in scrotal and sacral area and intravenous antibiotic treatment.

Results. We observed that the patient presents the basic pathology as a hypertension, ischemic heart disease and perianal abscess. The patient presenting leukocytosis, hemostasis alteration and high fever.

Conclusions. Fournier gangrene, is a rare disease but has a high morbility and mortalily. Specially in patients whith predisposing factors, so it is very important to make an early diagnosis and an urgent treatment.

#7967 : New forms of hashis consumption.

Preferred format : ePoster

Authors:

Elisa Ruiz Olivares (1), Sonia Sofía Ballestin Sorolla (2), Ana Belén Marín Floría (2), Begoña Gargallo Planas (1), Carola Medina Sainz (2), Silvia Gangutia (2), Pilar Sarasa Claver (2)

1. Emergencies, H. Royo Villanova., Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova, Zaragoza, SPAIN

Keywords: Hashis, tachycardia, nystagmus.

Abstract :

INTRODUCTION:
The hashish is made by extracting the resin of marihuana leaves and flowers. It is more powerful than dry leaves since it contains 10 times more THC. More than 8 million Spaniards say they have consumed sometimes. In the last ten years the consumption in young people in our country has been doubled.

1.CLINICAL CASE:
woman of 15 years, occasional smoker of marijuana, refers palpitaciones and parestesias of 5 hours of evolution, after to have consumed a "Chinese" of marijuana dissolved in yogurt. Physical exploration: Tª: 37.2º, TA: 140/80, pulso.111ppm. Pulmonary auscultation: without alterations. Auscultation cardiac: rythmical noises cardiac to 110ppm. Neurological exploration: reactive average pupils. Complementary tests - analytical sanguineous: CK: 118 (24-173) - ECG to its arrival to urgencies: sinusal tachycardia to 111ppm., with hemibloqueo of right branch and reduction of the ST in the antero-septal face Evolution: The patient receives treatment with diazepam 5mg. After 2 hours the asintomática patient, with ECG of control: sinusal rate to 77ppm., with hemibloqueo of branch dcha and without alterations of repolarización.
2.CLINICAL CASE:
man of 25 years, who refers to have consumed, for 4 hours, hashish in infusion (approximately 5 gr.). For one hour he has been presenting/displaying palpitaciones, sensation of turn of objects, buccal and bad dryness to be general. Physical exploration: Tª: 37.1º, TA: 150/80, pulse 100ppm. Neurological exploration: horizonto-lateral nystagmus (izdo-decho). Complementary tests: - ECG: sinusal tachycardia to 101 ppm. Without alterations of the repolarización. Evolution: The patient is dealt with 5 sueroterapia and Diazepan mg.

CONCLUSIONS:
The hashish consumption is more and more prevalente in young people who experience new forms of administration in search of sensations, finally finish in the Services of Urgencies presenting/displaying more or less habitual symptoms.

#7969 : Lumbar fracture after delirium by cocaine

Preferred format : ePoster

Authors:

Sonia Sofía Ballestin Sorolla (1), Begoña Gargallo Planas (2), Elisa Ruiz Olivares (2), Ana Belén Marín Floría (3), Carola Medina Sainz (1), Pilar Sarasa Claver (1), Silvia Gangutia (1)

1. Emergencies, H. Royo Villanova, Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova., Zaragoza, SPAIN
3. Emergencies, H. Royo Villanova, zaragoza, SPAIN

Keywords: Cocaine, delirium, fracture vertebral.

Abstract :

33-year-old male who comes to the Emergency Department after cocaine use. The patient has suffered a delirium and has believed Superman jumping from the window of the first floor.

The patient referred pain right calcaneum and gait difficulty level.

Exploration is located espinosa of L2 and deformity palpation pain in right heel. Not affecting neurological strength, sensitivity of EEII correctyas without sphincter incontinence.

He is a blood clotting which does not show any alteration and radiological study with LUMBAR RX showing a flattening of the L2 vertebral body fracture of lamina. RX CALCANEOUS: Fracture of calcaneus. With these tests is performed LUMBAR CT: fractured pop of the L2 vertebral body with hundimient of the top cymbal, decrease and displacement of the posterior wall causing a decrease in the spinal canal of 60%. Affects the three pillars with one right lamina fracture line that passes through.

The patient receives treatment analgesic iv and moved to Hospital of higher level for entry into service of neurosurgery. There make you Noms that is reported as fracture outbreak of L2 vertebral body, with major oedema on body vertyebral and invasion of 55% of the spinal canal.

The patient received surgical treatment and is Kyphoplasty L2. Fixation percutaneous in L1 and L3. Placed splint suro-pedial later. Given high is uneventful

#7970 : Toluene is the enemy

Preferred format : ePoster

Authors:

Sonia Sofía Ballestin Sorolla (1), Ana Belén Marín Floría (2), Elisa Ruiz Olivares (3), Begoña Gargallo Planas (3), Carola Medina Sainz (1)

1. Emergencies, H. Royo Villanova, Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova, zaragoza, SPAIN
3. Emergencies, H. Royo Villanova., Zaragoza, SPAIN

Keywords: Toluene, organic dissolvents, loss of conscience

Abstract :

ABSTRACT TEXT:

Organic dissolvents are toxic. The steams that organic dissolvents emit are heavier than the air, this is the reason why the greater concentration will be near the ground. These steams go through cellular membranes, and due to its great solubility in fat, they reach high concentrations in the CNS.

CLINIC CASE:

Man of 50 years brought in mobil UVI because he shows, at his home, episode of loss of conscience, recovered and later disartric and incoherent speech; drunkenness is suspected.

In urgencies service, conscious patient, not oriented in time nor in space, somnolent with stable constants (Pressure 120/80, F.C. 72xmin, Temperature 36.5, O2 Saturation 96%), no enolic odour.

In the neurological exploration it is shown a somnolent patient, a bit disartric with Glasgow (3+4+6) 13/15, without another focality

Complementary tests:

leucocytosis with left deviation; thorax x-ray without alterations; ECG sinusal rate 64x min without repolarization alterations

Evolution:

When the discrepancy between the physical exploration and the first clinical direction has been observed, his wife is interviewed, who confirms that he has been drinking alcohol and inform us that has been also varnishing a furniture with a product, that she is going to look for at home. The varnish is composed by TOLUENE 100:6.

As a result of the new information he is diagnosed of acute Poisoning by Toluene and the treatment begins.

CONCLUSIONS:

Clinical history is always fundamental in the Service of Urgencies.

Always think about the poisonings by dissolvents in situations of affectation of the CNS without clear focality.

#7971 : XXI century nightmare

Preferred format : ePoster

Authors:

Sonia Sofía Ballestin Sorolla (1), Elisa Ruiz Olivares (2), Begoña Gargallo Planas (1), Alicia Baguena García (2), Ana Belén Marín Floría (1), Carola Medina Sainz (1), Silvia Gangutia (1)

1. Emergencies, H. Royo Villanova, Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova., Zaragoza, SPAIN

Keywords: Heroine consume carbon monoxideintoxication, coma.

Abstract :

40 years old patient, she is brought to the Urgencies Service by her relatives because she shows conscience diminution and respiratory difficulty. At her arrival, she is cold, trembly, and non-reactive, with respiratory difficults and Glasgow 10. She has myotic, non-reactive and without photomotor reflection pupils. Central and peripheral cyanosis. She presents a convulsion that yields with rectal Diacepam.
The auscultation cardiac is composed of 100 b.p.m. rhythmic tones without blowings and in the pulmonary auscultation she presents roncus and dispersed sibilants with bibasal crepitants. O2 saturation under 70%. In the electrocardiogram suggestive alterations of isquemia nor alterations in repolarizacion are not observed.
Collaboration is asked to her husband to make the clinical history. He refers that the patient was in one room where there was too much smoke coming from a gasoline burner and that she had also smoked heroine.
Antidotes (flumazenil and naloxone) with transitory improvement of the level of conscience are administered but without total recovery. Cooximetry is made, that shows a carboxihemoglobine level of 32% (normal: 0-1,5%). Metabolic acidosys compensated. She is entered in I.C.U. where the treatment continued with oxygen therapy with FiO2 100%, perfusion of naloxone and bicarbonate.
Later evolution has been favorable, presenting a carboxihemoglobine level of 8.6% after an hour and 0.6% after 6 hours. After 24 hours, the patient is passed to Internal Medicine Unit to continue evolution.
To emphasize the importance of clinical history, in this case the contribution that her relatives gave us, which was the key to diagnose her.

#7972 : New anticoagulants as an alternative to the classical therapy with antivitamin K drugs in atrial fibrillation

Preferred format : ePoster

Authors:

Noelia Ortega Jimenez (1), Elisa Aldea Molina (2), Irune Albistur Lesmes (3), Teresa Pardo Vintanel (2), Pilar Miranda Arto (3), Teresa Fernando Gros (3), Marco Sarrat Torres (3)

1. Emergencies, Hospital MAZ Zaragoza, Zaragoza, SPAIN
2. Emergencies, Hospital Royo Villanova Zaragoza, zaragoza, SPAIN
3. Emergencies, Hospital Royo Villanova Zaragoza, Zaragoza, SPAIN

Keywords: New anticoagulants ,atrial fibrillation

Abstract :

Atrial fibrillation is the most common sustained arrhytmia in adulthood , and the most commonly diagnosed in ambulatory and hospitalized patients. Its presence contributes the formation of thrombus in atrium which can be detached and cause serious thromboembolic complications.

The risk of a brain stroke increases specially in those patients who associate valvular heart disease and after medical , electric or spontaneous cardioversion.

This kind of brain stroke is more severe than others derivated from other pathology , and they are responsible of the majority of mortality and comorbidity associated to AF.

Prophylaxis of arterial thromboembolism is one of the therapeutic goals in AF. Use of anticoagulant therapy reduces the risk of having a brain stroke . The emergence of new anticoagulants as an alternative to the classical therapy with antivitamin K drugs , that improve the quality of life of patients as the don´t need dose adjustment periodically , and decreases the need of frequent controls as well as close monitoring of coagulability rate , is the reason why we decided to start with this study in our Emergency Service (Hospital Royo Villanova , Zaragoza) with the purpose of watching changes in atrial fibrillation management after the introduction of these direct action new anticoagulants .

#7973 : General practice and emergencies room.

Preferred format : ePoster

Authors:

Sonia Ballestín Sorolla. (1), Elisa Ruiz Olivares (2), Teresa De Fernando Gros (3), Inmaculada Callejas Gil (2), Patricia Boned Blas (2), Carola Medina Sainz (4), Ana Belén Marín Floría (1), Pilar Sarasa Claver (4), Silvia Gangutia (4)

1. Emergencies, H. Royo Villanova, zaragoza, SPAIN
2. Emergencies, H. Royo Villanova., Zaragoza, SPAIN
3. Emergencies, H. Royo Villanova., zaragoza, SPAIN
4. Emergencies, H. Royo Villanova, Zaragoza, SPAIN

Keywords: Derivation to emergencies room, quality, costs.

Abstract :

OBJECTIVE:
Diverse studies make reference to the use of the hospital services of urgencies (HSU), based on the users who go to such service without being evaluated previously by a doctor. The objective of the study is to value the accurateness level and the agreement of the derivations to urgencies by other facultative personal.
MATERIAL AND METHODS:
A data collection card for every patient sent to urgencies with its corresponding report of derivation from Primary Attention (PA), specialized attention (SA), Continued Attention Point (CAP), 061, Medical Unit of Emergencies (MUE) and geriatrical residences is elaborated.
In each card the following questions are collected:
1st. Personal antecedents of the patient in the derivation report are indicated.
2nd. Is the medication that the patient takes indicated?
3rd. Is the symptomatology that the patient presents indicated?
4th. Is his/her physical exploration indicated?
5th. Is the diagnosis direction that motivates the derivation of the patient indicated?
And in the same card, once made the clinical history of the patient in urgencies, the criterion of the urgencies facultative is written down, it is valued if the patient could be treated in his/her center of origin and if he/she has needed hospitable entrance.
RESULTS:
- Less of 10% of the patients who go to urgencies do it with report of derivation.
- 66% of the patients did it through the family doctor.
- 14% through the 061.
- 11% were derived by the doctor of geriatrical residence.
- 6% were derived from the CAP.
- 3% were sent by the UME.
Conclusions related to accomplishment of the derivation report:
- 19% do not indicate who is the doctor that derives the patient.
- In 34% of them the information of the symptomatology that the patient shows is not indicated.
- In 44% of the reports the personal antecedents of the patient are not mentioned.
- In 42% of the reports any diagnosis direction is not specified.
- In 50% of them the medication that the patient takes is not mentioned.
- Only in a 41% of the cases the diagnosis direction is concordant with the diagnosis in urgencies.
-Almost the 100% of the patients sent by the MUE require hospitable entrance in relation to the 24% of who that were sent from primary attention.
- **CONCLUSIONS:**
The unnecessary visits to HSU constitute an important problem for the National Health System, with implications in the quality and costs of the attendance.
The use of HSU as substitute of the primary attention and the inadequate derivation made by the professionals becomes in an overload to the hospitable set in damage of the resources for the attention of patients in risk vital situations.
The creation of a Protocol of Adjustment of Hospitable Urgencies agreed with the rest of the health areas can be an effective element in the identification of the hospitable urgencies.

#7974 : A PURPOSE OF A CASE: TOXOPLASMOSIS

Preferred format : ePoster

Authors:

Begoña Gargallo Planas (1), Elisa Ruiz Olivares (1), Pilar Sarasa Claver (1), Ana Belén Marín Floría (2), Sonia Sofía Ballestin Sorolla (1), Elisa Aldea Molina (3)

1. Emergencies, H. Royo Villanova, Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova, zaragoza, SPAIN
3. Emergencies, H. Royo Villanova., Zaragoza, SPAIN

Keywords: Toxoplasmosis, HIV, disorientation, headache.

Abstract :

33 year old patient with a history of diagnosed HIV 10 years ago and has abandoned its retroviral treatment 4 years ago by intolerance. Currently do not follow controls by the infectious service.

Is brought to the emergency room by his family for presenting from a week ago picture of high fever accompanied by symptoms of respiratory infection, cough and dyspnea; with fluctuating disorientation, weakness of limbs, asthenia, anorexia and headaches.

Now concerns have suffered traumatic ciliary right without loss of consciousness or other added symptomatology.

The exploration tendency to sleep and low reactivity without clear foci. Analytically only highlights a discrete anemia with hematocrit of 32% and hemoglobin of 10.6 g/dl.

He is Rx thorax that is no evidence image of condensation.

Apply brain CT reporting as hypodense lesions associated with extensive vasogenic parietooccipital location perilesional edema

left, front left, right and left basal ganglia, frontobasal after administration of

contrast show enhancement in ring, as first possibility of toxoplasmosis given the

clinical context of the patient.

The occipital left along with extensive perilesional edema cause compression and displacement of the

occipital Horn ipsilateral and the left hemisphere associated edema also cause mass effect with

contralateral deviation from the centerline of 6 mm.

Intra or extraaxiales acute hemorrhagic lesions are not seen.

With this diagnosis starts m broad-spectrum antibiotic treatment (Sulfadizina, Pirimetadina and folinic acid).

The patient was admitted to the infectious being given high to his home unit.

#7976 : Emergency department sedation for reduction of hip dislocations by emergency physicians versus non emergency physicians

Preferred format : ePoster

Authors:

Crispijn van den Brand (1), Petra van der Lelie (2), Mischa Veen (1)

1. Emergency Physician, Medical Centre Haaglanden - Bronovo, The Hague, THE NETHERLANDS
2. Emergency Medicine Resident, Medical Centre Haaglanden - Bronovo, The Hague, THE NETHERLANDS

Keywords: procedural sedation, emergency department, hip dislocation, emergency physician

Abstract :

Introduction

The Bronovo Hospital did not employ emergency physicians (EP's) before 2015. Prior to 2015 emergency department (ED) sedations were supervised by the surgical specialties (non-EP's). With the arrival of EP's, sedation in accordance with the CBO-guideline was introduced. We analysed the difference in outcome and occurrence of adverse events during sedation for reduction of dislocated hips by EP's and non-EP's.

Methods

Retrospective review of 45 hip dislocations reduced in the ED in 2015. Twenty-five were supervised by EP's.

Results

Patients in both groups had similar baseline characteristics, except for a difference in ASA classification (ASA 3-4: non-EP's 40% versus EP's 16%). EP's documented fasting status and informed consent in all cases versus respectively 20% and 5% documented by the non-EP's. Analgesia used by EP's was mainly fentanyl (88%), while non-EP's frequently did not document this (80%). EP's preferred propofol (84%) above midazolam (16%) for sedation. Propofol gave a successful reduction in 95% of the patients causing one bradycardia and one case of hypotension. Midazolam gave a successful reduction in 75% with one case of hypotension with desaturation. Non-EP's mainly used diazepam (45%) or midazolam (45%). Diazepam gave a successful reduction in 100% causing one apnoea. Midazolam gave a successful reduction in 55% with two apnoea's. Flumazenil was used twice by non EP's.

Conclusion

Sedation in the ED by EP's and implementation of the CBO guidelines resulted in better documented sedations and avoidance of high risk patients. Non-EP's used diazepam for sedation, which is not recommended for this purpose, although few adverse events occurred. We found preference for the use of propofol, midazolam had a lower overall success rate and higher occurrence of adverse events. This data shows the need for education in procedural sedation and analgesia amongst non-EP's to improve better adherence to the national guideline.

#7977 : Is female gender associated with a delayed diagnosis of acute appendicitis in emergency department?

Preferred format : ePoster

Authors:

Laimonas Miseikis (1), Zilvinas Dambrauskas (2)

1. , MD, senior resident in emergency medicine, Department of Emergency Medicine, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania., Kaunas, LITHUANIA
2. , MD, PhD, Department of Surgery, Hospital of Lithuanian University of Health Sciences, Kaunas, Lithuania., Kaunas, LITHUANIA

Keywords: female, appendicitis, emergency department

Abstract :

Background & Objectives

We hypothesized that sexually active female patients of fertile age, presenting to ED with lower abdominal pain might undergo more additional testing and examination. This potentially could be associated with a delayed diagnosis of acute appendicitis and subsequent surgery, placing these patients at higher risk of perforation, increased morbidity and/or mortality. The aim of the study is to analyze the clinical pathways for female and male patients presenting with acute appendicitis and to explore the examination modalities used in emergency department before surgery.

Methods

We performed a retrospective chart review study at emergency department in tertiary, university-affiliated hospital. Two hundred and seventeen consecutive retrospective records of subjects with the diagnosis of appendicitis as per surgical pathology were reviewed. Patients were divided into two groups, female (study population) and male (control). Inclusion criteria included patients presenting to the ED and positive post-surgical pathological specimen showing appendicitis. We collected the following data: sex, age, time to OR from ED triage, whether CT was done and whether an abdominal and/or pelvic ultrasound was performed, obs-gyno was consulted. Length of hospital stay, whether patient were admitted to the ICU and duration of symptoms before ED presentation were also noted.

Results

Data are obtained. Results under evaluation.

Conclusion

Results could help to discover bottlenecks of diagnostic approach to the diagnosis of appendicitis in female patients with abdominal pain in emergency department and let us create more sufficient clinical diagnostic protocol.

#7978 : Acute pancreatitis induced by cisplatin and etoposide

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Cihan Buyuksutcu (1), Ersen Gunduz (1), Pelin Ata (1), Tuce Duzkel (1), Onur Incealtın (1), Soner Isik (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: cisplatin, etoposide, pancreatitis

Abstract :

Acute pancreatitis is an acute inflammatory process of the pancreas that may involve surrounding tissue and remote organ systems. The disease can range from mild inflammation to severe extensive pancreatic necrosis and multi-organ failure with mortality rates of 20% to 30% or higher. Most cases are mild with a mortality rate<1% and resolve spontaneously with supportive care.

Many drugs are reported to be associated with acute pancreatitis, but they account for only 1.4% to 2.0% of all cases. This report describes a man who developed acute pancreatitis while being treated for lung cancer with the cisplatin and etoposide regimen.

Case Report: A 54-year-old patient presented to the ED with nausea, vomiting, abdominal pain and swelling. In history he had been performed chemotherapy including cisplatin(100 mg) and etoposide (150 mg) before a week. On physical examination, the abdomen was distended and diffuse tenderness which was maximal in the epigastrium and no rebound tenderness was present. Laboratory data on admission showed increased serum levels of amylase (605 U/L; reference value <125 U/L), lipase (1143 U/L; reference value<78 U/L). Serum values of urea, creatinine, AST, ALT, alkaline phosphatase, triglycerides, cholesterol, calcium and bilirubin were normal. Abdominal ultrasound revealed that the head of pancreas was edematous and hypoechoic. The biliary tree was not dilated and no gallstones were seen. He was diagnosed with acute pancreatitis and interned to gastroenterology clinic.

In conclusion we described drug-induced pancreatitis. Despite the low incidence of it, all patients of acute pancreatitis of unknown etiology should be carefully questioned about drugs possibly responsible for the induction of the disease.

#7979 : A diagnostic dilemma- Unknown case of oesophageal pericardial fistula

Preferred format : ePoster

Authors:

Akhtar Munazah (1), Babak Daneshmand (2), Julian Webb (3)

1. Speciality doctor/Research lead, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK
2. Emergency Medicine , East Surrey hospital, Redhill, UK
3. Emergency Medicine, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK

Keywords: Chest pain, dyspnea, cancer

Abstract :

Oesophageal cancer is statistically the eight most common cancer worldwide with increased incidence in men than women. The prognosis is quite poor as most patients present late with advanced disease. Researchers are looking at genes, role of aspirin and photodynamic therapy apart from regular chemotherapy and surgery.

We present a case of a 56years old male patient who attended our emergency department at east surrey hospital with acute episode of chest pain and mild shortness of breath which was relieved with analgesia in the deparment. His pain was retrosternal and did not radiate anywhere but was associated with nausea. Patient had a background history of terminal oesophageal cancer which was stented previously. He also suffered from pancreatic and prostate cancer. His initial observations showed mild tachycardia and low blood pressure which improved with fluids intravenously. He had no signs of respiratory compromise and was afebrile. His systemic examination was baseline with tenderness along the costochondral joints.His arteial blood gas and laboratory results were normal.His chest xry did not show any new abnormality. He was observed in the department and as his pain improved he was discharged with a diagnosis of musculoskeletal pain.

This patient was prioritised later that night into resus as a priority cardiac arrest. He was resuscitated with full life support protoccol despite his known medical condition but he did not survive. Autopsy later on revealed an Oesophageal Pericardial fistula as the primary cause of death despite his terminal cancer.

Oesophageal Pericardial fistula is a rare clinical entity with a very dismal prognosis and is often a diagnostic dilemma. According to litreature review less than fifty(50) cases have been doccumented so far. The clinical triad of symptoms include retrosternal chest pain, shortrness of breath and pyrexia. The commonest predisposing causes are oesophagitis, ulcer, foreign body, tuberculosis,iatrogenic, ingested caustic substances,oesophageal diverticula and oesophageal cancer. It can also occur in patients who have had radiofrequency ablation in atrial fibrillation. The common radiological findings are cardiomegaly, pneumomediastinum,pneumopericardium, hemopneumopericardium and pleural effusion. However it is a life threatening complication and diagnosis is often by radiology, surgery or at autopsy.

#7980 : An Innovative Alternative to Audit Days in the Emergency Department: Serious Incident Learning Initiative (SILI) a study

Preferred format : Oral presentation

Authors:

Karen Rhodes (1), Pallav Bhatnagar (2)

1. Mid Essex Hospital Services NHS Trust, NHS, Chelmsford, UK
2. Mid Essex Hospital Services NHS Trust, none, Chelmsford, UK

Keywords: Education, multidisciplinary, audit, novel, learning, emergency department

Abstract :

Introduction

Audit, or multidisciplinary meetings, are integral to the understanding and dissemination of information gained from review and analysis of adverse clinical incidents. Such meetings are known to be educational, improve the quality of care, minimise litigious cost implications and allow an open forum for interaction of a multidisciplinary team. The hectic nature of the Emergency Department (ED) (Mid Essex Hospitals population coverage of 320 000) does not permit the safe suspension of clinical practice to allow for audit or multidisciplinary meetings. Therefore we devised an innovative and alternative meeting called the 'Serious Incident Learning Initiative' (SILI).

Material and Methods

SILI is two identical, interactive, 30 minute presentations of a chosen, previously investigated, serious incident chaired by an ED consultant, run back to back. The meetings are open to all staff. This optimises the number of staff that can attend without compromising continuous care. We have assessed the practicality of meetings by evaluating the means of attendance in each category (doctors, nurses, administrators and GPs) against the number of staff present on the day between November 2014 and September 2015. A short, anonymous survey was conducted consisting of 5 questions both online and in paper format to maximise responses between February and March 2016. Educational benefit was measured against two factors of beneficial versus non-beneficial and learning outcome versus no learning outcome. Sustainability was measured by a desire to attend further meetings or no desire to attend further meetings. The outcome of the survey was subjected to a paired t test using IBM Statistical Package for the Social Sciences (SPSS version 20). A p value of 0.05 or less at 95% confidence interval was considered statistically significant.

Results:

Of a total of 9 SILI meetings over a period of 10 months, 82% of doctors (n=96/117), 36% of administrators (n=15/42), 34% of nurses (n=122/360) and 25% of GPs (n=2/8) successfully attended the meeting. The overall mean attendance was 44.6% (n=235/527) (inclusive of all permanent and non-permanent staff). The outcome of the survey demonstrated a statistically significant educational benefit of SILI meetings (versus non-educational) (95% CI, $p<0.001$). This was also evident in the sustainability of SILI meetings (versus non-sustainability) (95% CI, $p<0.001$).

Conclusion:

The SILI meeting is an innovative, methodological approach to the morbidity and mortality meeting in a busy ED environment where the accepted standard is not feasible. The regular attendance, attested educational benefit and sustainability demonstrated through this pilot study could serve as a model for any department or speciality seeking an alternative to the audit or multidisciplinary meetings. This model could serve as a platform and be adapted to deliver any other clinical and educational workshops and/or meetings within the busy emergency department.

#7981 : Point of care ultrasound for infective endocarditis

Preferred format : ePoster

Authors:

Talia Walker (1), Julie Slick (1)

1. Emergency Medicine, Louisiana State University Health Sciences Center, New Orleans, USA

Keywords: infective endocarditis, poc ultrasound, modified duke criteria

Abstract :

Infective endocarditis (IE) is a deadly condition that carries a 20-30% mortality rate. It is most often associated with valve repairs, endovascular devices, or intravenous drug use causing damage to native otherwise healthy valves. The modified Duke Criteria has become the standard means of diagnosing this condition, however, the utility of the criteria is limited in the ER setting due to the necessity of blood cultures to improve its sensitivity. The diagnosis of IE is met if patients have 2 major, 1 major + 3 minor, or 5 minor criteria. The 2 major criteria are positive blood cultures and evidence of endocardial involvement. Given that culture results are not available during ED evaluation, bedside ultrasound is instrumental in detecting IE in the ED. Transthoracic echocardiogram is 65-75% sensitive for valve vegetations and 84% sensitive for vegetations >10mm. Vegetation size has been shown to correlate with severity of illness, therefore a timely point of care ultrasound gives the emergency physician a tool to immediately detect those patients at greatest risk of morbidity and mortality. Here, we present the case of patient **DC** who was transferred to our institution for “endocarditis.” **DC** met just 1/5 minor Duke Criteria and had no accompanying imaging. Point of care ultrasound performed by the Emergency Department residents revealed a large aortic valve vegetation with severe aortic regurgitation, despite minimal appreciable murmur on exam. With 1 major + 1 minor modified Duke Criteria, this patient fell into the category of “possible endocarditis.” Despite the uncertainty reflected by this term, the patient’s diagnosis was clear. He had signs of heart failure on exam and required timely intervention to avoid further morbidity or death. The impressive size of the vegetation and evidence of failure facilitated immediate transfer of care to the Internal Medicine and Cardiothoracic Surgery services. **DC** was taken to the operating room the following day for aortic and mitral valve replacement and ultimately discharged in well condition.

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#7982 : Evaluation of the patients who admitted to the trakya university health research center emergency service with syncope

Preferred format : Oral presentation

Authors:

VOLKAN MUMCU (1), OMER SALT (1), MUSTAFA BURAK SAYHAN (1)

1. EMERGENCY MEDICINE, TRAKYA UNIVERSITY MEDICAL FACULTY, EDIRNE, TURKEY

Keywords: Emergency Department, mortality, risk rules, syncope

Abstract :

Syncope is accounting for 1%–3% of emergency department (ED) visits in a year. The rate of hospitilization of patients with syncope is % l-6. Syncope may indicate a serious disease, especially in the elderly population. 12-48% of healthy young adults lives once syncope atack among their lives. The annual incidence of syncope is 6% in people over 75 years Sudden death is around 25% with underlying heart disease.

In our study, it is aimed to evaluate the clinical symptoms; laboratory and imaging findings, the diagnosis they receive in the emergency room and duration of stay, improving mortality status of within 3 months, the international scoring system (Short-Term Prognosis of Syncope Study, San Francisco Syncope Rule, Evaluation of Guidelines in Syncope Study, Observatorio Epidemiologico sulla Sincope nel Lazio , Martin et all., Boston Syncope Score) of patients with syncope who have admitted to our emergency department for two years.

When we compact to syncope score in terms of survival; San Francisco Syncope Rule, Martin et al. , Observatorio Epidemiologico sulla Sincope nel Lazio score, Evaluation of Guidelines in Syncope Study and Short-Term Prognosis of Syncope Study values were found to be higher in patients who died, Boston is no difference

$p<0,05$ was accepted statistically significant. Variables are evaluated with logistic regreccion and the results were evaluated in terms of mortality factors. As a result it has been seen that age, supin position and precence of cancer increase the mortality rates 1,3, 8,014, 7,336 times respectively

In patients with syncope, especially for high-risk patients the right to determine and early mortality and more comprehensive in terms of taking measures that could reduce morbidity, multicenter, prospective studies can be done.

In concluccion; it is needed to perform multicenter prospective and more comprehensive studys to determent the patients with high risk factor and to prevent morbidity and mortality.

#7984 : Chondrosternal pain in a young patient

Preferred format : ePoster

Authors:

Ana Belén Marín Floría (1), Sonia Ballestín Sorolla (1), Elisa Ruiz Olivares (1), Pilar Sarasa Claver (1), Carola Medina Sainz (1), Silvia Gangutia Hernández (1), Begoña Gargallo Planas (1)

1. Urgencies, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Costochondritis, mediastinal mass, lymphoma

Abstract :

48 years old male patient with a history of hypertension and mellitus diabetes in dietary treatment. He doen not consume alcohol, he is a 10 years ex-smoker.He goes to the Emergency Service due to pain on the left chondrocostal joint, at the 2nd left costal arch level, of mechanical character and two days evolution. He reports that he has lost weight in recent months on a voluntary basis, as a treatment for his hypertension and diabetes. He practises aerobic exercise regularly.A physical examination is performed, presenting the patitent normotension, he is afebrile .The resulting cardiac and pulmonary auscultation has not notable changes. The abdomen is soft, depressible, without masses or signs of peritoneal irritation. The lower limbs don't show nor signs of DVT.

In the analysis performed, it shows a normal blood count differential count (leukocytes 9000, 74 % neutrophils, lymphocytes 10.3%), 14.3 hemoglobin and 43% hematocrit with 289000 platelets. Biochemistry is normal with blood glucose levels of 116, creatinine 0.76 , with glomerular filtration rate of 98 ml/min, liver and thyroid ions and enzymes were normal. CEA tumor markers, alpha fetoprotein, beta 2 microglobulin, Ca 19.9 and neuron-specific enolase were normal.Chest radiography, was reported with a mediastinal mass.Bronchoscopy identified a lymph node in the 10R node station with performing FNA .

Chest CT described the images as anterior mediastinal mass, with aggressiveness criteria, which could correspond to an invasive thymoma and less likely by their characteristics, to a lymphoma or germ cell tumor. Superior vena cava thrombosis. Multinodular goitre at the expense of the right lobe.Chest CT biopsy was performed, resulting in pathology of mediastinal large cells B lymphoma.The abdominal CT scan was normal.The patient was referred to the Hematology Service which graded the tumor as II-B-BULKY and began chemotherapy treatment (REPOCH) and low molecular weight heparin at therapeutic doses.The patient is currently undergoing treatment.

#7985 : Simultaneous neck and back pain.

Preferred format : ePoster

Authors:

Ana Belén Marín Floría (1), Elisa Ruiz Olivares (1), Sonia Ballestín Sorolla (1), Begoña Gargallo Planas (1), Silvia Gangutia Hernández (1), Pilar Sarasa Claver (1), Carola Medina Sainz (1)

1. Urgencies, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Paresthesia, tetraparesis , tuberculous meningitis

Abstract :

41 years old male patient with a history of chronic neck and back pain, who was intervened on both knees due to ligaments and meniscal pathology. He is not under treatment. Active life with daily bodybuilding exercise. Recent contact, few weeks ago, with a friend diagnosed with pulmonary tuberculosis.Attended the Emergency Service due to five days suffering from paresthesias in all four extremities with distal predominant hypoesthesia, especially in the left side. In addition, associated weakness in all four extremities, especially in the lower ones so he could not keep standing. He also referred weakness in his left hand.On neurological examination, the patient is conscious, oriented with normal speech and language, with negative meningeal signs, weakness in proximal lower extremities 4+/ 5 in right lower extremity; 4-/5 in the left lower extremity, left foot dorsiflexion 3/5, 4/5 right foot , plantar flexion of both 4/5 , 4/5 weakness in his left hand for abduction/adduction of fingers, arreflexia in lower limbs. ¼ tendon reflexes in upper extremities. Distal sensory loss in both lower extremities with paresthesia of all four limbs. Tenderness in the abdomen, normal chest and facial.Lumbar puncture is done to discard albuminocytological dissociation and he is entered in the Neurology Department with suspected Guillain Barre syndrome.Cerebrospinal fluid is reported as xanthochromic, with marked protein concentration and pleocytosis. Urgent cranial CT with normal results.Treatment was initiated with immunoglobulins, intravenous ampicillin and ceftriaxone. He suffered urinary retention in the early days, requiring placement of bladder size for urology, due to impossibility of doing a bladder catheterization related to an urethral stenosis. He presented a rapid deterioration during the first days, becoming quadriplegic with respiratory failure and severe dysphagia, D6 bilateral sensitive level and he was allocated in the Intensive Care Unit. After 24 hours , he required intubation for respiratory failure.Electroneurogram, indicating an acute demyelinating sensorimotor polyneuropathy was performed.

In the MRI with gadolinium, a meningeal thickening with cervical pseudonodular uptake in the C5-C6 levels in the lumbar spinal and root cone, suggestive of inflammatory-infectious disease was observed .Lumbar puncture was repeated, objectifying worsening of the parameters, and empirically TB treatment was added. PCR positivity of Mycobacterium tuberculosis in cerebrospinal fluid was subsequently confirmed. Corticosteroid treatment was associated during the first weeks of treatment.

He was finally diagnosed with tuberculous meningitis and cranial multineuritis mielorradicultis.

He was derived to the spinal cord injury unit of his reference hospital .

#7986 : What it seemed pneumonia...

Preferred format : ePoster

Authors:

Ana Belén Marín Floría (1), Sonia Ballestín Sorolla (1), Elisa Ruiz Olivares (1), Silvia Gangutia Hernández (1), Carola Medina Sainz (1), Begoña Gargallo Planas (1), Pilar Sarasa Claver (1), Javier Gil de Bernabé (1)

1. Urgencies, Hospital Royo Villanova, Zaragoza, SPAIN

Keywords: Fever, neuropathy , mesothelioma.

Abstract :

65 years old woman with a history of L4-L5 foraminal posterocentral herniated discs without root affectation, treatment with dexketoprofen, tramadol/paracetamol and omeprazole. She is independent for activities of daily living.

She goes to the Emergency Service with 38°C fever in the afternoons since 4-5 days ago, whithout chills or shivering. She does not concern having cough nor expectoration. No urinary nor digestive symptoms. She does not present associated constitutional syndrome.Refers neck pain and pain in the right extremity irradiated to the hand with 2 months of evolution, with no relation with any movement.

In blood analysis, hemoglobin and hematocrit in lower limit of normality was observed with c-reactive protein of 20 mg/dl. Normal CBC.In chest X-ray, a condensation in the right lower lobe was reported.The patient was hospitalized at home, where she was treated with levofloxacin 500 mg every 24 hours was referred . Given the limited improvement of the patient, an X-ray control was requested. There, a right basal condensation was observed, in evolution with obliteration of costodiaphragmatic right breast.Then, a chest CT was requested, where a mass in right posterior chest wall was visualized, which encompassed and eroded the 9th costal right arch. This mass, had dimensions of 150 by 100 by 40 mm but it was delimited with difficulty and had hypodense component areas, apparently necrotic and central . It contacted with 7th right costal arch, encompassing 8th to 10th arches. It was also described an infiltration of intercostal muscle structures and parietal pleura, with pleural effusion and pleural dissemination by nodular thickening of it.Biopsy of the mass was performed for typing the mass, reaching the diagnosis of mesothelioma.The tumor was removed by thoracic surgery and now she is in radio and chemotherapy treatment.

#7987 : Methodological characteristics and outcomes used in simulation randomized controlled trials in the field of Emergency Medicine: a systematic review.

Preferred format : Oral presentation

Authors:

CHAUVIN ANTHONY (1), Jennifer Truchot (1), Dominique PATERON (1), Patrick Plaisance (2), Youri YORDANOV (1)

1. Emergency Department, APHP, Paris, FRANCE
2. Emergency Department, PARIS, Paris, FRANCE

Keywords: simulation; randomized controlled trials; quality

Abstract :

Background: Simulation is defined as a technique used to replace or amplify real experiences with guided experiences that evoke or replace substantial aspects of the real world in a fully interactive manner. The use of simulation in emergency medicine began decades ago with the use of low-fidelity simulations and has evolved at an unprecedented pace. The literature on simulation is abundant in emergency medicine. But the methodological quality of these studies had not yet been assessed. The aim of this study was to conduct a systematic review of published randomized controlled trials (RCT) assessing a simulation intervention and to examine their methodological characteristics.

Methods: We performed a systematic review on MEDLINE via PubMed of randomized controlled trials, assessing a simulation intervention, published from January, 1st 2012 to December, 31th 2015 in the 6 general and internal medicine journals, and the 10 emergency medicine journals with the highest impact factor according to the Institute for Scientific Information Web of Knowledge. Two researchers independently performed the trials selection and extracted the data, if necessary a third researched stepped in to resolve disagreements. For each trial, researchers extracted the RCT general characteristics, the participants, intervention, comparator and outcomes as reported in the trial report. The Cochrane Collaboration risk of bias tool was used to assess the trials risk of bias, using the tool main domains (sequence generation, allocation concealment, blinding of participants, blinding of outcome accessors, incomplete data management and selective reporting). Methodological quality was evaluated using the MERQSI score. The MERSQI is a tool used to assess educational interventions.

Results: 1 394 RCTs were screened, 270 (19%) were considered as in the field of emergency medicine and 69 (26%) assessed a simulation intervention. Fifty-five RCTs were monocentric. The average time of acceptance was 143 days (SD=86). Studies included on average 144 participants. United States of America were the most frequent place of study. In included trials, cardiopulmonary resuscitation (CPR), was the most frequent topic (n=55; 80%). The usual procedure was the comparator in half studies (n=37). 30 (43%) of RCTs were evaluated for CPR quality outcomes. A total of 10% (n=7) were registered on a public registry or had an available protocol. The random sequence generation and allocation concealment were correctly performed respectively in 68% (n=47) and 43% (n=30).The participants and assessors blinding were correctly performed in 20% (n=14) and 62% (n=43). The attrition bias was low in two-third in studies (n=50). The reporting bias was low in nearly all studies (n=65; 95%).Methodological quality by MERQSI score averaged 12.3/18 (SD=3).

Conclusions: Trials assessing simulation count fo one quarter of published RCTs in emergency medicine. Their quality remains unclear and should make us very cautious when interpreting their results. In our sample authors particularly failed to correctly describe the blinding and allocation concealment. These trials characteristics being associated with the magnitude of the intervention effect based on previously published meta-epidemiological studies.

#7990 : Characteristics of and the Factors Affecting the Morbidity and Mortality of Malignancy Patients Presenting to the Emergency Department: A Prospective Epidemiological Study

Preferred format : Oral presentation

Authors:

Onur Tokocin (1), Afsin Ipekci (2), Deniz Necdet Tihan (3), Fatih Cakmak (4), Didem Ceylan (5), Mehmet Necmettin Sutasir (6), Canturk Emir (5), Ozgur Dandin (7), Merve Tokocin (8), Ibrahim Ikizceli (2)

1. Department of Emergency Medicine, Istanbul Training and Research Hospital, istanbul, TURKEY
2. Emergency Department, Istanbul University Cerrahpasa Medical Faculty, Istanbul, TURKEY
3. Department of General Surgery, Bursa Yuksek Ihtisas Training and Research Hospital, Bursa, TURKEY
4. Department of Emergency Medicine, Urfa Balikligol Public Hospital, Sanliurfa, TURKEY
5. Department of Emergency Medicine, Sisli Hamidiye Etfal Training and Research Hospital, istanbul, TURKEY
6. Emergency Department, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, TURKEY
7. Department of General Surgery, Bursa Military Hospital, Bursa, TURKEY
8. Department of General Surgery, Bagcilar Training and Research Hospital, istanbul, TURKEY

Keywords: Emergency medicine, cancer, malignancy, oncology, mortality, morbidity, complication

Abstract :

Objective: Death due to malignancy is the second cause of mortality after cardiovascular system diseases. Because technological developments allow early diagnosis and new treatment modalities extend follow-up periods, emergency department presentation of malignancy patients with disease- and treatment-related complications has been rising. The objective of this study is to identify the clinical characteristics of the patients with malignancy, who constitute the majority of the emergency department admissions, and to increase the quality of care and raise awareness of rapid targeted-therapy.

Materials and Methods: Cancer patients 18 years of age and older who presented to the Istanbul University Cerrahpaşa Medical School Emergency Department between October 6, 2014 and May 6, 2015 were evaluated prospectively. Patients' demographics, vital signs, characteristics associated with malignancy, examinations performed and their results, treatments and length of stay were evaluated.

Results: A total of 1283 patients and 1522 presentations were recorded. In nine patients, the initial diagnosis of cancer was made in the emergency department. 51.99% of the patients were male (mean age: 57.52±13.12), and 48.01% were female (mean age: 69.05±15.15). The overall mean age was 63.05±14.08. The most prevalent symptom was dyspnea (17.94%), and the most common type of cancer was lung cancer (16.23%). In male patients, the most prevalent complaint was fever, and the most common type of cancer was lung cancer (34.63%) ($p<0.001$). In female patients, the most prevalent complaint was dyspnea, and the most common type of cancer was breast cancer (35.25%) ($p<0.001$). Distant metastasis was present in 64% of the patients. The influence of mean arterial blood pressure, pulse, hemoglobin levels, uremia and hypoalbuminemia on mortality and ICU admission was significant ($p<0.001$). Overall, 41.46% of the patients were hospitalized, and 1.05% of the patients died. The average length of stay was 4.64±6.73 days. The average length of stay in the emergency department until the patient was admitted to the relevant department was 3.04±1.91 days.

Conclusion: Patients with malignancy constitute a significant portion of the emergency department admissions. Promoting the emergency physicians' insight into and experience on oncological emergencies would contribute to decreasing the mortality and morbidity of these patients.

#7991 : ELECTRIC SHOCK: SOMETIMES IT SAVES, SOMETIMES IT KILLS.

Preferred format : ePoster

Authors:

Begoña Gargallo Planas (1), Sonia Sofía Ballestin Sorolla (1), Elisa Ruiz Olivares (2), Elisa Aldea Molina (2), Ana Belén Marín Floría (1), Carola Medina Sainz (1), Silvia Gangutia (1)

1. Emergencies, H. Royo Villanova, Zaragoza, SPAIN
2. Emergencies, H. Royo Villanova., Zaragoza, SPAIN

Keywords: Electric shock, atrial fibrillation, electrical cardioversion.

Abstract :

53 year-old patient who is brought in mobile ICU for an episode of electrocution while he was working with electrical cables. The patient was unaware of the type of power that was. It concerns fall back of approximately 1.5 meters height without loss of consciousness with low back pain. General exploration objective burn in hand right suggestive of entrance of the electric shock. Cardiac auscultation to arrhythmic heart tones at a frequency of 80 can be seen. ECG is performed confirming atrial fibrillation to 114 beats per minute without alterations in repolarization. 989 CK stands out in blood. Rx of unaltered assessable chest. Patient concerns have made medical review in April where it was sinus rhythm.

Heart rate, blood pressure and saturation is monitored and we initiated treatment with Amiodarone 300 mgr in bolus and infusion to try to pass to sinus rhythm. The patient presents alternation of frequency between 110 to 160 beats per minute. After 6 hours of initiating the treatment, the patient presents with 77/40 blood pressure, hemodynamic instability held despite volume overload. Therapeutic failure, it was decided to make cardioversion electric synchronized with 100 joules prior sedation of the patient with 6 mg of propofol 1% iv, turning the patient to sinus rhythm with FC 60 per minute and blood presure 110/60 mm Hg

#7992 : Can the introduction of a "virtual clinic" in a major UK paediatric tertiary centre help to reduce the burden of follow up for minor paediatric fractures?

Preferred format : Oral presentation

Authors:

Sanjoy Roy (1), Nicola McDonald (1), Di Back (1)

1. National Health Service, St. Thomas' Hospital, London, London, UK

Keywords: fracture, childhood, paediatric, torus, futuro, clinic

Abstract :

Introduction

Fractures account for approximately 25% of all injuries during childhood in the UK (Cooper C et al; 2004). Of those the radius/ulna are most common (30%) (Landin, Lennart A; 1997) - 80% of those are buckle/torus fractures. The volume of these injuries poses considerable pressures to the emergency department (ED), whilst their subtle nature makes them difficult to identify radiologically. Furthermore, lack of homogenous guidance can lead to inconsistencies in management. Children require follow up in Fracture clinics, meaning time off school or nursery; potential time off work for parents and additional hospital visits for the family.

Given that buckle fractures require minimal intervention and follow-up, this is unfortunate. There is evidence showing that optimal treatment entails the use of a Futuro splint for three weeks (Plint et al; 2006), with safety netting and patient information. Many EDs in the UK are adopting this approach successfully.

Objectives

The aim of this quality improvement project was to introduce a new pathway for the management of torus fractures of the radius/ulna, including a “virtual” fracture clinic. We also reviewed our current management of these injuries within the ED. Finally, we compared costs of the old management plan and new protocol, including attendance, plasters and splints.

Methods

A list of children aged 0-16 years with wrist x-rays between June-Nov 2015 was obtained. Those with a buckle-torus fracture were reviewed for method of immobilization and outcome of fracture clinic follow-up.

After this review, in collaboration with our orthopaedic colleagues, a “virtual” clinic was established within the existing Fracture clinic.

Results

24 children fulfilled the inclusion criteria; fourteen were managed in a Futuro splint; ten with a plaster of Paris (POP). All were followed up in fracture clinic. At this visit, seven children switched from a Futuro to a POP. Three switched from a POP to a Futuro, leaving nine in total with a splint. One child was discharged from fracture clinic on first attendance; 23 required ongoing follow-up with at least one additional visit to clinic. This equates to at least 57 hospital appointments in this group for inclusion to the “virtual” clinic over five months.

In this clinic, the Orthopaedic Consultant reviews the child’s case notes and images; contacts the family and decides whether a follow-up is required. The patient does not need to attend this appointment. The costs of running this clinic would be approximately 20% cheaper on our current overheads.

Conclusions

The majority of children were managed appropriately as per current guidance. Some treatment discrepancies were identified with preferential use of a POP in Fracture Clinic. We educated staff on gold standard treatment and introduced a new clinical guideline. As a result of identifying the number of children returning unnecessarily, a “virtual” fracture clinic has been established. It is hoped this will generate significant cost savings as well as providing families with continuity of care, reassurance and convenience.

We plan to reaudit whether this clinic reduces follow up hospital attendances, in view of expanding it to include other minor fractures.

#7993 : In situ simulation in pre-hospital emergency medicine: a comparison between high-fidelity and low-tech approach

Preferred format : ePoster

Authors:

Daria Wiese (1), Martin Fandler (2), Thomas Plappert (3)

1. , Sana Hanseklinikum Wismar, Wismar, GERMANY
2. , Nuernberg, Nuernberg, GERMANY
3. , Klinikum Fulda, Fulda, GERMANY

Keywords: simulation in-situ training pre-hospital

Abstract :

In the field of simulation, in-situ-simulation is the new trend: inspired from the idea of training as one works, i.e. in the normal surrounding, with the original equipment and the „real“ team, more and more applications where described on conferences, in blogs and in case-studies. As simulation-training is meanwhile regarded as effective for enhancing as well psychomotor- and team-skills, in-situ-training aims to add experience with the normal equipment and to reduce the artifacts of simulation.
It is undeniable, that frequent training in working environment increases the confidence, provides an opportunity to train skills and to train effective teamwork. Simulation creates riskfree setting to master the challenges of the life-threatening events and of caring for critical ill patients.
Beginning in 2012, we conducted several in-situ-trainings for medical emergencies in several different units of our hospital, a 500-bed-teaching hospital of the University of Rostock in a pretty rural area at the baltic coast. Using that experience, we startet 2014 to use the technique for the skills- and team-training of EMS-crews in the handling of critical situations, namely the induction and pre-hospital intubation in case of a) traumatic brain injury, b) polytraumatised patient and c) cardiogenic lung edema, refaractory to non-invasive ventilation.
We started 2014 with low–tech/low-cost concept. A usual ambulance, which was only for the day of training out off duty, was staffed with a portable camera, a simple manikin and an iPad-based simulation-system. Later on, the whole video-debriefing-system was made portable and the training was again conducted and in 2016, one of the ambulances of the local rescue service was fix equipped with simulation-equipment and audio-video-debriefing system.
After working with several possibilities, we could not find great benefit from one or another simulator-set-up, either on the site of the trainers, nor on the students. It seems, the acceptance of the setting and the learning effect are mainly based on the quality of briefing and debriefing. A well-known surrounding might be the base for a quicker familiarization.
In the following, we precisely describe the set-up in a “how-to” way and compare all the components to each other in order to help other projects to get started.

#7994 : Additional value of copeptin and FABP to the HEART score

Preferred format : Oral presentation

Authors:

Simone Gopal (1), Barbra Backus (2), Leo Jacobs (3), Roger Hessels (4), Ron Kusters (5)

1. emergency department, Elisabeth Tweesteden Ziekenhuis Tilburg, Breda, THE NETHERLANDS
2. emergency department, Medisch Centrum Haaglanden, Den Haag, THE NETHERLANDS
3. Clinical chemistry, Meander MC, Amersfoort, THE NETHERLANDS
4. emergency department, Elisabeth Tweesteden Ziekenhuis, Tilburg, THE NETHERLANDS
5. Clinical chemistry, Jeroen Bosch Ziekenhuis, Den Bosch, THE NETHERLANDS

Keywords: HEART score, Chest pain, copeptin, FABP

Abstract :

Introduction

Chest pain is a frequent complaint at the emergency department (ED). It is often difficult to differentiate between an acute coronary syndrome (ACS) and other causes of chest pain. The HEART score is a validated risk score for all patients with chest pain at the ED.

Troponin is one of the key elements of the HEART score. Currently other biomarkers are known to rise early in case of an ACS, such as copeptin and fatty acid binding protein (FABP). We investigated if the accuracy of the HEART score increases by adding copeptin and FABP to the HEART score.

Study design

In 586 patients with chest pain we collected all elements of the HEART score plus copeptin and FABP on arrival at the ED.

We compared the discriminative performances (c-statistic) of the original HEART score vs the HEART score plus copeptin or FABP for the occurrence of Major Adverse Cardiac Events (MACE).

Results

In total 164 patients (28.96 %) reached at least one MACE within six weeks (140 AMI, 88 PCI, 15 CABG, one death). The event rate in patients with a HEART score of zero to three was 0.6%. The c-statistics for MACE were: HEART 0.877, HEART+copeptin 0.877 (p=0.868), HEART+FABP 0.886 (p=0.032).

Conclusions

In this study the addition of copeptin does not improve the HEART score. The addition of FABP slightly improves the discriminating performance of the HEART score in chest pain patients. Adding FABP to the HEART score could improve the rule out of ACS at the ED.

#7995 : The important role of Family Medicine in the UAE to establish and manage Urgent Care Services.

Preferred format : Oral presentation

Authors:

Rahat Ghazanfar (1)

1. Family Medicine, Intercare Health Center, Abu Dhabi, UNITED ARAB EMIRATES

Abstract :

Various hospitals throughout the Western Healthcare have now incorporated Urgent Care Centers within the Emergency Department. These are routinely run by Family Medicine Consultants and/or nurse practioners on an average of 10-14 hrs. per day. The aim is to reduce workload on the main Emergency Department. The UAE is still a maturing health care system and Family Medicine is not as well established across the seven emirates. This leads to more ER attendances with clinical pathologies which could have been seen in an Urgent Care Centre managed by a credentialed Family Medicine Consultant. We will aim to elaborate on the role and remit of an Urgent Care Center, especially in a maturing environment and talk about its importance in reducing work load for the Emergency Physicians. We will also compare some recent data from the United Kingdom from a successfully running Urgent Care Centre, co-habited within the Emergency Department.

#7996 : Revalidation in the UK 4 years down the line. Lessons learned?

Preferred format : Oral presentation

Authors:

Omar Ghazanfar (1)

1. Emergency Medicine, Zayed Military Hospital, Abu Dhabi, UNITED ARAB EMIRATES

Abstract :

Revalidation of doctors started in the UK in 2012 after it became legislation and thereby mandatory for all doctors to engage in. We presented some data and interesting discussion point in 2014 when the process was 2 years old and in its infancy. At that juncture the process was still in its infancy and maturing. Currently 4 years down the line we will aim to discuss how this process has matured and how it has led to better governance of the medical profession in the UK. We will also discuss some of the innovative ways appraisals are evolving and how it pertains to UK trained and registered doctors practicing medicine overseas.

#7997 : The Phenomenon of Older Emergency Department Frequent Attenders

Preferred format : Oral presentation

Authors:

Geraldine McMahon (1), Megan Power Foley (2)

1. Emergency Medicine consultant, St James Hospital, Dublin 8, Ireland, Dublin, IRELAND
2. Medical Student , Trinity College Dublin, Dublin, IRELAND

Keywords: Older Adults, Frequent Attenders, Emergency Attendances

Abstract :

Introduction:

Characteristics of older frequent users of Emergency Departments (EDs) are poorly understood. Our aim was to examine the characteristics of the ED frequent attenders (FAs) by age (<65 and ≥65 years).

Methods:

We examined the prevalence of FA attending the ED of an urban teaching hospital in cross-sectional study between 2009 and 2011. FA was defined as a person who presented to the ED four or more times over a 12-month period. Randomly selected groups of FA and non-FA from two age groups (<65 and ≥65 years) were then examined to compare characteristics between older FAs and non-FAs and older FAs and younger FAs. Logistic regression was used to calculate the odds ratio (OR) and 95% confidence intervals for 12-mortality in FA compared to non-FA aged ≥65years.

Results:

137,150 ED attendances were recorded between 2009 and 2011. 21.6% were aged ≥65years, 4.4% of whom were FAs, accounting for 18.4% of attendances by patients over 65 years. There was a bi-modal age distribution of FA (mean ±SD; <65years 40±12.7; and ≥65years 76.9±7.4). Older FAs were 5 times more likely to present outside normal working hours and 5.5 times more likely to require admission. Cardiovascular emergencies were the most common complaint, in contrast with the younger FA group, where injury and psychosocial conditions dominated. The OR for death at 12-months was 2.07 (95% CI 0.93, 4.63), p=0.07, adjusting for age and gender.

Conclusion:

1-in-5 ED patients over 65years are frequent attenders. Older FAs largely presented with complex medical conditions. Enhanced access to expert gerontology assessment should be considered as part of effective intervention strategies for older ED users.

#7998 : Implementation of an animal model for toxic smoke inhalation and resuscitation

Preferred format : ePoster

Authors:

Jost Beelitz (1), Wolfgang Dersch (1), Clemens Kill (1), Nina Vogt (2), Florian Veit (3), Hinnerk Wulf (4), Carsten Feldmann (1)

1. Department of Emergency Medicine, Department of Anesthesia and Critical Care, Philipps-University, Marburg, GERMANY
2. Department of Neurosurgery, University of Giessen, Giessen, GERMANY
3. Institute of Legal Medicine, Department of Forensic Toxicology, Justus-Liebig-University Giessen, Giessen, GERMANY
4. Department of Anesthesia and Critical Care, Philipps-University, Marburg, GERMANY

Keywords: Smoke inhalation, Resuscitation, Hydroxycobalamin, Carbonmonoxide, Hydrogen cyanide

Abstract :

Objective

Resuscitation of fire victims may be different from resuscitation in sudden cardiac death, because death by fire mainly is caused by toxic smoke inhalation and therefore may need specific antidote treatment[1,2]. To investigate the effects of combined inhalation of the important toxic gases carbonmonoxide (CO) and hydrogen cyanide (HCN) we designed a realistic animal intoxication model. The goal of this study was the feasibility and safety of this model and the effects of Advanced Life Support on Return of Spontaneous Circulation (ROSC).

Materials and methods

After approval by local authorities and in accordance with German animal protection law a smoke inhalation model for pigs (25-35kg) was developed based on a closed ventilation circuit. Gas cylinders with oxygen, compressed air, compressed air with CO=1500 parts per million (ppm) and compressed air with HCN=1000ppm were connected together with valves allowing multiple mix of gas concentrations to supply a Siemens Servo300 ventilator. The expiratory outlet lead to a gas suction unit. Room-air concentrations were monitored with gas detection devices for CO and HCN. 24 pigs (mean 31kg) underwent anaesthesia, intubation and instrumentation. Inhalational intoxication was simulated by controlled ventilation with: air with CO=1500ppm (5min), followed by air with CO=750ppm and HCN=500ppm (5min), followed by HCN=1000ppm until cardiac arrest occurred. Resuscitation was started with 100%oxygen and chest compressions (10 minutes), followed by ALS according to guidelines. Additionally 5g hydroxycobalamin or placebo were given. Time to cardiac arrest and time to ROSC were measured. Results as median (25/75%percentiles).

Results

No increase in room air concentration of CO/HCN could be observed. Cardiac arrest occurred in all pigs in a median time of 38min(25.5/48.5). ROSC was achieved in 14/24 pigs (7 hydroxycobalamin, 7 placebo), median time to ROSC 14(13/15.8)min.

Conclusions

This smoke inhalation model was safe and lead to cardiac arrest in all cases. The time to cardiac arrest hereby was much longer than in literature data described for inhalation of HCN 1000ppm[3]. Additional investigations are needed to reevaluate both the toxic effects of combined CO/HCN inhalation and resuscitation outcome.

References

[1]Postgrad Med. 1987;82(1):63-8, [2]Eur J Emerg Med 2013;20(1):2-9, [3]Fire Technology 1972;8(2):120-30

#7999 : Safety and Effectiveness of Ultrasound Guided Supraclavicular Nerve Block for Upper Extremity Trauma

Preferred format : ePoster

Authors:

Kristine Robinson (1), Yusef Sayeed (2), Erik Olness (3), Gregory Borah (4), Aaron Monseau (1), Jeremy Rowell (1), Joseph Minardi (1)

1. Department of Emergency Medicine, West Virginia University School of Medicine, Morgantown, USA
2. Department of Occupational Medicine, West Virginia University School of Medicine, Morgantown, USA
3. Department of Anesthesiology, West Virginia University School of Medicine, Morgantown, USA
4. Department of Surgery, West Virginia University School of Medicine, Morgantown, USA

Keywords: Ultrasound, Supraclavicular Nerve Block, Trauma

Abstract :

Background: Analgesia in acute trauma is notoriously undertreated, as evaluation and resuscitation often take immediate priority. Furthermore, opioid analgesia, although effective, has many detrimental effects including sedation, respiratory depression, tolerance, and potential for addiction. Regional anesthesia offers an effective adjunct for analgesia that has been shown to improve analgesia scores, improve patient comfort, decrease the need for opioids and opioid complications, decrease staffing needs, and decreasing the length of stay. There have been a handful of case reports documenting Emergency Physicians performing Ultrasound-guided nerve blocks safely; however, it is still not a common practice. Further studies would be necessary to determine practice standardization in community or rural hospital settings. **Objective**: We described a case of Ultrasound guided Supraclavicular brachial plexus nerve block successfully performed by an Emergency physician for pain control for acute upper extremity trauma. **Case Report**: A 30-year-old female presented to the Emergency Department after accidentally placing her hand in an accelerating meat grinder. She sustained severe injuries to her hand, including complete amputation of her index finger, open displaced fractures of the long finger, and significant soft tissue deformities. The emergency physician performed an ultrasound guided supraclavicular brachial plexus block, using a Sonosite Edge Ultrasound machine and a high frequency linear transducer. The skin was prepped with chloraprep and a sterile tegaderm cover was applied to the ultrasound probe. The supraclavicular artery and 1st rib were identified. The brachial plexus was visualized just posterior to the artery, and injection occurred under dynamic needle advancement. Approximately 5 mL of 0.25% bupivacaine was injected and is seen on Ultrasound as a hypoechoic fluid surrounding the plexus and the perineural sheath. Color Doppler captured surrounding vessels which increased accuracy and safety. In addition, the EM physician was able to directly characterize the pleural lining under ultrasound, and aligned the 1st rib underneath the target, minimizing complications. The patient's pain and distress significantly improved minutes after the procedure, and she reported feeling comfortable while awaiting operative management of her injuries. **Discussion**: The increasing experience of emergency physicians with ultrasound-guided procedures has made formerly highly specialized procedures, such as the supraclavicular brachial plexus block, more accessible to patients. With training, emergency physicians as well as other specialists should be able to apply these techniques, increasing options for analgesia, decreasing resource utilization in select acute traumatic injuries, and improving patient care. Implementation of these techniques should impact rural communities the most but more studies are needed to determine the effect size.

#8000 : Resuscitation after smoke inhalation with cyanide intoxication: Influence of early administration of hydroxycobalamin on oxygen uptake

Preferred format : ePoster

Authors:

Jost Beelitz (1), Wolfgang Dersch (1), Clemens Kill (1), Nina Vogt (2), Florian Veit (3), Hinnerk Wulf (4), Carsten Feldmann (1)

1. Department of Emergency Medicine, Department of Anesthesia and Critical Care, Philipps-University, Marburg, GERMANY
2. Department of Neurosurgery, University of Giessen, Giessen, GERMANY
3. Institute of Legal Medicine, Department of Forensic Toxicology, Justus-Liebig-University Giessen, Giessen, GERMANY
4. Department of Anesthesia and Critical Care, Philipps-University, Marburg, GERMANY

Keywords: Smoke inhalation, Resuscitation, Hydroxycobalamin, Carbonmonoxide, Hydrogen cyanide, oxygen uptake

Abstract :

Objective

Toxic smoke inhalation is often combined with intoxication due to both carbonmonoxide (CO) and hydrogen cyanide (HCN) [1]. Resuscitation of fire victims in cardiac arrest may be facilitated by specific antidote treatment [2,3]. We investigated the influence of resuscitation with the antidote hydroxycobalamin on oxygen uptake in cardiac arrest following toxic smoke inhalation an animal model.

Materials and methods

After approval by local authorities and in accordance with German animal protection law an intoxication model for pigs (25-35kg) with anaesthesia, intubation and instrumentation including a pulmonary arterial catheter was used. Smoke intoxication was simulated by controlled ventilation in a closed circuit with: Air with CO=1500ppm (parts per million) over 5 minutes, followed by air with CO=750ppm and HCN=500ppm over 5minutes, followed by air with HCN=1000ppm until cardiac arrest occurred. 5g hydroxycobalamin or placebo were infused and resuscitation was started with 100%oxygen and chest compressions over 10 minutes, followed by standard Advanced Life Support including defibrillation and epinephrine iv. Oxygen uptake (VO_2) was calculated before intoxication (baseline) and after antidote-infusion (t=3min and t=9min). Primary endpoint was the change in oxygen uptake compared to baseline within each group (Wilcoxon-test), secondary endpoint was the oxygen uptake at t=3min and t=9min compared between both groups (U-test). Results as median (25/75%percentiles).

Results

Fourteen pigs were included. Hydroxycobalamin (n=7): VO_2 baseline 126(111/152)ml/min; t=3min 182(161/343)ml/min, p=0.016 vs. Baseline; t=9min 174(152/237)ml/min, p=0.016 vs. baseline. Placebo (n=7): VO_2 baseline 146(115/221)ml/min, t=3min 132(66/152)ml/min, p=0.07 vs baseline; t=9min 138(59/157)ml/min, p=0.16 vs baseline. VO_2 hydroxycobalamin vs. placebo: Baseline p=0.62; t=3min p=0.027; t=9min p=0.073 .

Return of spontaneous circulation was achieved in 12/14 pigs (5 hydroxycobalamin, 5 placebo)

Conclusions

Early administration of hydroxycobalamin during resuscitation improved oxygen uptake in this smoke inhalation model. We assume that this is a direct sign of recovery of cellular respiration from HCN intoxication. Further investigations are needed to investigate the effects on tissue damage by this treatment.

References

[1]Postgrad Med. 1987;82(1):63-8; [2]Eur J Emerg Med 2013;20(1):2-9; [3]Fire Technology 1972;8(2):120-30

#8001 : Validation of a belgian prediction model for patient encounters at music mass gatherings

Preferred format : Oral presentation

Authors:

Kris Spaepen (1), Winne Haenen (2), Leonard Kaufman (3), Ives Hubloue (2)

1. Research Group on Emergency and Disaster Medicine, Vrije Universiteit Brussel, Willebroek, BELGIUM
2. Research Group on Emergency and Disaster Medicine, Vrije Universiteit Brussel, Brussels, BELGIUM
3. , None, Brussels, BELGIUM

Keywords: Mass gathering medicine, Medical resource model, Patient presentation rate

Abstract :

Purpose: A Belgian Medical Resource Model, Plan Risk Manifestations (PRIMA), for the prediction of the number of patient encounters at mass gatherings has recently been developed in addition to the existing models of Arbon and Hartman.

Relevance: Several predictive models have been published but all of these models have their limitations. The PRIMA model is a versatile predictive medical resource tool suitable for application across various types of MG. The purpose of our study was to validate the PRIMA during music mass gatherings in the province of Antwerp, Belgium.

Participants: All patients who sought medical help at one of the first aid stations on-site of the selected events were included in our study.

Methods: a retrospective study was conducted using data gathered from music mass gatherings in the province of Antwerp (Belgium) during the period of 2012 – 2014. Data from 48 music mass gatherings was used for the study.

Analysis: The forecast of medical resources for these events were determined by entering the characteristics of individual events into the Arbon, Hartman and PRIMA models. The data gathered was retrospectively compared to the predicted number of resources needed using the aforementioned models. This triple comparison was used to determine whether the PRIMA model was over- or under predictive for medical resources needed.

Results: Our study showed that all three models had an acceptable rate of overprediction of number of patient encounters (Arbon 11,66%; Hartman 10,42%; PRIMA 25%), but an high rate of under-prediction of number of patient encounters (Arbon 77,08%; Hartman 89,58%; PRIMA 70,83%). Only our PRIMA model succeeded in the correct prediction of the number of patient encounters on two occasions (4.17%).

Conclusion: the PRIMA model is a more accurate tool in predicting the number of patient encounters and for medical resources needed at music mass gatherings.

#8002 : Pericardial tamponade as first manifestation of non-advanced lung adenocarcinoma

Preferred format : ePoster

Authors:

Carmen Adela Yago (1), Enrique Caro (1), Daniel Fernandez (1)

1. Critical care and Emergency Service, Andalusian Health Service, Málaga, SPAIN

Keywords: Cardiac tamponade, pulmonary adenocarcinoma, pericardiocentesis

Abstract :

75 year old man patient, independent living, a nonsmoker, hypertension treated with enalapril. Go to emergency service for epigastric pain, dyspnea and asthenia 1 month of evolution; previously serviced by family doctor and treated with antibiotics, without improvement. Not fever, not refer other symptoms.

Physical exam: Normotensive, tachycardia (130 pm), increased jugular venous pressure basal. Sat 94%. Afebrile. Cardiopulmonary auscultation: Rhythmic tones without murmurs, decreased vesicular murmur; Abdomen: globular, pitting blandoy, no masses or organ enlargement, blumberg - Murphy -; MMII; distal edema with fovea +, no signs of DVT.

Complementary tests: Blood test showed no significant findings. ECG: electrocardiogram showed prominent low voltage QRS complexes in all derivations. Chest x-ray showed a markedly enlarged cardiac silhouette and a nodule in the right upper lung. Two-dimensional echocardiography showed a large pericardial effusion and marked diastolic collapse of the right auricular with significant respiratory variation in mitral flow velocity, there was no collapse of the right ventricule.

Emergency pericardiocentesis was performed via a subxiphoid approach. After the removal of 1800ml of non-coagulable bloody fluid, clinical symptoms rapidly improved. A post pericardiocentesis echocardiography showed a high pulmonary artery systolic pressure with pulmonary artery systolic pressure at 50 mmHg.

Discussion: Pericardial effusion is a well-known complication of many advanced malignancies such as lung cancer, breast cancer, lymphomas and leukemias. Although infrequent, symptomatic pericardial effusion with hemodynamic compromise can be the initial presentation of underlying malignancies. It can occur because of accumulated fluid amounts as low as 150 ml if the accumulation occurs rapidly. On the other hand, the slow accumulation of fluid, in some instances as much as two liters, may not cause tamponade. Echocardiography Doppler is a portable, non-invasive imaging modality that was ideally suited in this instance to rapidly confirm the clinical suspicion of tamponade and help guiding therapeutic management. We believe that it is necessary to consider a possible diagnosis of pericardial tamponade of various causes, even advanced malignancies, in otherwise healthy patients admitted with the aforementioned symptoms. Cardiac tamponade and pulmonary embolism are a rare but potentially fatal cancer complication.

#8003 : Extradural haematoma in children still represents a big challenge for diagnosis and treatment in emergency department

Preferred format : ePoster

Authors:

Nicoleta Cretu (1), Ben Teasdale (1)

1. Leicester Royal Infirmary Hospital , Leicester, UK, Leicester University Hospitals Trust, Leicester, UK, Leicester, UK

Keywords: extradural haematoma, children, transfer, ED management

Abstract :

Introduction

Extradural haematoma in children as in adults, represents a big challenge for diagnosis and treatment in emergency department(ED), being still a cause for high mortality.

Emergency Department presentation

A male child of 6 years old presented to Children ED at 7:30 pm on Saturday with Head injury after he fell from a bicycle and hit the forehead from concrete.

Patient-fit and healthy.

Initial assessment in triage room: History- fell from the bicycle, hit the concrete with the forehead with secondary haematoma on the left side of the forehead and loss of consciousness for a few seconds.

Vital signs in triage: AVPU-A(GCS=E4V5M6=15/15), no focal neurology, pupils equal and reactive sizes 2 bilateral, BM-normal,HR= 90bpm sinus rhythm , BP=90/55mmHg, CRT<2 sec, T=36.8 degrees, pain score=0.

Initial management in Children ED- the patient is to be waiting in the waiting room(WR) with his father.

After 2 hours the patient is reviewed by a doctor in children's Majors (at apx 9:30 pm), when it was noticed that the GCS of the patient dropped.

On examination: the patient was confused, with GCS=E3V2M4=9/15, anizocoria with left pupil (5mm)>right pupil(3mm), BM-normal, haematoma left side forehead,2 episodes of vomiting in the WR, but able to protect his airway, HR- 90bpm, BP=90/55mmHg, CRT <2 sec, T=36.8degrees.

ED management: urgent CT brain , neurology monitoring every 15 minutes, continuous vital signs monitoring, afterwards the patient being transferred to Resuscitation Room, ED Consultant being informed also.

CT brain was reported after 30 minutes after the patient was examined as Large Left Extradural Haematoma with midline shift.

The Anaesthetics, Children ITU and Neurosurgical team was contacted urgently. The patient was immediately accepted in Neurosurgical Hospital in QMC Hospital Nottingham , UK.

Further resuscitation Room management: the patient received Rapid sequence Intubation, sedation and ventilation for airway protection, with continuous Propofol infusion, CXR, Arterial line, peripheral line , urinary catheter . He was transferred by ambulance with Paediatrics ITU Consultant to Neurosurgey QMC Hospital.

Evolution- the second morning after the above event, the doctor on duty at that night called the Neurosurgery team from the other hospital to ask about this patient- the patient had a successful surgical intervention with drainage of the haematoma- he was eating breakfast at the moment of the call.

Discussion

Despite the fact that it is followed the head Injury protocol in Children ED very thoroughly, it is always a possibility to miss a very difficult case as an extradural haematoma in children, when the patient is talking and die.

Conclusion

The management of this patient lasted apx 3 hours, with 45 minutes –examination, CT , Resuscitation room transfer and airway management , less than 1 hour as per our Transfer protocol, taking longer to transfer him to the other hospital. This problem was addressed with a conjunction meeting between Anaesthetics, ITU and ED Consultants.

Dr Nicoleta Cretu, ACCS ST1 Emergency Medicine trainee

Dr Ben Teasdale, Emergency Department Consultant.

Leicester Royal Infirmary Hospital, UK.

#8004 : White male in his late 50's found face down, obtunded, hypoglycemic, hypotensive, hypothermic. Is he drunk or intoxicated, suffering an MI, a stroke? Or is it an aortic root dissection from brain to lower pelvis?

Preferred format : ePoster

Authors:

John Quinn (1), Andrei Carpiuc (1), Dan-Lucian Ghiurluc (1)

1. Emergency Medicine , London North West Hospital Trust: Northwick Park Hospital , London, UK

Keywords: aortic dissection, acute dissection, emergency ultrasound, the undifferentiated patient

Abstract :

Patients with aortic dissection may present with classic red flag features to the Emergency Department (ED) but a high index of suspicion of life threatening illness but be very high on the differential diagnosis in order to save life. An obtunded, hypothermic, hypotensive and hypoglycemic patient in their 5th decade that presents with no history from prehospital teams is atypical for such a pathology and requires thorough clinical exam, clinical acumen and most importantly a systematic approach to achieve a definitive diagnosis. This case report offers an uncommon presentation of extensive aortic dissection with very few comorbidities, no convincing evidence of blunt or penetrating trauma and an absent history of present illness. Upon initial presentation to the ED, an atypical perfusion distribution and material anomaly on eFAST exam at the level of the bifurcation of the abdominal aorta led to CT definitive diagnosis of a peculiar aortic root dissection.

In sum, this case highlights the requirement in the ED to have a high index of suspicion in the acutely unwell and obtunded patient for life threat pathologies and to follow diagnostic algorithms with clinical judgment in order to apply best practices and maximize best outcomes. The use of bedside ultrasound, aggressive CT diagnostics, clinical exam, emergency team involvement and interdisciplinary approach offers best practices for the broad patient population presenting to emergency departments across Europe and the UK.

#8005 : Consultus Interruptus: Unscheduled Interactions within the Emergency Department

Preferred format : Oral presentation

Authors:

Sandeep Gill (1), RAJ PAW (2), PETER DOYLE (2), Ameer Shah (3), Sarah Shakkshir (4), MUNIR ABUKHDER (4)

1. , NHS, Birmingham, UK
2. Dudley Group of Hospitals, NHS, DUDLEY, UK
3. , NHS, Dudley, UK
4. , University of Birmingham, Birmingham, UK

Keywords: Emergency Department, Emergency Medicine, Unscheduled Interactions, Interruptions, Medical Coordinator

Abstract :

Introduction

It is well recognised that the job of an EM consultant involves multitasking and dealing with multiple unscheduled interactions (UI). The fluid, unpredictable, time pressurised and multi-professional nature of EM makes it particularly susceptible to UI. An increasing number of UI can result in increased error. An Increasing number of decisions, irrespective of complexity can lead to error and decision fatigue. We aim to map the number of UI an EM consultant faces when on shift.

Objectives

This study attempted to answer the following questions:

- In a day how many unscheduled interactions does the senior EM physician deal with?
- How many of these are interactions are clinical interactions?
- What is the average length of time spent dealing with these unscheduled interactions?

Methods

This prospective observational study took place at a single centre urban ED in the West Midlands. The study period was from 1.12.15 to 23.12.15. An EM consultant was trailed on shift by a medical student who noted down all the non-patient interactions that the consultant had. The consultant had no input into data collection. The nature of the UI, the time spent and the outcome was recorded on a simple data collection form. This was then collated and analysed.

Results

- A total of 23 shifts over 135hrs 34min were observed.
- There was a mix of early (0800-1600), late (1600-2100) and weekend shifts.
- All 10 members of the consultant body were followed.

Total Number of UI in study period: 2082

Average Number of UI per hr: 17.95 UI/hr.

UI rate (time per UI) 3min 21seconds

Average time per UI 87.5sec (Range 10s–34 mins)

Clinical Interaction vs Non Clinical Interactions: 94% vs 6%

Conclusion

In this single centre study of an urban UK emergency department 40% of shop floor consultant time is spent dealing with UI. The majority (94%) of these UI related to clinical interactions. In this study this equates to 17.95 UI per hour with an average time spent dealing with each interaction of 87.5 seconds

Discussion

The nature of modern EM necessitates a senior EM physician running a shift on order to cope with the vast number of UI that must be resolved. Combining the intensity of this role with an individual patient load is not feasible and departments should consider the initiation of a ‘captain of the ship’ ‘Fat Controller’ role along with a second senior EP to provide individual consultant level care to the sickest individuals who require senior input.

#8006 : Inappropriate Ipratropium ?

Preferred format : ePoster

Authors:

Gordon McNaughton (1), Christine Murphy (2), Emel Barbirou (2), Simon Hobson (3)

1. Emergency Medicine, Royal Alexandra Hospital, Paisley, UK., Glasgow, UK
2. , university of Glasgow, Glasgow, UK
3. , university of Glasgow, glasgow, UK

Keywords: Asthma, COPD

Abstract :

Title: Inappropriate Ipratropium ?

Introduction: Acute exacerbations of COPD and asthma are common presentations to the Emergency Department. Many will have received bronchodilator therapy prior to their attendance. Salbutamol is recommended as the inhaled bronchodilator of choice in all cases. The addition of a anticholinergic muscarinic antagonist (ipratropium) is not recommended in all cases. This was a questionnaire of ED doctors prescribing habits based on 4 common scenarios.

Methods: We gave clinical scenarios in a verbal questionnaire to doctors working in the Emergency Department. All grades were asked to give their choice of nebuliser drugs for each scenario. The scenarios were for adult patients and were designed around the British Thoracic Society guideline for COPD & the SIGN guideline for Asthma.

Scenarios were:

1: Moderate Exacerbation of asthma with no prior Rx.

2: Severe Exacerbation of asthma with no prior Rx.

3: COPD Exacerbation with no prior Rx.

4: Moderate Exacerbation of asthma with prior Rx with both salbutamol & Ipratropium

Results:

18 doctors completed the questionnaire comprising 12 juniors & 6 Consultants. The overall correct prescribing rate based on guidelines was 53 / 72 cases (74%) . Junior doctors had better adherence to guidelines (77 %) compared with their senior colleagues (67 %).

The two scenarios where salbutamol alone would be acceptable (scenarios 1 & 4) had 64% correct prescribing compared with the scenarios where combined nebulisers are recommended (2 & 3) 83%, suggestive of an tendency towards over prescribing of ipratropium.

Discussion: This study suggests that doctors working in Emergency Medicine often prescribe nebulised brochodilators outwith current guidelines. The most frequent error appears to be the addition of ipratropium to salbutamol despite guidelines supporting its use less frequently. Some of these combinations may be inappropriate. Side effects of muscarinc antagonists are well described and include dry mouth, allergic reactions and rarely paradoxical bronchospasm therefore they should be used within current guidance. Further prospective audit of actual prescribing is planned with feedback to staff in the ED to improve compliance with current guidance.

#8007 : I am still learning (Michelangelo)- A young case of atrial fibrillation leading to cardiac arrest.

Preferred format : ePoster

Authors:

Akhtar Munazah (1), Julian Webb (2), Inigo Rubio (3)

1. Speciality doctor/Research lead, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK
2. Emergency Medicine, East Surrey hospital/ Surrey and Sussex Trust., Redhill, UK
3. Associate Specialist Emergency Medicine, East surrey Hospital, Redhill, UK

Keywords: Anxiety, Palpitations, cardiac arrest.

Abstract :

Atrial fibrillation is one of the most common causes of abnormal heart rhythm and a major causes of stroke. The causes of atrial fibrillation are widespread , from Hypertension, valvular heart disease, thyrotoxicosis, excess alcohol consumption, diabetes mellitus and coronary heart disease .However majority of times no cause has been identified and this is still a concern.

Recent NHS England Statistics show that Prevalance for atrial fibrillation is 1.2% with increasing numbers every year. Although it affects adults of any age but incidence is more in elderly with a ratio of about seven (7) in hundred (100) people and more prevalant in males than females (source NHS England UK).

We present an extraordinary case of a thirty seven (37) years old female patient who recently presented to our emergency medicine departmet at east surrey hospital with onset of palpitaions from lunchtime onwards at a social gathering. She had a presyncopal episode for thirty (30) seconds but recovered immediately. She had no chest pain or Shortness of breath throughout and no associated symptoms otherwise. She was on oral contraception and had two small children. Her medical background was depression and anxiety for which she was on low dose citalopram.

On arrival she was in fast atrial fibrillation, heart rate of 150-160per minute and was shifted immediately to resusitation and managed accordingly. The rest of her vitals were stable . She was started on maintainance intravenous fluids and was on continuous cardiac monitoring.Her Arterial blood gas was normal. Her chest xry was normal.She was discussed with the cardiologist and it was decided to electrically cardiovert her. However she reverted back to sinus rhythm on her own within twenty minutes (20) of arrival in resus. She was monitored for the next four hours and remained stable with no furthur episodes .

Her laboratory tests were normal and expert cardiology advice was sought again.It was decided not to antocoagulate her as she scored low on CHA2 DS2-VASc score and a referral to arrythmia clinic was done.

She was discharged home with follow up advice .

Later on in the evening she went into cardiac arrest at home.She was intubated and shocked eight (8) times till return of spontaneous circulation(ROSC) by paramedics.She was taken to a speciality centre in London where she stayed in intensive cardiac unit for the next week. On extubation she had full recovery and an ICD was fitted. The interesting thing was that her inflammatory markers were persistantly high thereafter during her inpatient stay and she was treated with intravenous antibiotics as a precautionary measure.However no clinical sign of sepsis was noted .She also had an echocardiogram and CT scan of her coronaries which were normal. She was discharged home and has remained stable.

This was an interesting learning case and had opened discussions amongst physicians whether patients who present with new onset atrial fibrillation need inpatient twenty four (24) hours monitoring and specialist cardiac investigations before discaharge.

#8008 : An Audit of Foot and Ankle Problems in Diabetic Patients presenting to the Emergency Department

Preferred format : ePoster

Authors:

Katherine Kelly (1), Gordon McNaughton (2), Alice Unsworth (3), Andrew Connelly (4)

1. , University of Glasgow, Glasgow, UK
2. Emergency Medicine, Royal Alexandra Hospital, Paisley, UK., Glasgow, UK
3. , university of Glasgow, Glasgow, UK
4. , university of Glasgow, glasgow, UK

Keywords: Charcot joint, Diabetes, Ankle / Foot injuries

Abstract :

Title: An Audit of Foot and Ankle Problems in Diabetic Patients presenting to the Emergency Department

Introduction: Diabetic patients are at higher risk of foot and ankle problems especially if co-existant neuropathy is present. Even relatively minor injures could be the precipitating factor for serious problems such as a Charcot joint. It is recommended that diabetic patients have early access to appropriate foot clinics and podiatry services. We carried out a short audit to determine whether access to the foot clinic could be improved by undertaking a simple audit where we asked staff about the outcome of their patients including whether they were referred to the Diabetic Foot service.

Methods: A retrospective review of foot and ankle problems presenting to the ED combined with a prospective audit carried out after agreeing a protocol with the Diabetic Team to increase referrals to the Foot Clinic. In the retrospective audit patients were identified from the ED information system over a two week period. Non-diabetic foot & ankle problems were excluded. In the prospective audit over 2 weeks staff were asked to record the ID number of any diabetic foot or ankle problem seen in ED. Notes were subsequently reviewed to determine diagnosis & outcome

Results: In the retrospective audit 6 patients were identified, the diagnosis of a Soft Tissue Injury was made in 4 cases. All patients were discharged with no follow up. In the prospective audit 7 patients were identified . In this group 1 fracture was referred to orthopaedics and 6 others were noted to have soft tissue injuries however of these 3 were referred to the Diabetic Foot clinic.

Discussion: Patients with diabetes often present to the Emergency Department with relatively minor injuries or other foot and ankle problems. Inexperienced staff may be unaware of potential longer term problems e.g. ulceration, vascular insufficiency or Charcots joints. Following discussions with the Diabetic Team we have agreed that all patients who are known diabetics with foot and ankle problems should be able to access the Diabetic Foot service. The main limitation of the audit is that it was conducted by medical students on a short clinical atachment and as a result the numbers of patients studied were small. However if extrapolated over a year this would represent significant numbers of diabetic patients with foot and ankle problems presenting to the ED. The improved referral rates reflect a classic Hawthorne effect of auditing clinical practice and making clinicians consider other discharge outcomes. We are now working on a patient information leaflet and hope to use smart media such as QR codes to facilitate greater numbers of podiatry referrals in the near future.

#8009 : Improving psychiatric risk assessment for patients presenting in crisis to the emergency department at a London hospital

Preferred format : ePoster

Authors:

Frances Debell (1), Barbara Cleaver (1), Sachin Patel (1)

1. National Health Service, Imperial College Healthcare NHS Trust, London, UK

Keywords: risk assessment, liaison psychiatry, triage

Abstract :

Background: The Royal College of Emergency Medicine recommends that risk assessment by Emergency Department (ED) staff is integral to the optimal management of psychiatric presentations to the ED. The ED in question had an existing risk assessment tool which was poorly understood and underused. Referrals to psychiatry lacked consistency and patient safety was potentially at risk.

Method: A retrospective note review was carried out on ED referrals to Psychiatry in July 2015 (n = 41) and found that only 7% of the sample had a risk assessment by ED clinicians, with 0% use of the existing risk assessment tool. As a result, an intervention was planned. A new mental health risk assessment proforma (MHRAP) was designed with input from Liaison Psychiatry and ED staff. The proforma was abbreviated, focused on key factors relevant to decision-making, and risk categories were simplified to correlate with clear actions by ED staff. The MHRAP was introduced alongside multidisciplinary team teaching on the tool.

Results: On re-audit (n = 40), 48% of patients had a completed MHRAP, and 55% had either an MHRAP or a risk assessment documented in the notes. A significant proportion of referrals (18%) were by nursing staff at triage, and the MHRAP was only used for one of these referrals.

Discussion: Risk assessment recording for mental health patients was significantly improved by the introduction of a new streamlined MHRAP. Factors leading to this improvement were (i) successful collaboration between interested parties in designing and implementing the new tool; (ii) establishment of a rolling training programme to support use of the tool; and (iii) aiming not only to improve ED standards but also provide a user-friendly tool for staff. Feedback has already been obtained and the MHRAP amended to make the tool more workable for use at triage. One of the key next steps is to expand tailored training to triage nurses as this will maintain safety of vulnerable patients and speed flow through the ED.

#8010 : Audit of the management of buckle fractures of the wrist in the paediatric emergency department

Preferred format : Oral presentation

Authors:

Tudor Oman (1)

1. Paediatric Emergency Medicine, Royal Belfast Hospital for Sick Children, Belfast, UK

Keywords: buckle fracture, torus fracture, splint, paediatric

Abstract :

Buckle (torus) fractures of the wrist account for one third of all wrist fractures in children. These fractures are stable and heal well. Traditionally they have been treated in a Plaster of Paris with orthopaedic review.

Critical appraisal of the evidence revealed splints to be as effective as Plaster of Paris in pain control and healing as well as resulting in improved physical function, patient satisfaction and significant cost savings. Based on this we developed a new policy for the management of buckle fractures in children.

The aims of the policy were to improve management of buckle fractures, improve functional outcome, improve patient and parent satisfaction, reduce fracture clinic appointments and reduce the cost of treatment.

An audit of the changes made revealed that 35% (227) of all wrist injuries seen in the Emergency Department were buckle fractures. Of these 126 were treated in removable splints and 119 did not attend fracture clinic. Of those who were treated in a splint the re-attendance rate was 7% compared to 21% for those in a Plaster of Paris.

A Plaster of Paris costs £6-£7 per patient and requires 15-20 minutes of nursing time to apply, splints cost £2 and can be applied in seconds at the end of the consult. In addition these patient did not require a review appointment in the fracture clinic and demonstrated a marked reduction in re-attendance in the in the emergency department for Plaster of Paris complications. The result was a reduction in work load for the emergency department staff, a reduction in waiting times for affected patients, reduction in hospital attendances and a reduction in fracture clinic appointments. In addition the savings for treating patients with a splint for one year were an estimated £11,500.

A significant cost saving has been demonstrated in the reduction of fracture clinic appointments. Further adjustments to the policy will result in an estimated £20,000/year saving and better patient satisfaction. This policy demonstrates how a well-run journal club with critical appraisal can directly affect service provision and quality of care.

#8011 : Differential Effectiveness of Three Airway Management Techniques for Trapped Pre-hospital Patients: A Simulation Study

Preferred format : ePoster

Authors:

Cristian Boeriu (1), Luciana Rotaru (2), Teodora Sorana Truta (3), Emilia Turucz (3), Alina Boeriu (4)

1. Emergency Department, University of Medicine and Pharmacy, Tirgu Mures, ROMANIA
2. ED-SMURD, University County Hospital, Craiova, ROMANIA
3. Emergency Department, Mures County Emergency Hospital, Tirgu Mures, ROMANIA
4. Mures County Hospital, University of Medicine and Pharmacy, Tirgu Mures, ROMANIA

Keywords: Airway management, endotraheal intubation, video laryngoscope

Abstract :

Backround: Pre-hospital airway management is a critical skill, demanding a lot of training and experience. Difficult airway management may require various measures to be taken to ensure tracheal intubation. Few studies have evaluated the performance of airway devices and the time needed to achieve endotracheal intubation in trapped road traffic accidents victims.

Objective: The aim of the present study was to evaluate the effectiveness of two video laryngoscopes in comparison with conventional laryngoscopy, used for face-to-face endotracheal intubation of a manikin simulating an entrapped patient.

Material and methods: The study was designed as a prospective, controlled, randomized crossover trial.

The entrapped patient was simulated using an airway manikin placed on left front seat of a special prepared car for extrication training. Access to the patient was possible only through the front windshield that broke during the accident.

Twenty-five physicians out of which, fifteen emergency medicine specialists and ten emergency medicine residents were trained in the use of Storz C-Mac D-Blade DCI (Direct Coupled Interface) and Airtraq Prodol Mediteq video laryngoscopes, on a standard airway trainer manikin. Participants were then asked to perform tracheal intubation in a simulated trapped patient using video laryngoscopes in a typical out-of-hospital setting.

We compared intubation times and success rates for tracheal intubation by measuring the times to achievement of a view of the glottis, tracheal intubation, cuff inflation, first ventilation and tracheal tube position using a standard Macintosh laryngoscope or Storz C-MAC and Airtraq video laryngoscopes in a randomised order. GraphPad Prism 6 was used for statistical analysis of the collected data. A p value of less than 0.05 was considered statistically significant.

Results: Twenty-five emergency physicians, mean age 39 years, 15 female, 10 male took part in the study as volunteers. No significant differences in failure rates were found between the Macintosh and Airtraq laryngoscopes ($p = 0.38$) or the Storz C-MAC ($p = 0.072$). A better view of the larynx was obtained with both video laryngoscopes ($p < 0.05$) while the tracheal intubation, cuff inflation and first ventilation were not performed significantly faster when Airtraq was used.

Conclusion: The use of video laryngoscopes for face to face endotracheal intubation in simulated patients who are trapped in a vehicle involved in a road traffic accident does not improve efficacy of airway management. Times measured for endotracheal intubation were not significantly shorter and success rates were not higher compared with conventional laryngoscopy.

#8012 : Determination Of Knowledge, Attitudes and Behavior of Emergency Medical Service Employees About Ecg in Edıirne

Preferred format : ePoster

Authors:

OZAN OZISIK (1), MUSTAFA BURAK SAYHAN (2), OMER SALT (2)

1. EMERGENCY MEDICINE, TRAKYA UNIVERSITY MEDICAL FACULTY, edirne, TURKEY
2. EMERGENCY MEDICINE, TRAKYA UNIVERSITY MEDICAL FACULTY, EDIRNE, TURKEY

Keywords: Electrocardiogram, emergency medical technician, emergency medicine, paramedic

Abstract :

One of the most important factors in the management of emergent cardiac diseases is early diagnosis. In this context,one of the the most important helpful tool of emergency medical personnel in the diagnosis is electrocardiography. It is very important to have sufficient experience and knowledge of health personnel in the unit which they work. Correct record and interpretation of ECG is very important for the detection of forming life-threatening cardiac pathologies. In this study, it is aimed to investigate the knowledge, attitude and behavior of emergency mecial staff who work in Edirne and counties. This study was conducted through face to face interviews with paramedics and emergency medical technicians who work in112 emergency stations of Edirne and provinces. The data of questionnaire were entered into SPSS statistical analysis package and statistical analysis was performed. When the answers were evaluated on the questions asked about the recognition of and performing electrocardiogram; it was seen that; a majority of them evaluate themselves enough about electrocardiograph and electrocardiogram performing, while a relatively small part of them think that; they are not enough about evaluating electrocardiogram paper. But only two-thirds of them declared that; they perform electrocardiogram in a situation of abdominal pain that can be a sign of life-threatening acute inferior myocardial infarction. In light of the data obtained from this study; paramedics and emergency medical technicians who work in 112 stations of Edirne city center and towns know rhythm analysis, speed measurement, wave patterns and questions for assessing ST-segment abnormalities and electrocadiogram performing purpose of the, were correctly at high rates. The importance of continuity of education on this issue has arisen once again.

#8014 : Non accidental injuries(NAI) in children represents a high emotional impact on the medical staff implicated in their management

Preferred format : ePoster

Authors:

Nicoleta Cretu (1), Ben Teasdale (1)

1. Leicester Royal Infirmary Hospital , Leicester, UK, Leicester University Hospitals Trust, Leicester, UK, Leicester, UK

Keywords: non accidental injuries, children, subdural haematoma, social workers

Abstract :

Introduction

The NAI in children represents a significant Paediatrics Emergency Department(ED) presentations in UK, with 10% presentations in children under 2 years old.

Emergency Department presentation

A 7 months old male patient with head injury presented with his mother, after the GP advised her to present to the hospital.

History taken from the mother , having as chaperone one of our nurses, revealed that she left her baby in the basket with the other 4 children of hers(10 years, 6 years, 4 years and 2 years old) while she went to the toilet. When she arrived from the toilet, she found her baby on the sofa, with mark of head injury-left frontal haematoma. She couldn't give an explanation for the injury.This event was happening in the early morning, the presentation in the hospital being in the afternoon apx 2pm, after she discussed with her GP.

On examination: AVPU-A, haematoma left side of forehead, pupils equal reactive size 2 bilateral, ENT- both thympany membranes normal, throat examination-normal, no other bruises on the body examination,CRT <2 sec, HR=110bp, BP=80/40mmHg,T=36.7degrees, BM –normal, normal weight for his age.

ED management

The patient's mother was interviewed by Police crew and Social Workers team in the ED, before the patient was admitted on the Paediatrics Medical team.

Dipstick urine was normal. CT brain was organized and reported as Acute on Chronic subdural haematoma.

Paediatrics medical team management

x-ray scheletal survey showed multiple bones fractures, with different periods of healing.

The patient was referred to the Social Workers teams and it was started a Police investigation in the patient's family.

Discussion

The medical staff that was dealing with this patient, playing team , nurses or doctors, were very much impressed about this event. Even if they have years of experience, it is still difficult to deal with a NAI in such a small baby.

Conclusion

NAI in children, particular babies, represents a big challenge for the clinicians that are examining this type of patients.

The emotional implication for the medical staff for this patient was significant, even in the next days my colleagues giving phones to Paediatrics Medical Ward asking about the evolution of events for this patient. Some of us went to the ward to review the patient.

It is difficult to quantify the emotional effect of such a tragic case on medical and nursing staff in Emergency Department, and the psychological toll it takes on carers. More focus needs to be placed on debriefing of medical staff after such incidents.

Being non-judgemental and in the same time professional, we need to involve early the Social Workers and the Police in order to protect this children.

Dr Nicoleta Cretu, ACCS ST1 Emergency Medicine trainee

Dr Ben Teasdale, ED Consultant

Leicester Royal Infirmary Hospital, UK.

#8016 : “Just” A Bruise?

Preferred format : ePoster

Authors:

Ian Hong (1), Venkataraman Anantharaman (2)

1. Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
2. Emergency Medicine, Singhealth, Singapore, SINGAPORE

Keywords: ecchymosis, elder abuse, geriatrics

Abstract :

Introduction:

A large of proportion of elderly presentations to emergency departments (ED) are due to injuries sustained at home, with most injuries attributed to falls [1]. How many of these injuries have a component of elder abuse within is unknown. The prevalence of elder abuse is highly variable ranging from 3.2 to 27.5% [2]. This may be attributed in part to under-reporting of events, a low index of suspicion on the part of the physician and inaccurate histories at presentation. With the global elderly population estimated to hit 2 billion by 2050 [3], and recent census data from Singapore in 2015 on increasing number of elderly persons [4]; we need to be vigilant to these presentations to the ED. We present a case report of a patient with an apparent atraumatic sudden onset extensive of ecchymosis.

Case:

A 91 year-old lady presented to the ED for left forearm bruising that was noted on the morning of presentation by her stay-in caregiver. She reported that the extensive left forearm bruise had occurred overnight. Her son accompanying her reported that her arm was normal when he last visited her the night before. She denied any trauma or falls overnight and this was corroborated by the stay-in caregiver. She had good family support and was being cared for by the full-time stay-in caregiver.

On examination, she was alert and comfortable. The reported left forearm bruise extended from the proximal phalanx of the dorsum of the hand to the distal end of the humerus. The palmar surfaces of the hand were spared. The arm was oedematous but not tense, no obvious wounds were identified. In addition, swelling of approximately 3x3cm was noted on the dorsum of the wrist. No increased warmth was felt over the forearm. The affected areas were non-tender. Neurological examination of her left upper limb did not reveal any deficits. Sensation was intact. Flexion-extension mechanisms and power were normal and equal bilaterally. Radial pulse and capillary refill times were normal. Mild patchy bruising was also noted on the right forearm and over the big toes of both feet.

She was subsequently admitted and worked up with coagulation studies, which were normal. X-rays of the affected limb did not identify any fractures. She was later discharged well with an outpatient follow up appointment to Vascular Surgery for further evaluation of possible distal thromboembolic events.

Discussion:

We present this case to highlight the apparent lack of preceding events giving rise to a bruise of extensive proportions. The inconsistency in history and presentation should ring alarm bells and considerations of elder abuse as a cause of presentation. Whilst this case does highlight inconsistencies in history and presentation, no findings of elder abuse were elicited from either her family or caregiver. As numbers of elderly ED visits increase owing to population demographics, we need to be aware of such issues and raise them to relevant parties to ensure care for our patients is not compromised.

#8017 : Exploring the antibacterial effect of “chitosan lineer polymer” (celox™) in a experimental infected rat model

Preferred format : Oral presentation

Authors:

Ebru TONAY (1), Gurkan ERSOY (1), Basak BAYRAM (1), Osman YILMAZ (2), Aydan OZKUTUK (3), Ipek DUYGU (1), Selcuk TURKEL (3)

1. University of Dokuz Eylul, School of Medicine, Department of Emergency Medicine, University of Dokuz Eylul, Izmir, TURKEY
2. o University of Dokuz Eylul, School of Medicine, Department of Animal Research Center, University of Dokuz Eylul, Izmir, TURKEY
3. University of Dokuz Eylul, School of Medicine, Department of Microbiology, University of Dokuz Eylul, Izmir, TURKEY

Keywords: Emergency department, chitosan lineer polymer, wound infection

Abstract :

Background and Purpose:

Wound infections are stil a serioous problems of emergency departments since its rate is around 8-10%. We aimed to discuss if “Chitosan Lineer Polymer” (CLP) (a local hemostatic agent) has antibacterial effect of in a experimental infected rat model.

Methods:

Following ether anesthesia, dorsal site of 11 rat was shaved and a 2 cm long paravertbral incision was done. Later, the wound edges were clamped for 2 minutes to increase occurance rate of wound infection. In order to contaminate the cut area a suspension of Staphylococcus Aureus (10^8 CFU/ml) is poured onto it. Later, the rats are randomly divided into: CLP (n=6) (2 gr CLP poured into the cut area) and control, (n=5) groups (no treatment). The rats were observed for 6 days. Everyday, the cut areas, were observed by “wound evaluation scale” (WES) for: redness, odema, discaharge. Following sacrification tissue samples were taken and investigated for bacteriological analysis.

Results:

In CLP group 1 rat died. There was no significant difference for WES value of control group, however there was significant difference for the 1. and 5. days WES of CLP group (p=0.032) was (CLP group: 3+0.83 (3,0-5,0), Control Group: 6+1.73 (2,0-6,0)). On behalf of mean bacterial count of groups, there was no significant difference between groups (CLP group: $1x10^5$+354881, Control Group: $1x10^5$ +472154) ($p<0.05$). When WES is compared between groups on 1. and 5 days, we percieved that wound infection was more evident in CLP group since p=0.034.

Conclusions:

Here in this experimental infected rat model study, application of CLP into the wound area didn’t decrease the occurance rate of infection.

#8018 : Comparison of Tris-hydroxymethyl Aminomethane (Tham) and Sodium Bicarbonate (NaHCO3) on mortality in Metabolic Acidosis Caused by Methanol Toxicity in a Rat Model

Preferred format : Oral presentation

Authors:

Mustafa Bolatkale (1), Gurkan ERSOY (1), Sedat Yanturali (1), Osman YILMAZ (2), Necati Gokmen (1), M Can GIRGIN (3), Ahmet Cagdas ACARA (1)

1. University of Dokuz Eylul, School of Medicine, Department of Emergency Medicine, University of Dokuz Eylul, Izmir, TURKEY
2. o University of Dokuz Eylul, School of Medicine, Department of Animal Research Center, University of Dokuz Eylul, Izmir, TURKEY
3. Emergency department, Bingol State Hospital, Bingol, TURKEY

Keywords: metabolic acidosis, methanol, tris-hydroxymethyl aminomethane, sodium bicarbonate

Abstract :

Comparison of Tris-hydroxymethyl Aminomethane (Tham) and Sodium Bicarbonate ($NaHCO_3$) on mortality in Metabolic Acidosis Caused by Methanol Toxicity in a Rat Model

Background and Purpose

Methanol entoxication is a health problem in developing countries since metabolic acidosis is serious complication of it. It is anticipated to correct acidosis rapidly. We aimed to compare the effects Tham and $NaHCO_3$ theraphy in rats with metabolic acidosis, created by intragastric ingestion of methanol.

Methods

21 male rat was used following anesthesia. A Carotis was cannulated, esophagus penetrated with intracath, baseline blood gas sample was taken, and methanol was injected into the esophagus through the cannula. At the 30 minute of injection, blood gas samples were taken. Rats developed acidosis were randomly assigned to 3 groups:

Group A: Treated by infusion of Tham,

Group B: Treated by infusion of $NaHCO_3$

Group C: No therapy.

At 30 and 90 minutes of therapy, blood samples were drawn again. At the 120 minute, the study was over and mortality rates were investigated.

Results

Four rats in group B, and 6 in C dead before the study was over. All were alive in Group C, results were statistically significant. When Group A and C were compared, there was no statistically significant difference in terms of body temperature, blood pressure and heart rate, PaO_2, Na^+, K^+ and base deficit values.

For pH values of group A and B, there was no statistically significant difference at 30^{th} and 60^{th} minutes (Mann-Whitney U, $p< 0.05$). However, there was a meaningful difference between their baseline pH values (Mann-Whitney U, p:0,01). While the average baseline pH value of Group C was 7,35±0,08, it was 7,28±0,01 in Group A. When compared the lifetimes of rats in Group A and B, there was statistically significant difference ($p<0,05$) (Group A was better), however no difference was detected between Group B and C ($p>0,05$).

Conclusions

We percieved that rats in group lived longer compared to $NaHCO_3$ and control groups.

#8019 : The impact of meterological events on ST segment elevation myocardial infarction

Preferred format : Oral presentation

Authors:

Afsin Emre Kayipmaz (1), Orcun Ciftci (2), Cemil Kavalci (1)

1. Department of Emergency, Baskent University Faculty of Medicine, Ankara, TURKEY
2. Department of Cardiology, Baskent University Faculty of Medicine, Ankara, TURKEY

Keywords: Acute coronary syndrome, air pollution, weather

Abstract :

As an important source of morbidity and mortality, ST segment elevation myocardial infarction is known to occur on the basis of certain risk factors including diabetes, hypertension, hyperlipidemia, smoking, and family history. In addition to these traditional risk factors, cocaine use, physical or emotional stress, traffic, and air pollution have also been shown to be triggers of myocardial infarction in some occasions. In the present study we aimed to investigate the impact of certain meteorological and air pollution parameters on ST segment elevation myocardial infarction (STEMI).

We conducted the present study in a retrospective manner after obtaining ethics committee approval. We included patients who were diagnosed with STEMI after being presented to our emergency department with symptoms suggestive of acute coronary syndrome between April 2011 and December 2015. We obtained demographic and medical data including age, sex, risk factors, and co morbid conditions with the help of the patient information management system of our hospital. We obtained certain meteorological data of Ankara province pertaining to the study period, including maximum-minimum and average air temperature (°C), humidity (%), sea level pressure (hPa), and precipitation type and status (rain, snow, fog, storm, hail). We also accessed air pollution surveillance data (Particulate matter 2.5 and 10 (PM2.5 and PM10), Sulphur dioxide (SO2), Nitric oxide (NO), Nitrogen dioxide (NO2), Nitrogen oxide (NOx), Carbon monoxide (CO)).

The normality of distribution of continuous variables was tested by Kolmogorov-Smirnov test. Mann-Whitney U test was used for comparison of two independent groups of variables with a non normal distribution and Chi-square test was used to assess relation between categorical variables. Generalized additive regression models were built to investigate effects of main and lag effects of meteorological variables on STEMI. Lag effect analyses and models were constructed. A p value < 0.05 was accepted as statistically significant.

During a period of 1709 days, a total of 246 STEMI cases were presented to our emergency department. Males constituted 80.1% (n=197) of the cases and females 19.9% (n=49). The mean age of the study subjects was 58.58 ± 12.61 years. STEMI cases presented at 220 (12.9%) of 1709 study days.

We did not detect any significant difference between weather conditions during days with and without STEMI presentation ($p>0.005$). Weather events (rain, snow, fog, storm, hail) were not significantly correlated to STEMI events ($p>0.005$).

According to a 4-day lag analysis to determine the effect of variables related to weather condition on STEMI occurrence, there were no significant differences with respect to maximum, average, minimum temperatures, as well as in air pressure. On the other hand, minimum humidity was significantly correlated to STEMI presentations (Odds Ratio (OR) [95% Confidence Interval (CI)]=0,986 [0,972-0,999], p=0,036). Among air pollution parameters, on the other hand, only nitric oxide ((OR)[95%CI]=0,992 [0,987-0,998], p=0,006) and nitrogen oxide ((OR)[95%CI]=0,994 [0,990-0,999] p=0,010) were significantly correlated to STEMI presentation in Lag 2 analysis.

In conclusion, weather events were not correlated to STEMI presentation whereas minimum humidity, nitric oxide, and nitrogen oxide were significantly correlated to STEMI presentations in Lag 2 analysis.

#8020 : Nephrolithiasis or renal artery thrombosis?

Preferred format : ePoster

Authors:

incifer kanbur (1), behlul bas (1), sila sadillioglu (1), hakan topacoglu (1)

1. emergency department, istanbul research and training hospital, istanbul, TURKEY

Keywords: thrombosis, renal artery, nephrolithiasis

Abstract :

Background: Renal artery thrombosis (RAT) is a rare condition, with a poor prognosis, which can lead to renal infarction (RI). The frequency of renal infarction is higher than reported: Clinical diagnosis of renal infarction is frequently missed or delayed because the patients present with abdominal or flank pain, which mimic other, more common conditions, such as nephrolithiasis and pyelonephritis.

Case presentation: A 68-year-old male patient with diabetes and hypertension history, who had a primary percutaneous coronary intervention and stent placement 6 months ago because of an acute myocardial infarction, was admitted to our Emergency Department (ED) with flank pain on the left side. His blood pressure was 175/80 mmHg, his pulse 74/minute, oxygen saturation 99%, and fever 36.8 degrees Celsius.At his physical examination he only had costovertebral angle tenderness on the left side. Of his parameters, only his troponin level (0.22ng/mL) and blood glucose (161mg/dL) were high. In his urinalysis he had glucose and erythrocytes.In the contrast enhanced abdominal CT there was a 20 mm thrombosis formation at the left proximal renal artery, which was reaching the abdominal aorta. The patient was interned in the Urology Department with a diagnosis of renal artery occlusion. The interventional radiologist applied a balloon expandable stent in the renal artery as well as thrombolytic therapy.

Conclusion: In a patient with flank pain who has a high risk of atheroembolism, the differential diagnosis of renal artery thrombosis should be considered.Computer tomography angiography could be used to prove the diagnosis in EDs. An early detection of renal artery thrombosis can save the kidney from injury, improving the quality of the patient’s life.

#8021 : A case of cerebral vein thrombosis

Preferred format : ePoster

Authors:

incifer kanbur (1), behlul bas (1), sila sadillioglu (1), hakan topacoglu (1)

1. emergency department, istanbul research and training hospital, istanbul, TURKEY

Keywords: thrombosis, cerebral vein, dural sinus

Abstract :

Background: Cerebral vein and dural sinus thrombosis is less common than most other types of stroke, but can be more challenging to diagnose. Of all cerebral sinus thromboses, 5 to 20 % occur in connection with pregnancy or childbirth, or during the puerperium. The risk is highest during the first month following delivery.

Case presentation: A 23-year-old female patient with no history of illness was admitted to our hospital by ambulance after experiencing near syncope. Her blood pressure was 130/70mmHg, her pulse 76/minute, her oxygen saturation 99% and her fever 36.3 degrees Celsius. She had a Glasgow coma scale score of 15. One day before she had experienced loss of motor function on her right side. There was no evidence of pathology in her physical examination. She was only complaining about headache and weakness. One week before she had had a Caesarian section and she was now breastfeeding. Her blood panel and biochemical parameters were normal. There wasn’t any pathology in her cranial computed tomography. As a generalized tonic clonic seizure occured during her hospital monitoring, diffusion weighted magnetic resonance imaging was applied, and a diffusion limitation was detected on the left precentral gyrus. Because of the atypical localization, sinus venous thrombosis was considered as a prediagnosis. The Neurology Department was consulted and the patient was interned. The MR venography conducted in the Neurology Department showed no flow in the left vein of Trolard or in the superior sagittal vein.

Conclusion: In a postpartum patient with seizures, CVT should be considered as a differential diagnosis. Due to the widespread use of diffusion weighted magnetic resonance imaging in the Emergency Department, it is possible to detect and diagnose CVT early, which can be lifesaving for the patient.

#8022 : Intestinal tuberculosis mimicking colon cancer; a case report

Preferred format : ePoster

Authors:

Sukru Arslan (1), Erdem Karadeniz (1), Bünyami OZOGUL (1), Esra Disci (1), MESUT YUR (2), Atıf BAYRAMOGLU (3), Sabri Selcuk Atamanalp (1)

1. General Surgery, Ataturk University Medical Faculty , Erzurum, TURKEY
2. General Surgery, Ataturk University Medical Faculty , Erzurum, TURKEY
3. Department of Emergency, Ataturk University Medical Faculty , Erzurum, TURKEY

Keywords: intestinal tuberculosis, colon canser

Abstract :

Introduction

Tuberculosis is an important health problem all over the world. Intestinal tuberculosis constitutes 1% of the whole tuberculosis cases although it is extremely rare. The prevalence of colon tuberculosis is a lot fewer.

The Case

Fifty-eight-year-old female patient applied to the Emergency Service with the complaints of stomachache, abdominal swelling and inability to defecate. In her history, it was detected that she had weakness, lack of appetite and loss of weight that continued for the past 1 year. In the physical examination, it was detected that she had sensitivity especially in lower-right quadrant, *m. defense* and doubtful rebound. Her laboratory tests revealed that the white blood cell count was 13200/mm3. The standing empty abdominal radiograph revealed that there were air-fluid levels. Urgent abdominal tomography revealed that there was increase in the thickness of the colon proximal, which was partly out in the localization where terminal ileum was connected to cecum. Intestinal obstruction was considered for the patient and urgent surgery was planned.

There was mass lesion observed in the stomach radiography in the cecum-out coming colon localization in the exploration. This mass lesion was invasive to the retroperitoneum, which included the right ureter. Resection was not considered, and *ileotransverse* by-pass was applied. Biopsy material was taken from the lymph nodules existing in the meso.

The patient, who did not have any problems, was discharged from hospital on 6^{th} post-operational day. In the pathological examination of these lymph nodules, granulomatous changes that included caseification necrosis were observed; and therefore, it was decided that this was colon tuberculosis, which had caused intestinal obstruction. This diagnosis was confirmed with the laboratory tests that were applied later.

Conclusion

Although tuberculosis most frequently holds the lungs, it is also possible that it may hold any organ in the gastrointestinal system from the mouth to the rectum. The tuberculosis that holds the colon may be confused with the inflammatory diseases of the intestines, intestinal malignity, and non-specific infectious diseases of the intestines. Colonoscopic examination must be conducted especially in endemic areas for the patients for whom colon tuberculosis is doubted. In patients who arrive with intestinal obstruction, which was also the case in our patient, resection must be applied to the lesion if it is suitable for this; and if not, by-pass must be conducted in surgeries conducted in urgent conditions.

#8024 : Knowledge of risk factors for venous thromboembolisms and the use of low molecular weight heparin in the emergency departement

Preferred format : Oral presentation

Authors:

Annelies Vandewege (1), Lien Mestdagh (2), Tom Schmitz (1), Ives Hubloue (1)

1. Emergency Departement, UZBrussel, Brussel, BELGIUM
2. Emergency Departement, UZbrussel, Brussel, BELGIUM

Keywords: LMWH, VTE, Trauma Care, LLI, Profylaxis

Abstract :

INTRODUCTION

Low molecular weight heparin (LMWH) are commonly prescribed in the emergency department (ED). Not prescribing LMWH for patients with lower limb immobilization (LLI) and at risk for venous thromboembolic events (VTE) can be life-threatening. The incidence of VTE in patients with LLI is estimated between 5 - 39%. The known risk factors for VTE are easily misinterpreted we noticed in our departement.

METHODS

Participants were asked about their prescribing behavior: the influence of risk factors for VTE, the level of evidence and the need for dose reduction in patients with renal failure.

Ethical committee was obtained and a online questionnaire was created.

RESULTS

75 questionnaires were filled out by physicians, both attendings (65,3%) and residents (32%), working at EDs.

89% of the respondents does not differentiate immobilization of grade III distortions from fractures when prescribing LMWH and 14,9% indicates being influenced by the type of immobilization (splint versus circular cast).

Withholding treatment in patients with known risk factors, other than the immobilization itself, was seen for known risk factors: hormonal therapy (28%), history (24%) and pregnancy (22.6%). Of the respondents 88% recognized that BMI is a risk factor.

56% wrongly indicated being influenced by the patient’s gender in their decision and 4% indicated using the age of 60 or higher as the cut-off for prescribing LMWH.

Renal insufficiency was not taken into account in 39.1% of the responders.

CONCLUSION

It is important to only initiate VTE-prophylaxis in patients where benefits outweigh the possible risks.

Based on the results of our multi-center survey, we can conclude that a lot of physicians aren’t familiar with the correct use of LMWH in the ED. It seems that the role of gender and age is not well known. More surprisingly, more than half of the respondents does not consider LLI itself as risk factor. In contrast, about one fourth of the physicians would not prescribe LMWH even though the patient has a proven risk factor for VTE.

Dose reduction is an important issue in patients with severe renal insufficiency and is apparently easily forgotten.

Even though there is extensive research available about the risk factors for development of VTE, a lot of physicians seem to be having difficulties identifying patients at increased risk. In addition, most research available about the subject is not applicable on the population encountered in the ED.

The decision pathway is not difficult so flowcharts could easily be created to limit the possibility of errors in interpretation of the risk factors.

Further research is planned based on the results of this research, an international multi-center study is planned to follow this national enquiry.

#8027 : Crohn's disease with acute appendicitis: a case report

Preferred format : ePoster

Authors:

Bünyami OZOGUL (1), Sukru Arslan (1), Esra Disci (1), Erdem Karadeniz (1), MESUT YUR (2), Atıf BAYRAMOGLU (3), Mehmet Ilhan Yildirgan (1)

1. General Surgery, Ataturk University Medical Faculty , Erzurum, TURKEY
2. General Surgery, Ataturk University Medical Faculty , Erzurum, TURKEY
3. Department of Emergency, Ataturk University Medical Faculty , Erzurum, TURKEY

Keywords: Crohn's disease, acute appendicitis

Abstract :

Introduction

Crohn’s Disease is confused with the appendicitis in young patients. Especially between 15-35 years of age, Crohn’s Disease shows similar clinical findings with acute appendicitis in cases that have terminal ileum involvement. Appendicitis is observed frequently in the same age group patients. However, the two diseases being observed together are extremely rare. We would like to present a case that was pre-diagnosed with acute appendicitis and then was diagnosed with Crohn’s Disease.

The Case

Thirty-three-year-old male patient applied to the Emergency Service with stomachache complaint. In his history, he told that the stomachache started 2 days ago around the belly and localized to the lower-right quadrant. At first, he had qualm, but not vomiting. He also mentioned that he had epigastric pain, which lasted for nearly one year, and sometimes diarrhea. In his physical examination, it was determined that he had sensitivity in his lower-right quadrant, muscular defense and rebound. The white blood cell count of the patient was 14000/mm3. In the abdominal ultrasonography, it was reported that he had acute appendicitis. It was observed that the diameter of the appendix of the patient was increased, and was gangrene. There was mural thickening at a further level in the terminal ileum. In addition, there was increase in the thickness of the terminal ileum meso, and lymph nodules. In this case, appendectomy was applied to the patient, and biopsy material was taken from the lymph nodules. The patient was re-operated because there was abscess in the incision area in the postoperative 3rd week. It was observed that the terminal ileum and cecum wall thickness were increased, and there was a perforation. In this situation, right hemicolectomy was applied to the patient. In postoperative period, no complications developed in the patient and he was discharged from the hospital on 6th day.

Conclusion

Acute appendicitis and Crohn’s Disease are among the causes that lead to acute abdomen, and may cause confusion in diagnosis. They are observed together extremely rarely. There is the possibility of developing fistula and obstruction after appendectomy.

#8028 : Eight years (2008-2016) in-hospital Basic Life Support Training for all nurses: We keep going!

Preferred format : ePoster

Authors:

Thierry Schissler (1), Bart Lesaffre (1), Ellen Deschacht (2)

1. Emergency Department, AZ Sint Jan Brugge Oostende, Oostende, BELGIUM
2. , AZ Sint Jan Brugge Oostende, Oostende, BELGIUM

Keywords: Training, Basic Life Support, Education

Abstract :

Objective

The first 2 links in the “Chain of survival”, and thus cardiopulmonary resuscitation training, are mandatory for a good patient outcome. Poor knowledge and skill retention following resuscitation training has been documented over the past 25 years.

We developed a basic life support training program for clinical nurses and we composed a six-stage plan based on the ERC algorithm for in-hospital resuscitation.

We defined two quality standards (which we had to modify, as the guidelines changed in 2010) to measure if there was an improvement in the resuscitation skills after four sessions.

Methods

The whole nursing staff (ca. 400 individuals) in our hospital had to register for a fourth obligatory basic life support session, with the consent of the Board of Directors.

The performance of the nurses was recorded on an Ambuman manikin (with Ambu CPR software version 2.3.9), lying in a hospital bed.

Several variables were recorded, e.a. the correct execution of the sequence of the six-stage-plan, the compression rate, the compression depth and the ventilation volume. Using two quality ‘standards’, we compared the results session.

Results

The attendance to those sessions is significantly lower when the nursing staff had to enrole themselves.

For the first two sessions (2005 guidelines), we saw a compression depth between 40mm and 50mm was achieved by 120 or 37% (vs 95 or 31% in first session) ($p=0,09$) (fig. 2); a compression rate between 80/min and 120/min was achieved by 254 or 79% (vs 221 or 72% in first session) ($p=0,03$) (fig. 3); a ventilation volume between 400ml and 700ml was achieved by 148 or 46% (vs 97 or 31% in first session) ($p<0,001$) (fig. 4).

Optimal resuscitation (defined as a combination of those three determinants) was achieved by 44 or 14% (vs 25 or 8% in first session) ($p=0,03$). Satisfying resuscitation (defined as a combination of a compression rate between 70/min and 130/min, a compression depth more than 35mm and a ventilation volume more than 300ml) was achieved by 228 or 71% (vs 98 or 32% in first session) ($p<0,001$) (fig 5.)

For the third, fourth, fifth, sixth and seventh session, we defined optimal resuscitation as a compression depth >50mm, compression rate 100-120/min and ventilation volume between 400ml and 700ml. We defined satisfying resuscitation as a compression depth >45mm, compression rate 90-130/min and a ventilation volume more than 300ml. The 2016 session showed that 70% achieved a satisfying compression depth, 95% achieved a satisfying compression rate and 96% achieved a satisfying ventilation volume. This is, so far, our best result in 8 years.

Using Fisher exact test, we found a significant improvement ($p<0,001$) for ventilation volume and for satisfying resuscitation.

Conclusion & perspectives

We need to thank the team of BLS instructors for their efforts to keep the resuscitation knowledge of the whole nursing staff at this level. We will continue to support this project on director’s level.

#8029 : The Comparison of the Effectiveness of Silibinin and Resveratrol in Preventing Alpha-Amanitin Induced Hepatotoxicity

Preferred format : Oral presentation

Authors:

Aynur Sahin (1), Oktay Kesici (2), Yesim Tuncok (2), Sule Kalkan (2), Bekir Ugur Ergur (3), Ilkay Aksu (4), Mualla Aylin Arici (2)

1. Department of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, TURKEY
2. Department of Medical Pharmacology, Dokuz Eylul University, Faculty of Medicine, Izmir, TURKEY
3. Department of Histology and Embryology, Dokuz Eylul University, Faculty of Medicine, Izmir, TURKEY
4. Department of Physiology , Dokuz Eylul University, Faculty of Medicine, Izmir, TURKEY

Keywords: α-AMA, resveratrol, hepatotoxicity, silibinin

Abstract :

Introduction: The alpha-amanitin (α-AMA) contained in mushrooms of the species *Amanita phalloides* lead to intoxications resulting in hepatotoxicity and death. Although silibinin is used in the treatment of α-AMA intoxication, morbidity and mortality associated with liver failure are high. The aim of our study was to investigate the effectiveness of resveratrol (R), a known antioxidant and hepatoprotective agent, in the treatment of α-AMA intoxication and to compare it with Sil.

Method: The acute hepatotoxic dose of α-AMA elevating liver function tests (AST and ALT) and causing liver damage in Balb/c mices was determined at 1.4 mg/kg (intraperitoneal, i.p.). Our experimental groups were 1: Control: α-AMA (n=12), 2: α-AMA+dimethylsulfoxide (DMSO, Solvent of R and Sil, n=8), 3: α-AMA+SR (α-AMA and simultaneous 30 mg/kg R i.p. n=8), 4: α-AMA+12R (30 mg/kg R 12 h after administration of α-AMA, n=10), 5: α-AMA+24R (30 mg/kg R 24 h after administration of α-AMA, n=10) and 6: α-AMA+Sil (α-AMA and simultaneous 5 mg/kg Sil, n=10). R was administered at 12-h intervals and Sil at 6-h intervals over 48 h in the experimental groups. Following 48-h observation, mices were sacrificed under ether anesthesia. Liver function tests and liver damage scores were evaluated. ANOVA, and the Tukey-Kramer multiple comparison test was used for the statistical analysis. $P<0.05$ was regarded as significant.

Results: AST values were significantly lower in the SR (2191.0 ±281.2 U/L) and 12R (2403.0 ±726.1 U/L) groups compared to the control group (7947.0 ±1335.0 U/L) ($p<0.01$ and $p<0.01$). ALT values were also lower in the SR (1335.0 ±570.4 U/L) and 12R (1542.0 ±537.3 U/L) groups compared to the control group (6454.0 ±1604.0 U/L) ($p<0.05$). Histopathological liver damage scores decreased significantly in the SR (1.4 ±0.2), 12R (1.3 ±0.2), and 24R (1.4 ±0.2) groups compared to the control group (2.6 ±0.2), ($p<0.01$, $p<0.001$, and $p<0.001$ respectively). Histopathological damage score in the Sil group was 1.8 ±0.2. There were no statistically significant difference between the R and Sil groups in terms of AST and ALT values or histopathological damage score ($p>0.05$).

Conclusion: Resveratrol was effective for reversing hepatotoxicity when used simultaneously or early after the α-AMA intoxication. Silibinin, used as a traditional antidote, but it was not successful in reversing hepatotoxicity. Resveratrol is a promising potential antidote in the prevention and treatment of α-AMA-induced hepatotoxicity.

This study was supported by the Scientific and Technological Research Council of Turkey (114S927).

#8031 : Acute Neuropsychiatric Syndrome Managed Like Status Epilepticus; Methylphenidate Intoxication

Preferred format : ePoster

Authors:

ALI YURTSEVEN (1), MEHMET ARDA KILINÇ (2), EYLEM ULAŞ SAZ (1)

1. Pediatric Emergency Medicine, Ege University School of Medicine, Izmir, TURKEY
2. Pediatric Intensive Care Medicine, Ege University School of Medicine, Izmir, TURKEY

Keywords: Intoxication . Methylphenidate . Management

Abstract :

The authors describe a 2 years old boy presented to the emergency department (ED) about 2 h after accidentally ingestion of 3 Methylphenidate (SR) 18-mg tablets (54 mg Concerta(®)). At admission he had neuropsychiatric signs and symptoms such as; severe agitation, hyperactivity, irritability and delusion. Physical examination revealed that his body temperature of 36.9C, pulse 200/min and blood pressure 140/100 mmHg. The patient also had hyperreflexia and his ECG showed sinus tachycardia. Beside neuropsychiatric signs cardiovascular effects include hypertension and tachycardia occured. Elevated cardiac troponin T has been detected on laboratory assesment with a value of 0.022 ng/mL (normal value < 0,013ng/ml). Since the present case evaluated as moderate to severe toxicity, ingestion is recent, the patient is not vomiting, and is able to maintain airway activated charcoal was administered. The goals of management this toxicity are to control agitation and prevent or limit end organ toxicity. To control CNS and cardiovascular stimulation, he received

received midazolam (0,1 mg/kg) without improvement in his symptoms. Multiple doses of intravenous

midazolam,administered for a total of 1 mg/kg which provided some transient resolution of his symptoms. The child’s symptoms recurred within 6 hours after ingestion. Continuous midazolam infusion (0,05mg/kg/h) was initiated following loading dose with a 0.2 mg/kg. The infusion was weaned by 0,01 mg/kg every hour to off. He did not have any recurrence of symptoms with a normal cardiac troponin T level and was discharged after 36 h of observation.

The authors describe a 2-y-old boy of methylphenidate intoxication in which continuous midazolam infusion was used successfully to abate both CNS and cardiovascular symptoms without respiratory compromise.

#8032 : Health-Related Quality Of Life (HRQOL) in patients with moderate and severe trauma in Hong Kong: 4 year prospective multicentre cohort study

Preferred format : Oral presentation

Authors:

Colin A Graham (1), Kevin KC Hung (1), Janice HH Yeung (2), Wai S Poon (3), Hiu F Ho (4), Chak W Kam (5), Timothy H Rainer (6)

1. Accident and Emergency Medicine Academic Unit, Chinese University of Hong Kong, Hong Kong, CHINA
2. Trauma & Emergency Centre, Prince of Wales Hospital, Hong Kong, Hong Kong, CHINA
3. Department of Surgery, Chinese University of Hong Kong, Hong Kong, CHINA
4. Accident and Emergency Department, Queen Elizabeth Hospital, Hong Kong, CHINA
5. Accident and Emergency Department, Tuen Mun Hospital, Hong Kong, CHINA
6. Welsh Heart Research Institute , Cardiff University, Cardiff, UK

Keywords: Disability, Quality of Life, Trauma, Wounds and injuries

Abstract :

Introduction

Trauma care systems aim to reduce death and to improve quality of life and functional outcome in trauma patients. The long term quality of life has not been well documented in Chinese patients with moderate to severe trauma. The aim of this study was to evaluate post-injury health-related quality of life (HRQOL) in patients with moderate and major trauma over four years in Hong Kong.

Participants and methods

This was a multicentre, prospective cohort study using data from the trauma registries of three regional trauma centres in Hong Kong. Trauma patients with an ISS≥9 and aged≥18 years were included. Main outcome measures included the number of patients with physical component summary (PCS) score and mental component summary (MCS) scores of the Short-Form 36 (SF36) for health status. Good outcomes were defined as patients reaching the Hong Kong norm for PCS, namely >52.83.

Results

From 1st January 2010 to 30th September 2010, 400 patients were recruited to the study (mean age 53.3 years; range 18-106; 70% male; ISS 9-5, N=139; ISS≥16, N=261). The proportion of surviving responders (66/143) reaching a PCS equivalent to the Hong Kong population norm was 46.2%, and 16.5% (66/400) of the total original patients. As there were no statistically significant differences between surviving responders and non-responders at baseline, it is reasonable to assume that 46.2% of the 179 surviving non-responders (N=83) also reached the HK population norm. If so, then the total number of cases reaching the HK population norm for PCS is 66+83=149, i.e. 37.2% of the original 400 patients.

Conclusion

Four years after injury, patients with moderate and major trauma have a 17 to 37% chance of reaching the Hong Kong normal PCS (52.83).

Acknowledgement

This study was supported by Health and Health Services Research Grant 07080261 and Health and Medical Research Fund Grant 10110251.

#8033 : Supporting isolated patients who test negative for the Ebola Virus Disease: a descriptive analysis of a novel equitable strategy for providing capped free healthcare in Sierra Leone

Preferred format : Oral presentation

Authors:

Edward Blandford (1), Hooi-Ling Harrison (1), Cecilia Kamara (2), Samuel Seisay (2), Daniel Youkee (1), Aminata Alfsatu (2)

1. , King's Sierra Leone Partnership, London, UK
2. , Connaught Government Hospital, Sierra Leone, Freetown, SIERRA LEONE

Keywords: Ebola, free health care, sierra leone

Abstract :

Background

Due to the undifferentiated presentation of EVD during the recent outbreak in West Africa, some suspect patients were isolated who subsequently tested negative for the virus. In Sierra Leone, a country in which 69% of healthcare is funded (1) through out of pocket payments, these patients were effectively made destitute as a result of stigmatization and destruction of personal possessions. A number of factors highlighted a need to provide emergency care pathways for these patients. This paper describes the design and implementation of a novel initiative to provide a level of free healthcare to EVD negative patients at Connaught Hospital, the main government hospital in Sierra Leone.

Methods and Findings

Following review of existing global schemes and a consultation period, data was collected from a random sample of 50 patients requiring admission to Connaught Hospital, after presentation to the A&E, in order to estimate routine aggregate costs for investigations and medical treatment. This data was used to set a funding cap of 260,000 Leones (approx GBP £35), which was calculated to provide free investigations and treatment for 98% of cases. In total, free care was provided to ~300 eligible patients over a 6 month period. The major boundaries to implementation were absence of strong patient advocacy, and lack of hospital resources: both preventing patients receiving the full complement of prescribed services.

Conclusions

In resource-poor settings such as Sierra Leone, where free healthcare is provided in incremental packages alongside the existing out-of-pocket payment system, it is essential for successful implementation that new initiatives are embedded within existing systems. This paper presents a number of lessons learned in the design and implementation process of a novel capped free healthcare system and proposes an extended approach to provide on-going tertiary care to EVD survivors and other vulnerable groups in Sierra Leone. This work also proposes a generalizable mechanism to support patients and strengthen healthcare systems in the transitional phase that follows other such humanitarian crises.

#8034 : Functional outcome in patients with moderate and severe trauma in Hong Kong: 4 year prospective multicentre cohort study

Preferred format : Oral presentation

Authors:

Colin A Graham (1), Kevin KC Hung (1), Janice HH Yeung (2), Wai S Poon (3), Hiu F Ho (4), Chak W Kam (5), Timothy H Rainer (6)

1. Accident and Emergency Medicine Academic Unit, Chinese University of Hong Kong, Hong Kong, CHINA
2. Trauma & Emergency Centre, Prince of Wales Hospital, Hong Kong, Hong Kong, CHINA
3. Department of Surgery, Chinese University of Hong Kong, Hong Kong, CHINA
4. Accident and Emergency Department, Queen Elizabeth Hospital, Hong Kong, CHINA
5. Accident and Emergency Department, Tuen Mun Hospital, Hong Kong, CHINA
6. Welsh Heart Research Institute , Cardiff University, Cardiff, UK

Keywords: Disability, Functional Outcome, Trauma, Wounds and injuries

Abstract :

Introduction

Trauma care systems aim to reduce death and to improve quality of life and functional outcome in trauma patients. It is well documented that trauma systems result in improved survival after injury, yet there is little data on post-trauma functional outcome. Such evaluation of functional recovery is important as this will allow comparison with other settings, will help evaluate the impact and effectiveness of trauma systems as a whole, and may provide prognostic information for healthcare workers and patients. The aim of this study was to evaluate baseline, discharge, six month and 1, 2, 3 and 4 year post-trauma functional outcome and predictors of optimal functional outcome in Hong Kong.

Participants and methods

From 1st January to 30th September 2010 patients were recruited to a prospective multi-centre cohort study of trauma patients and then followed up for four years to 30th September 2015. The study was conducted in three trauma centres in Hong Kong. Adult patients aged ≥18 years with ISS≥9, entered into the trauma registry, and who survived the first 48 hours of injury were included. The main outcome measures included theextended Glasgow Outcome Scale (GOSE) and SF36.

Results

During the study, 400 patients (mean age 53.3 years; range 18-106; 69.5% male) were recruited. There were no statistically significant differences in baseline characteristics between responders (N=143) and surviving non-responders (N=179). Only 81/400 (20.3%) cases reported a GOSE≥7. If non-responders had similar outcomes to responders, then the percentages for GOSE≥7 would rise from 20.3% to 45.6%. Univariate analysis showed that poor functional outcome at 48 months was significantly associated with admission to ICU (OR 2.267), ISS 26-40 (OR 3.231), baseline PCS on SF36 testing (OR 0.940), one-month PCS (OR 0.933), 6-month PCS (OR 0.904) and 6-month MCS on SF36 testing (OR 0.96).

Conclusions

At 48 months after injury, 45% of patients sustaining moderate or major trauma in Hong Kong had an excellent recovery. Admission to ICU, ISS 26-40, baseline PCS, one-month PCS, 6-month PCS and 6-month MCS predict 4-year functional outcome.

Acknowledgement

This study was supported by Health and Health Services Research Grant 07080261 and Health and Medical Research Fund Grant 10110251.

#8035 : Probability of return to work after moderate and severe trauma in Hong Kong: 4 year prospective multicentre cohort study

Authors:

Colin A Graham (1), Kevin KC Hung (1), Janice HH Yeung (2), Wai S Poon (3), Hiu F Ho (4), Chak W Kam (5), Timothy H Rainer (6)

1. Accident and Emergency Medicine Academic Unit, Chinese University of Hong Kong, Hong Kong, CHINA
2. Trauma & Emergency Centre, Prince of Wales Hospital, Hong Kong, Hong Kong, CHINA
3. Department of Surgery, Chinese University of Hong Kong, Hong Kong, CHINA
4. Accident and Emergency Department, Queen Elizabeth Hospital, Hong Kong, CHINA
5. Accident and Emergency Department, Tuen Mun Hospital, Hong Kong, CHINA
6. Welsh Heart Research Institute , Cardiff University, Cardiff, UK

Keywords: Disability, Trauma, Wounds and injuries, Return to work status

Abstract :

Introduction

The aim of this study was to provide preliminary data on RTW status for patients in Hong Kong with moderate and major trauma.

Participants and methods

A multi-centre prospective cohort study of trauma patients was conducted in three trauma centres in Hong Kong: the Prince of Wales Hospital (PWH), Queen Elizabeth Hospital (QEH) and Tuen Mun Hospital (TMH). Patients were included if they were in the trauma registry, aged≥18 years, had moderate or major trauma (ISS≥9), and answered ‘yes’ to question 5c of GOSE which specifically asks about whether the patient was working or seeking work prior to injury. Patients were followed up for 48 months. The primary outcome was 48-month post-injury RTW.

Results

From 1st January to 31st September 2010, 400 patients recruited to the study (mean age 53.3 years; range 18-106; 69.5% male), of which 197 (49.3%) met the inclusion criteria (mean age 42.9 years; range 18-87; 78.7% male). Of these patients, 31 (21.1%[C1]) had RTW at 1-month, 39 (37.5%) at 12-months and 46 (52.3%) at 48 months. Return to work within four years was significantly associated with shorter total length of hospital stay, head injury AIS <3, abdominal injury AIS <3, and multiple injury sites, and higher PCS at one month post injury. After multivariate analysis, one-month PCS on SF36 testing (OR 1.068, P=0.039) significantly predicted 48 month RTW.

Conclusion

The 48-month post-trauma RTW rate in patients with ISS≥9 was 52.3%. One month PCS post injury may be used to predict 48 month RTW.

Acknowledgement

This study was supported by Health and Health Services Research Grant 07080261 and Health and Medical Research Fund Grant 10110251.

#8036 : The development of the European Trauma Course in Austria – data on 30 courses

Preferred format : ePoster

Authors:

Michael Hüpfl (1), Florian Trummer (2), Adi Deixler (3), Katja Kalan Ustar (4), Christian Schreiber (5), Ileana Lulic (6)

1. European Trauma Course Austria, Medical University Vienna, Vienna, AUSTRIA
2. European Trauma Course Austria, KH St. Veit, Brückl, AUSTRIA
3. European Trauma Course Austria, UKH Linz, Linz, AUSTRIA
4. European Trauma Course Austria, European Trauma Course Austria, Ljublijana, SLOVENIA
5. European Trauma Course Austria, European Trauma Course Austria, Vienna, AUSTRIA
6. European Trauma Course Austria, University Zagreb, Zagreb, CROATIA

Keywords: Trauma, Training, European Trauma Course, Austria

Abstract :

Introduction

Worldwide, trauma claims more productive life years than any other disease. The World Health Organization estimates that the mortality of major trauma in Europe could be decreased up to 30% by improving the chain of care for major trauma patients. In recent years different trauma teaching programmes have been established in working towards decreasing the burden of death and disability of traumatized patients. European Trauma Course (ETC) goal is to teach a simplified and standardised approach to trauma patient management. ETC was designed in collaboration with the ERC, EuSEM, ESTES and ESA. Austrian group of experts in trauma patient management and the Austrian societies joined ETC initiative from the early beginning, being the first group providing in-house courses, prehospital and inhospital scenarios, interactive presentations for instructors and pushing the topics of human factors in the courses.

Material and methods

Database search of the records of ETC Austria from 2008 until April 2015

Results

30 courses were completed, with 669 participants (199 females, 470 males). More than two thirds of participants were doctors (627), followed by nursing staff (22) and ambulance personnel (20). The majority of participants were anaesthesiologists (323), alongside with trauma surgeons (232), emergency medicine specialists (82) and others (33). Of 30 courses 20 were open ones with individual registration and 10 were closed in-house courses for single institution trauma teams training.

Conclusion

In the past six years ETC has become the standard trauma course in Austria. Every year more and more medical personnel from nursing and ambulances join our courses, building the whole concept closer towards ETC goal of multi-specialty and multi-professional trauma team approach.

#8038 : The European Trauma Course development from 2006-2015

Preferred format : Oral presentation

Authors:

Michael Hüpfl (1), Adi Deixler (2), Katja Kalan Ustar (3), Ileana Lulic (4), Christian Schreiber (5), Markus Brucke (6), Victor Tregubov (7), Birgit Rössner (8), Florian Trummer (9)

1. European Trauma Course Austria, Medical University Vienna, Vienna, AUSTRIA
2. European Trauma Course Austria, UKH Linz, Linz, AUSTRIA
3. European Trauma Course Austria, European Trauma Course Austria, Ljublijana, SLOVENIA
4. European Trauma Course Austria, University Zagreb, Zagreb, CROATIA
5. European Trauma Course Austria, European Trauma Course Austria, Vienna, AUSTRIA
6. European Trauma Course Austria, European Trauma Course Austria, Ulm, GERMANY
7. European Trauma Course Austria, European Trauma Course Austria, Glasgow, UK
8. European Trauma Course Austria, European Trauma Course Austria, Burgdorf, SWITZERLAND
9. European Trauma Course Austria, KH St. Veit, Brückl, AUSTRIA

Keywords: Trauma, Training, European Trauma Course

Abstract :

Introduction

The European trauma course was developed in the pilot phase between 2006 and 2008. A group of experts from all Europe designed it as it was necessary to create a flexible course on trauma management that can be used in all the different systems in Europe. Additionally working in a team has not been reflected in the traditional courses that were available. The goal was to create a course that this focused on a team approach and flexible to adaptation to local protocols. Based on up-to-date adult learning models 85% is practical simulation based team training.

Material and methods

A database search of the ERC course data base (courses.erc.edu). Data were displayed according to country and month of the course.

Results

The courses started in 2006 with an inaugural course in Malta followed by 3 pilot courses. After that there were courses in 2008 (3), 2009 (11), 2010 (17), 2011 (18), 2012 (34), 2013 (41) and 2014 (62) in 3 (2008), 8 (2009), 10 (2010, 2011), 11 (2012)13(2013), 17(2014) and 19 countries in 2015. The most courses were done in Germany (51), followed by Austria(37) and UK (236), Egypt (28), Italy(21), Croatia (11), Malta (10), Poland (8), Slovenia (7), Portugal(6), Belgium, Finnland, Denmark (5), Hungary(4), Saudia Arabia, Sudan, Sweden, Switzerland and Romania (3), Jordan (2) and Norway, Netherland, Ireland and Greece(1).

Conclusion

The project “European Trauma Course” was piloted with four courses and started in 2008.The courses are already available in 24 countries made a quick development from 2008 to 2015.

References

The European Trauma Course: trauma teaching goes European. Thies KC et al., EurJAnaesthesiol. 2014

#8039 : A Rare Condition: Portal Vein Trombosis - A Case Report

Preferred format : ePoster

Authors:

Yusuf Cankat Bozkurt (1), Burcu Gulsen (1), Onur Tokocin (1), Hakan Topacoglu (1)

1. Department of Emergency Medicine, Istanbul Training and Research Hospital, istanbul, TURKEY

Keywords: portal vein, trombosis, abdominal pain, malignancy

Abstract :

Introduction: Abdominal pain has been shown in the general population to make up between 4.4% and 7.5% of primary care and emergency department visits.(1) In portal vein trombosis patients can present emergently with sudden onset of right upper quadrant pain, nausea, and/or fever. Portal vein trombosis usually associated with cirrhosis, liver transplantation, malignancies, inflammatory disorders, or hypercoagulable states.(2)

Case: A 74 years old female admited to ER with right upper abdomen pain. In patient's medical history, she had a carsinoma of the ampulla vater. On physical examination, the patient was noted to be afebrile with a normal blood pressure and a heart rate of 71 per minute. Spesific examination findings were rebound tenderness over right upper and lower abdominal region. The abdominal pain was associated with meals, consisting of a significant increase in pain approximately 10 to 15 minutes after eating and intermittent post-prandial nausea and occasional vomiting. At laboratuary findings were white blood cell 10.48 10^9/l , hemoglobin level 7.6 g/dl, platelets 115 10^9/l, INR 1.5, AST 20 U/l, ALT 14 U/l, lactat 3.55 mg/dl. In hepatobilier ultrasound result's shows that at portalosplenic area 33*14 mm size, allowing blood stream trombus image. Dinamic abdomen CT showed no symptom of mesenteric ischemia. Enoxaparin started to the patient 1 mg/kg SC twice daily. The patient hospitalizated for further examination and treathment.

Discussion: Portal vein trombosis is rare but should be considered diagnosis, patients presented to ER with abdominal pain and malignancy history. Neoplasms, hepatocellular carcinoma and pancreatic carcinoma causing most of these cases, are second major cause, accounting for 21-24% of cases of portal vein obstruction. (3)

#8041 : Role of Emergency Physicians in the treatment of cardiovascular emergencies

Preferred format : Oral presentation

Authors:

Ville Hällberg (1), Teemu Koivistoinen (2), Ari Palomäki (3), Ville Hällberg (3)

1. Emergency medicin, Kanta-Häme Central Hospital, Hämeenlinna, FINLAND
2. Emergency Department, Kanta-Häme Central Hospital, Tampere, FINLAND
3. Emergency Department, Kanta Häme Central Hospital, Hämeenlinna, FINLAND

Keywords: Stroke, atrial fibrillation, deep vein thrombosis, treatment in emergency room

Abstract :

Background

Emergency Medicine (EM) as an independent specialty was established in Finland in 2013. In our country, EM is a specialty with a full-length training of six years (1). During the first years, more than 140 physicians have begun the specialization program led by the universities. For now, the work distribution between physicians working on call in “old specialties” and in EM in Emergency Departments (ED) is in transition. In this observational study we discuss on the widening role of Emergency Physicians (EP) in the treatment of cardiovascular emergencies in Kanta-Häme Central Hospital (KHCH).

Methods

Specialist training of emergency medicine in Finland follows the European Curriculum and it includes a large variety of treatments and procedures previously performed only by physicians of traditional specialities (1). Training the skills in anaesthesiology, cardiology, neurology and radiology enables several cardiovascular emergent procedures (2, 3). In a hospital, where all specialties are not available in emergency department 24/7, these can be done effectively, safely and without delay.In this study, we analysed the role of EPs in the treatment of three time-critical cardiovascular emergencies, namely acute ischaemic stroke (AIS), paroxysmal atrial fibrillation (AF) and deep vein thrombosis (DVT). In a long run we are going to study, whether EPs in charge might expedite the work process compared to traditional work distribution.

Results

According to our first results in AIS, the door-to-needle time (DNT) was shortened from 54 to 20 minutes after the transition period. Secondly, after a 6-month training period, we have shifted the main responsibility of AF cardioversion to EPs in May 2016. Thirdly, we have deepened the training of DVT ultrasound, which is going to be a normal working process in the beginning of January 2017. We continue to analyse the stability of our DNT results. Furthermore, the time intervals of two latter processes in the ED will be analysed rigorously. It is important to implement fluent treatment protocols for most common emergencies, in order to give treatment more effectively, saving time and resource simultaneously.

Conclusions

Cardiovascular procedures can safely be done by EPs to save both resources and time.

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#8042 : Small intestine ischaemia related malrotation anomaly in one adolescent

Preferred format : ePoster

Authors:

Erdem Karadeniz (1), Sukru Arslan (1), Bünyami OZOGUL (2), Sabri Selcuk Atamanalp (1)

1. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, Erzurum, TURKEY
2. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, ERZURUM, TURKEY

Keywords: Small intestine, ischaemia, malrotation anomaly

Abstract :

Introduction: Midgut volvulus is a rarely seen malrotation developed with the rotation of the mesenteric root around the superior mesenteric artery. Although it is seen in infants more frequently, it can also be seen in adults. In this case, we aimed to exhibit the intestinal malrotation anomaly in 19-year-old male patients having chronic abdominal pain and small intestine ischaemia related to this.

Case report: the 19-year-old patient is having a complaint of abdominal pain interval, started to have severe abdominal pain, nausea and puffiness last one day and applied to our clinic with these complaints. In physical examination, there was prevalent tenderness on the abdomen and dull distension. In a laboratory investigation, there was no feature except elevated white blood cell count 15400/mm ^{3}. There were no features on the ambulant abdominal radiograph. 270-degree dextrogyrate torsion on mesenteric root on the contrast enhanced abdominal tomography is reported. The operation is planned for the patient. On laparotomy, 80 cm from the ileocecal valve all small intestines from proximal were covered by periton leaf. Opening this periton, small intestines are monitored. Among these small intestine segments, there were congenital (Ladd's) bands. Also dudeno jejunal was settled on the right of kollumna vertebralis. It was seen that, 100-cm small intestine segment's meso rotated by turning around a band, and ischaemia developed related to this. By opening the bands, rotation on the small intestine meso is fixed. After implementation of heat for a while, colour and peristaltism of the intestine returned to normal. Patient with no problem is discharged with suggestions on his second postoperative day.

Result: Intestinal malrotation is a quite rare anomaly but in terms of complications which it can cause, it is an important anomaly. Intestinal malrotation must be located at definitive diagnosis rather than patients with small bowel obstruction findings and acute abdominal.

#8043 : Acute aortic dissection

Preferred format : ePoster

Authors:

zied guermazi (1), SARRA JOUINI (2), Hana Hedhli (2), Imene Mekki (3), Houda Nasri (3), Rim Hammami (3), Bechir Bouhajja (2), Rym Hamed (3)

1. Emergency Department, CHU Charles Nicolle, TUNIS, TUNISIA
2. Emergency Department, CHU Charles Nicolle, tunis, TUNISIA
3. Emergency Department, CHU Charles Nicolle, Tunis, TUNISIA

Keywords: aortic dissection, emergency,Chest Pain

Abstract :

Introduction :

Acute aortic dissection (AAD) is a medical emergency with a high mortality rate. It usually presents with severe, unrelenting chest pain of sudden onset.There are several different formats of classification for thoracic aortic dissection; the most commonly used is the Stanford Classification which divides the dissections into 2 types: A - dissection originating in the ascending aorta; B - dissection originating in the aorta distal to left subclavian artery.

Case report:

A 60 year-old man, presented to the emergency department of our hospital with complaints of sudden severe chest pain. His past medical history revealed uncontrolled essential hypertension and diabetes associated with noncompliance with medication and appointments. The pain was described as a retrosternal cramp without irradiation.

On physical examination, the patient was conscious, temperature and blood oxygen saturation were normal. Pulse and respiratory rates were 69/minute and 18/minute, respectively. Blood pressure was 100/50 mmHg in left arm and 150/90 mmHg on the right side. There was no jugular venous distension.His extremities were warm to the touch, with no pallor, finger clubbing or cyanosis. Pulses were symmetrical and there was no peripheral oedema. There was no femoral sound. The abdomen was soft without defence. The rest of the exam was unremarkable. Initial EKG showed a sinusal rhythm with signs of right ventricular infarct. An acute coronary syndrome was mentioned, but an aortic dissection couldn't be eliminated. Therefore, the patient received the *Nicardipine* to control a systolic tension (less than 110 mmHg), a titration of *Chlorydrate of Morphine* and EKG monitoring. The patient's clinical condition was unchanged, except for a pulse deficit on the left side of his body, a finger cyanosis in the left hand and the patient described a lump parasthesis. The EKG was dynamic with rhythmic alternation, axis changes and Nonspecific T wave modification. The diagnosis of acute aortic dissection was probable.

The Patient was subsequently planned for Computed Tomographic angiography, which showed normal coronary arteries but aortic dissection *Stanford type A* starting from the aortic valve to the iliac bifurcation and extending to the supra aortic trunks, coeliac trunk and to the superior mesenteric artery. The patient was planned for aortic root replacement with aortic valve conduit and reimplantation of coronary arteries, electively. The patient was urgently transferred to cardiovascular unit. There were no changes in his clinical condition during transport, but while being placed on the operating table, he went into cardiac arrest with unsuccessful reanimation.

Conclusion:

Although aortic dissection is an uncommon entity, its outcome is frequently fatal and many patients with aortic dissection die before diagnosis. When left untreated, about 33% of patients die within the first 24 hours, and 50% die within 48 hours.

#8044 : Mean platelet volume as a diagnostic tool on acute mesenteric ischaemia

Preferred format : Oral presentation

Authors:

Erdem Karadeniz (1), Sukru Arslan (1), Bünyami OZOGUL (1), Sabri Selcuk Atamanalp (1)

1. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, Erzurum, TURKEY

Keywords: Mean platelet volume, acute mesenteric ischaemia

Abstract :

INTRODUCTION: Mesenteric ischaemia is a vascular emergency that includes life-threatening with high mortalities. It is revealed that mean platelet volume (MPV) and platelet activation are closely related. We researched whether MPV can be used as a diagnostic reagent on acute mesenteric ischaemia (AMI) diagnosis, and its relation to disease prognosis.

MATERIAL-METHOD: 112 people treated by AMI diagnosis in our clinic between February 2010 and March 2015 are taken as a patient group, and 122 people applied to our polyclinic for routine control in this period, and who does not have any diseases are taken as control group. Patient files are examined retrospectively. In this study, the differences between the groups are compared by using Independent T-Test. Statistical analysis of this study is made by using Statistical Package for Social Sciences version 21.0 Software for Windows (SPSS 21.0, Inc.,Chicago, IL).

FINDINGS: 53 of the patient group were female, and 59 were male. Average of age was 69,9 (30-94). 55 of the control group were female, 57 were male. Average of age was 66,5 (28-75). On patient group, MPV, neutrophil/lymphocyte rate (N/L) and platelet distribution width (PDW) values are found higher than the control group and this difference was statistically significant. ($p<0.01$) Mortality developed in 55 (49%) patients in the patient group. Between the groups mortality developed and not developed, age, white blood cell, MPV, N/L rate and PDW values were not statistically significant ($p>0.05$)

RESULT: As well as more studies are required in this case, MPV, N/L rate, PDW values promise hope on AMI disease as a diagnostic reagent. However, these parameters do not have importance on specifying the disease prognosis.

#8045 : Our 5-year clinical experiences on acute mesenteric ischaemia

Preferred format : Oral presentation

Authors:

Erdem Karadeniz (1), Sukru Arslan (1), Bünyami OZOGUL (1), Sabri Selcuk Atamanalp (1)

1. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, Erzurum, TURKEY

Keywords: Acute mesenteric ischaemia

Abstract :

INTRODUCTION: Acute mesenteric ischaemia (AMI) is one of the general surgery emergencies requiring immediate diagnosis and treatment, associated with high morbidity and mortality. Successful treatment of the disease depends on early diagnosis and early surgical operation on clinical suspicion. In this study, we aim to evaluate patients treated at our clinic with AMI diagnosis.

MATERIAL-METHOD: 112 patient files, treated with AMI diagnosis between February 2010 and March 2015 in our clinic, are analysed retrospectively.

FINDINGS: 53 of the patients were female, and 59 were male. Average of age was 69,9 (30-94). Most frequently complaints were stomach ache (100%) and nausea-vomiting (71%). The time between the release of the complaints and application to the hospital was longer than 24 hours on 80% of the patients. Most frequent co-morbid diseases were hypertension, coronary artery disease, atrial fibrillation and diabetes, respectively. The aetiological cause was arterial occlusion on 107 (96%) patients and venous occlusion in 5 (4%) patients. 74 patients had small intestine gangrene, 23 patients had small and large intestine gangrene, 9 patients had total small intestine gangrene, and 6 patients had large intestine gangrene. To 9 patients having total small intestine, gangrene were implemented exploration and resection was applied for all other patients. 2 patients are implemented intra-operative superior mesenteric arteriotomy and embolectomy, a second look and re-resection are made on 2 patients. Mortality developed in 55 (49%) patients. Small intestine syndrome developed in 2 patients who are implemented massive resection and no mortality is monitored on follow-up.

RESULT: Mesenteric ischaemia is a disease requiring early diagnosis and treatment, associated with high morbidity and mortality. The most important step for diagnosis is to be suspicious about the disease.

#8046 : A headache revealing hemophagocytic syndrome

Preferred format : ePoster

Authors:

Salwa Amri (1), Salwa Amri (2), SARRA JOUINI (2), Rym Hamed (1), zied guermazi (3), Asma Aloui (2), Syrine Jaouani (1), Bechir Bouhajja (2), Faten Amira (1)

1. Emergency Department, CHU Charles Nicolle, Tunis, TUNISIA
2. Emergency Department, CHU Charles Nicolle, tunis, TUNISIA
3. Emergency Department, CHU Charles Nicolle, TUNIS, TUNISIA

Keywords: headache, emergency, diagnosis

Abstract :

Introduction :

Macrophage activation syndrome also called Hemophagocytic lymphohistiocytosis (HLH) is rare but potentially fatal. It is based on a number of clinical signs and laboratory findings. Five out of the following nine diagnostic criteria for HLH: fever, splenomegaly, cytopenias (affecting two or more of three lineages in the peripheral blood), hypertriglyceridemia, hypofibrinogenemia, elevated ferritin, hemophagocytosis in bone marrow/spleen/lymph nodes.The causative agent, whether bacterial, viral, fungal or parasitic should be treated urgently.

Case report:

A 19-year-old man presented at our emergency departement with headaches and vomiting lasting for 5 days in a fever context. On admission, examination revealed that he was conscious, afebrile with a respiratory rate of 20 breaths/min, an oxygen saturation of 98% on air, and blood pressure of 100/60 mmhg. He was a jaundiced patient. Abdominal examination and elecrocardiogram were unremarkable. Biology showed acute renal failure (clearance : 14ml/min), cholestasis combined dominance 8N, cytolysis 2N, lipasemia 5N, hypertriglyceridemia, severe thrombocytopenia, hypochromic microcytic anemia 8.9. Cardiac ultrasound trans chest was unremarkable. Injected abdominal CT showed bilateral renal nephritis outbreaks. Hepatomegaly, intra abdominal effusion low abundance.

Conclusion:

Infectious etiologies of HLH are many, predominated by viral infections. The severity of HLH prognosis requires an approach aggressive diagnosis and a multidisciplinary therapeutic management to determine the best options based on etiology found and the seriousness of the table.

#8047 : Bacterial meningitis in Syrian refugee pregnant women

Preferred format : ePoster

Authors:

Yusuf Cankat Bozkurt (1), Aziz Vatan (1), Burcu Gulsen (1), Emine Gaffari (1), Onur Tokocin (1), Hakan Topacoglu (1)

1. Department of Emergency Medicine, Istanbul Training and Research Hospital, istanbul, TURKEY

Keywords: menengitis, pregnancy, lumber puncture, propofol, C-section, immigrant, altered mental status

Abstract :

Introduction: Altered mental status is one of most important and complicated issue for an emergency medicine doctor. Enfectious diseases is rare for that patient groups. Enfectious diseases in 5th place patient with altered mental status causes acording to Kanich et al. Because of the norologic status sometimes sedoanelgesia should be used for diagnosis. Propofol(category B) could be use safetly for sedoanelgesia in pregnancy. In some rare situation like immigrants (language barrier etc.) differential diagnosis even more harder.

Case: A 18 year old pregnant (38 weeks) Syrian refugee patient was admitted to ER with delirium and altered mental status. Because of the communication problems with patient and her relatives, patient's medical history was not taken at all. Patient had lack of cooperation and orientation. She was hurting herself and agitated. Glaskow coma score evaluated as 14/15.

She was examined as low blood pressure (70/40 mmHg), tachycardic (110 bpm), tachypneic (28 bpm). The patient's fever was 36.7 C and sO2 was %97. Respiratory and cardiac examination was normal. Pupillas were seen isocoric and with intact light response. Four ekstremity reflexes were normal. Nuchal rigitidy and other neurological examination couldn't evaluated properly. There weren't any rush at patient's body. IV fluids resutation was started. As lab results were; WBC 42.03 10^9/L, HGB 10.7g/dl, NEU 39.17 10^9/L, Lactat 3.4 mg/dl, Blood Glucose 114mg/dl, AST 24U/L, ALT 10U/L. Spot urinary test showed no leukocyturia, no proteinuria. In brain MRI there was no intrcranial mass, other focal brain lesion, bleeding area or infarction.Because of the white blood cell count was elevated, with a shift to right and confusion, we tought bacterial menengitis as a prediagnosis and ceftriaxone was applied 2 gr twice daily.

The patient was consultated with gynecology and obstetrics clinic for fetal distress and emergent C-section. NST was showed decelerations. After the sedation with propofol (0,1 mg/kg/min) lomber puncture was performed to patient then patient transfered to gynecology and obstetrics clinic for emergent C-section. Cerebro-spinal fluid was cloudy. Gram strain positive, >%80 PMN, pandy test +++, Glucose(CSF) 50mg/dl, protein(CSF) 296.2 mg/dl. Antibiotherapy was set ceftriaxone 2grp twice daily and vancomisin 500 mg four times per day by enfection and microbiology clinic. After C-section patient admitted to ICU. After a week of antibiotherapy; patient's vital signs, mental status and lab results were seen normal. Patient's medical treatment has ended and was discharged.

Conclussion: Bacterial meningitis is a rare, life-treatining and important reason of altered mental status. Lumber puncture is the main procedure to establish a final diagnosis of meningitis. Main medical theraphy is ceftriaxone. Sometimes sedoanelgesia is necessary for examination and prosedures. In pregnancy , propofol(category B) is reliable agent for prosedural sedation. Emergency cesareans are sometimes further classified by degree of urgency like an immediate threat to life of the mother or fetus is present. Early antibiotherapy and emergent C-section can provide an improvement of maternal and fetal health status as seen as in our case.

#8048 : Be careful! It may be emphysematous cystitis

Preferred format : ePoster

Authors:

ATTILA BESTEMIR (1), GOKSU BERIKOL (1), MEHMET SERKAN YURDAKUL (1)

1. EMERGENCY MEDICINE, KARAMAN PUBLIC HOSPITAL, KARAMAN, TURKEY

Keywords: cystitis, emphysema, vena cava inferior,

Abstract :

Introduction:Urinary tract infections are a large share of emergency servise visits. Although most of the them are outpatient, complicated urinary infections are hospitalized. Besides it is an etiology of abdominal pain and sepsis, one of the complication of urinary tract infection is emphysematous cytitis. Emphysema is seen in bladder wall and lumen and also can results with a air embolism in vena cava.

Case report: Our patient is 87 year old woman applied to emergency department with abdominal pain, fever with unstabil condition. She has hypertension, diabetes mellitus, hyperlypidemia, chronic renal disease, coronary artery diseases. In her physical examination the blood pressure was 90/60 with sinus tachicardia of 120/min. Her temperature was 38.5C, arterial oxygen saturation estimated by pulse oxymetery was 95%, respiratory rate was 14/min and blood glucose was 290mg/dl. The lungs were clear oscultation. The heart sounds were normal with no murmur. Lower of abdomen was distanded and tender. There were positive peritoneal irritation signs and bowel sounds were alleviated. Laboratory findings are respectively; WBC:14,400/µl, CRP:40,3mg/dl Creatine:1,3mg/dl, Urea:65,9mg/dl. Urinary catheterisation was applied but no urine output occurred in the first hours of visit. Her abdominal computer tomography was done and air-fluid level in bladder, gas bubble accumulation in bladder wall and lumen, air bubbles in vena cava inferior lumen were seen. While observation, she had cardiac arrest. She was resuscitated for 45 minutes and was not responded to CPR.

Discussion: Emphysematous cystitis with venous air embolism is rarely seen in emergency services. It can be a mortal complication of urinary tract infections in patients with predispositing factors like diabetes mellitus as our case. The pathophysiology is has not identified yet, but the accepted mechanism is accumulation of carbondioxyde and hydrogene by infected microorganisms. Computer tomography demonstrates the gas accumulation not only in bladder wall and lumen but also in vena cava inferior. An accelerated process was occurred in our patient resulted with mortality. The management of emphysematous cystitis is drainage and antibiotherapy sensitive to organism. In conclusion, the emergency physicians should keep this complication with differential diagnosis of abdominal pain in mind.

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Acknowledgments: There is no conflict of interest in this study.

#8049 : Hyponatremia, what is it hiding? : Case report

Preferred format : ePoster

Authors:

houcem ouni (1), Mohamed ali Cherif (2), ons andolsi (1), khaled saidi (1), youssef zied El hechmi (2), Mohamed Mezgheni (3), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Hyponatremia,emergency ,seizures

Abstract :

Introduction:

For psychiatric patients,potomania and the syndrome of inappropriate secretion of antidiuretic hormone (SIADH) are the most causes of hyponatremia. We report here the case of patient with hyponatremia.

Case report:

A 53-year-old female patient presented to the emergency department (ER) for tonic-clonics seizures without recovering consciousness. She had a 100 pack-year history of cigarette smoking, with a history of schizophrenia.

Her sugar blood pressure was 1,2 gr/litre. Her GCS was 12. She was hemodynamically stable. There was no other neurological sign nor meningism. She was bedridden with multiple lymphadenopathy. Her laboratory tests were natremia at 100mEq/l and kaliemia at 3 mEq/l. the urea and creatinine level were normals. The electrocardiogram had no abnormality.

A Convulsive Status Epilepticus due to hyponatremia was diagnosed.

She received 1 mg of clonazepam associated to 15mg/kg of phenobarbital and she was suplzmented in sodium and potassium.

The etiology of hyponatremia was associated to SIADH due to a metastatic small-cell lung carcinoma (SCLC).

Conclusion:

Hyponatremia is usually iatrogenic for psychiatric patients. However, an exploration for other etiology should be performed.

#8050 : Cerebral oedema in diabetic ketoacidosis : case report

Preferred format : ePoster

Authors:

houcem ouni (1), Mohamed ali Cherif (2), ons andolsi (1), khaled saidi (1), youssef zied El hechmi (2), Mohamed Mezgheni (3), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: ketoacidosis,Cerebral oedema,emergency

Abstract :

Introduction:

cerebraloedema is a rare but potentially lethal complication of diabetic ketoacidosis (DKA). It is more common among children with DKA than with adults.

Case report:

A 23-years-old male patient presented to the emergency department (ER) for asthenia, vomiting, drowsiness and (high sugar blood level/hyperglycemia). He had no medical history. Diabetic ketoacidosis state has been confirmed. Correction with continuous itra-venous insulin and fluids rescucitation has been started. 2 hours after, he altered his state of consciousness. His vital signs were as follow GCS of 3, blood pressure of 70/40, pulse rate of 45 beats/min, respiratory rate of 10 breaths/min. his laboratory tests were pH at 7.09, lipase level at 60 times the normal and albumin level at 19,3. Abdominal computed tomography (CT) showed acute pancratitis grade E of Balthazard scoring. Cerebral CT showed cerebral oedema with bilateral Uncal herniation. The patient has been intubated. He received mannitol and catecholamine. He deceased 48 hours later.

Discussion:

Brain swelling can be revealed when a major sign occurs but it has to be suspected when minor signs such as drowsiness and vomiting are presented. Cerebral oedema for this patient can be enhanced by hypovolemia caused by ketoacidosis, pancreatitis and hypo albuminea.

Conclusion:

Cerebral oedema in DKA can be suspected and confirmed rapidly by cerebral CT. however, it remains difficult to mamage and its mortality remains high.

#8051 : A Review of Emergency Department Patients with a Very High D-Dimer Level

Preferred format : Oral presentation

Authors:

David Monks (1), Neha Siddiqui (2), Precious Nwafor (2), John Cronin (3)

1. Emergency Medicine, St. Vincents University Hospital, Dublin, IRELAND
2. , St. Vincent's University Hospital , Dublin, IRELAND
3. Emergency Medicine, St. Vincent's University Hospital , Dublin, IRELAND

Keywords: D-Dimer, Pulmonary Embolism, Deep Venous Thrombosis, Venous Thromboembolism

Abstract :

TITLE: A Review of Emergency Department Patients with a Very High D-Dimer Level

INTRODUCTION

In a low risk patient a negative D-Dimer (DD) can be used to rule out suspected venous thromboembolism (VTE) and avoid advanced imaging tests.

Clinicians tend to view the DD result in a binary fashion - positive or negative. However DD is a fibrin degradation product and as such can correspond to clot burden. Therefore it is logical to suppose that we should not view a DD of, for example, 0.95mg/L the same a 9.5mg/L. In our study we analysed patients with very high DD results.

METHODS

This is a retrospective cohort study of patients who had a D-Dimer requested by the ED between September 2014 and July 2015. We studied patients who had a D-Dimer result over 10 times upper limit of normal (i.e. >5mg/L). The parameters analysed were age, DD value, diagnosis, the presence of new/old malignancy and 6 month mortality.

RESULTS

2,060 patients had a D-Dimer sent during the study period, 104 had a result of >5mg/L. There were no notes available for two patients and there was one duplication. The overall positive diagnostic rate for VTE was 46.5% (47/101). In those patients with DD between 5-10mg/L, the incidence was 40.6% (24/59) and in those >10mg/L it was 54.8% (23/42). There were higher rates of proximal DVT (64% vs 50%) and bilateral/multiple PEs in the DD- >10mg/L versus 5-10mg/L groups. 22 patients had a known malignancy prior to testing, there was a new diagnosis of malignancy in 3 patients. 6 month mortality rate was 19.8% (20/101), half of these had a known malignancy.

CONCLUSION

Our results indicate that in those patients with a higher D-Dimer, there appeared to be a correlation between D-Dimer level and clot burden. A very high result should give a clinician a higher index of suspicion to consider larger VTEs and possibly a more serious underlying diagnosis.

#8052 : Severe cutaneous drug reactions in emergency about two cases

Preferred format : ePoster

Authors:

ons andolsi (1), Mohamed ali Cherif (2), houcem ouni (1), khaled saidi (1), youssef zied El hechmi (2), Najeh Hajjem (1), Ines Sedghyeni (3), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: drug reaction ,anticonvulsants ,emergency

Abstract :

Introduction :

The term cutaneous drug reaction is used for dermatoses with involvement of the skin, mucosas, and/or skin appendages, caused by the effect of a substance, usually a drug, which comes into contact with the organism by a range of pathways. These reactions may range from mildly discomforting to those that are life-threatening.

Material and Methods :

We report two cases of severe cutaneous drug reactions in emergency.

Case1

An 48-year-old woman with allergic asthma and epilepsy. She presented to the emergency department with progressive pruritic macular erythematous rash and fever 12 days after commencing carbamazepine therapy. The rash started

on her face and over 2 days spread in a caudal direction to involve

her entire body. Skin examination showed severe generalized macular erythematous skin rashes with multiple flaccid bullaes predominant in the trunk and both of upper limbs and detachment of epidermis (positive Nikolsky). Forty-two percent body surface involvements were estimated by the rule of nines Skin biopsy showed epidermal necrosis. The diagnosis of toxic epidermal necrolysis (TEN) was retained. The initial management consisted of local therapy (wound care and dressing) and rehydration. The outcome was favorable.

Case2

An 49-year-old woman with epilepsy treated with phenobarbital and clonazepam for 1 month. She presented to the emergency department with macular erythematous rash over her body since 5 days. The rash initially started on her trunk then quickly generalized throughout the body. Skin examination showed severe generalized macular erythematous skin rashes with multiple bullaes on macular erythematous areas, detachment of epidermis (positive Nikolsky) predominant in the trunk and crusted lesions in the mucous ophthalmic, nasal and vaginal. Fifty percent body surface involvement was estimated by the rule of nines The diagnosis of toxic epidermal necrolysis (TEN) was retained. Initial treatment consists of local care and rehydration. The evolution was marked by the occurrence of a state of refractory septic shock and death of the patient.

Conclusion :

TEN is one of severe cutaneous drug reaction, with anticonvulsants such as phenytoin, carbamazepine, and phenobarbital, most commonly implicated. In addition, allopurinol antibiotics, have also been found to have a role. En typically begins 1–3 weeks after the initiation of

Therapy.

The appropriate and quick action should be taken as soon as TEN is detected due to its high morbidity and mortality rates.

#8053 : thyroid storm in emergency

Preferred format : ePoster

Authors:

ons andolsi (1), Mohamed ali Cherif (2), houcem ouni (1), khaled saidi (1), Malek Hsouna (3), youssef zied El hechmi (2), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis, TUNISIA
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Thyrotoxic,mortality,emergency

Abstract :

Introduction:

Thyrotoxic crisis is an uncommon clinical problem that is potentially life threatening. It is a severe manifestation of hyperthyroidism. The overall mortality is 10-20%. Clinical recognition, diagnosis, and early treatment are crucial to reduce the high associated morbidity and mortality.

Case report:

A 38-year-old man with no past medical history was brought to the emergency department for evaluation of shortness of breath and eodema of the lower members. Initial vital signs were pulse rate, 160 beats/mitt; blood pressure, 140/80 mm Hg; temperature, 37.7°C . The cardiopulmonary examination revealed an irregular rhythm, and bilateral basal crackles. The electrocardiogram showed an atrial fibrillation with a rate of 170, the chest X-ray study showed a cardiomegaly.

Laboratory Test: hepatic cytolysis (4 times above normal), rhabdomyolysis, PT= 27%, lactic acid 6.9 mmol/L (range 0.5-2.2), arterial blood gas= metabolic acidosis with hypoxemia and hypercapnia.

The initial course of action was non-invasive ventilation, diuretic, electrical cardioversion 150J×3, amiodarone 300mg/h then 50mg/h but without effect.

The etiological investigation was completed by thyroid function tests TSH levels of 0.16 mIU/mL (normal: 0.25–5mIU/mL) and free T4 levels of 73.8 ng/dL (normal: 0.8–2ng/dL). He was given basdene but the evolution was marked by death of patient in few hours.

Conclusion:

Clinical manifestations of Thyrotoxic crisis include fever, confusion, seizure, coma, tachycardia out of proportion to fever, diaphoresis, nausea, vomiting, diarrhea, and cardiac dysfunction. It can occur in patients of any age. The underlying pathogenesis of thyroid storm has yet to be fully understood. It is a rarely encountered clinical condition, which should be part of the differential diagnosis in patients with multiple organ dysfunction of unknown etiology. There is no specific diagnostic test. Immediate hospitalization in intensive care for the involvement of symptomatic and specific treatment is indisponsable to reduce the risk of fatal outcome.

#8054 : Thirty-day mortality and predictors of death among patients with early-identified sepsis in an emergency department

Preferred format : Oral presentation

Authors:

Osama Bin Abdullah (1), Johannes Grand (1), Petrine Nimskov (1), Astha Sijapati (1), Finn Erland Nielsen (2)

1. Department of Emergency Medicine, Slagelse Hospital, Slagelse, DENMARK
2. Department of Emergency Medicine & Institute of Regional Health Research Faculty, Slagelse Hospital & University of Southern Denmark, Slagelse, DENMARK

Keywords: Emergency department, sepsis, treatment protocol, 30-day mortality, prognostic factors

Abstract :

Background: New guidelines for the early identification and treatment of patients admitted with sepsis have been implemented in recent years. Our aim was to report 30-day mortality and predictors of death among all sepsis patients admitted to an Emergency Department (ED) and treated in accordance with these guidelines.

Patients and Methods: A historical cohort study was conducted among prospectively registered patients admitted to a single-centre ED from 1 November 2013 to 31 October 2014. All patients identified with sepsis were included in the study. Data for systemic inflammatory response (SIRS) criteria and initial treatment in the ED were obtained from a standard sepsis admission form. Baseline clinical data and data for survival were obtained from patient records and The Danish Civil Registration System. Logistic regression analysis was used to adjust for potential confounders and to determine whether the risk factors for death in the crude analyses were independently associated with 30-day mortality.

Results: A total of 429 patients were admitted to the ED with sepsis. Fifty six (13.1%; 95% confidence interval [CI], 9.9-16.1%) patients died. The mortality rate among patients with severe sepsis or septic shock (SS/SS) was 38.2% (95% CI, 24.9-51.4%). Patients without SS/SS had a mortality rate of 9.4% (95% CI, 6.4-12.3%). Age (odds ratio [OR], 1.49; 95% CI, 1.11–2.00%), lactate value on admission (OR, 1.36; 95% CI, 1.11–1.67%), Charlson Comorbidity Index (OR, 1.26; 95% CI, 1.03–1.53%), creatinine (OR, 1.03; 95% CI, 1.01-1.06%) and platelet counts (OR, 1.05; 95% CI, 1.02-1.07%) were associated with mortality. Urinary tract infections (OR, 0.19; 95% CI, 0.05-0.64%) and increasing systolic blood pressure (OR, 0.87; 95% CI, 0.81-0.93%) were associated with a lower risk of death.

Conclusion: The 30-day mortality rate among all sepsis patients was 13.1%. Approximately 38.2% of the patients with SS/SS died. Factors present on admission and associated with death were identified.

#8055 : Really Big Data - developing and implementing a common data set to understand Urgent and Emergency Care in the UK

Preferred format : Oral presentation

Authors:

Thomas Hughes (1), Aaron Haile (2), Gordon Miles (3), Clifford Mann (4), Jonathan Benger (5)

1. Emergency Medicine, John Radcliffe Hospital, Oxford, UK
2. Project Manager ECDS, Royal College of Emergency Medicine, London, UK
3. Chief Executive, Royal College of Emergency Medicine, London, UK
4. President, Royal College of Emergency Medicine, London, UK
5. National Clinical Director for Urgent and Emergency Care, NHS England, London, UK

Keywords: data performance information systems emergency care

Abstract :

In the UK there are approximately 25 million episodes of urgent and emergency patient care each year delivered in institutions, together with nearly 10 million ambulance calls.

The ‘Accident and Emergency Commissioning Data Set’ currently used in various forms in England, Scotland, Wales and Northern Ireland was designed in the 1970s. While appropriate for its time, this data set has not evolved to keep pace with practice in Emergency Medicine. This has resulted in an information gap between perception and practice, as well as poor communication regarding patient care. For example, there is a meaningful ‘reason for attendance’ for less than 5% of attendances, and a meaningful diagnosis for less than 40% of all patients.

The decision to to develop a new data set to inform patient care, policy and commissioning of services was lead by the Royal College of Emergency Medicine (RCEM) and has resulted in a broad coalition between politicians, the NHS, informatics professionals and IT providers.

After much development work and consultation, a data set has evolved that will cover not just Emergency Department use but (with some customisation) also minor injuries units, walk-in centre and urgent care centres, and ambulatory care. Work is being undertaken to harmonise the data set with ambulance data so that the patient journey and outcomes may be better understood.

The Emergency Care Data Set project started in February 2015, is being piloted in 2016 with a full implementation from 2017.

The development and some of the challenges encountered will be described.

The project has incorporated European standards e.g. for injury data collection and it is hoped that this project will help establish the foundations for a European data standard for emergency care.

#8056 : ISEE Hospital: a 2D hospital incident management training simulator

Preferred format : Oral presentation

Authors:

Tom Schmitz (1), Nima Hosseinpour Tabrizi (1), Michel De Backer (2), Ives Hubloue (1)

1. Research group on Emergency and Disaster Medicine VUB, UZBrussel, Brussel, BELGIUM
2. Research group on Emergency and Disaster Medicine, VUB, Brussel, BELGIUM

Keywords: simulation software, training, HICS, preparedness

Abstract :

Introduction

Training is a vital part, if not the most important part of the preparation process of a good emergency plan. The lessons that are learned are needed to make adaptions to new and unexpected problems. Training can be from real-life exercises to table-top or paper scenario's. Multiple software programs are available. ISEE Hospital is a 2D simulation platform that is developed as private public project and has the advantages of an academic background and a commercial objective.

Debriefing is in general the weakest link of every exercise and is in general subjective. Recording key performance indicators and time stamps is difficult and interpretation takes time. Debriefing your trainees in depth on the spot isn't feasible with big exercises. Getting everybody again together afterwardsi s difficult so in general a paper report is the result. It is be better to have the data available on the spot and therefore have time for discussion when everybody is available.

Methods

As the concept for the simulator already was created in the beginning of the new millennium as an European research project, the result was commercialized but was only used in academic circles and some hospitals in the Netherlands. A think-tank that consisted of IT developers and academic disaster researchers redesigned the program from scratch with the double-sided objective: a tool that could be used in an academic environment and that was easy to learn and use for a first time user.

Results

ISEE Hospital was launched in 2015 and replaced the old simulator. All the commercial users were excited with the new possibilities: easy to use for trainer and trainee, designing your own department, adaptable resources, time reduction of scenario creation, web-based program, low IT requirements, sharing of victim profiles and scenario's, registration of key performance indicators and build-in statistical analysis.

The program is already used for different research and master projects. The flexibility of the program makes it possible to use from one-on-one training to big multi-center training. In November 2015 ISEE Hospital was used in the Netherlands to support an online exercise between 10 hospitals with the objective to test the regional disaster plan. Every department vital in the chain of management was involved: the dispatch and ambulances of the EMS, the emergency and intensive care departments, the operating theaters, the wards and the administration of the hospital. Everything ran in an artificial environment that kept logs of every move that was made.

Conclusions

ISEE Hospital has proven that commercial and academic objectives can work together. The cost of a real life exercise or the time it takes to set up table top scenarios is too big for small non university hospitals that want to prepare. Those centers need a tool that is quick, easy to use and can be used on the spot without the need for extra materials or working space. ISEE Hospital is capable of fullfilling all those requierements.

#8057 : Occupancy is not associated with a delay in treatment with antibiotics in patients with sepsis

Preferred format : ePoster

Authors:

Theo Sebasian Tiltnes (1), Chris Andre Høyvik (1), Finn Erland Nielsen (2)

1. Department of Emergency Medicine, Slagelse Hospital, Slagelse, DENMARK
2. Department of Emergency Medicine & Institute of Regional Health Research Faculty, Slagelse Hospital & University of Southern Denmark, Slagelse, DENMARK

Keywords: Sepsis, emergency department, occupancy, antibiotic treatment

Abstract :

Introduction: Emergency department (ED) overcrowding is important since it might decrease quality of care. The aim of our study was to examine if crowding measured by occupancy in an Emergency Department (ED) has any impact on the time of delivery of antibiotics in patients with sepsis.

Methods: A historical cohort study among prospectively registered sepsis patients admitted to the ED at Slagelse Hospital, Denmark, during the period 01.11.2013 to 30.09.14. The information about the time of admission to the ED, and time of delivery of antibiotics was obtained from the department's sepsis registry form. Data about the number of patients who were admitted to the ED, and the occupancy rate throughout all hours of the study period were retrieved from the IT department at Slagelse Hospital.

Results: A total of 393 patients were included in the study. The median door-to-needle time was 1.49 hours. The median door-to-needle time was 1.31, 1.75, 1.47 and 1.60 hours within the ED occupancy rate intervals of < 0.75, 0.75 to 0.99, 1.0 to 1.25 and > 1.25, respectively ($p = 0.240$). There was no association between delayed antibiotic treatment (>1 hour) after the sepsis diagnosis was recognized and the occupancy rate ($p = 0.685$). The door-to-needle time among women was longer compared to men (1.63 hours vs. 1.34 hours, $p = 0.007$).

Conclusion: Increasing occupancy rates did not have any negative impact on the time of antibiotic treatment.

#8058 : Non-invasive CPAP-ventilation support versus oxygen-therapy using a reservoir face mask for carbon monoxide poisoning: an observational study

Preferred format : ePoster

Authors:

Dominik Roth (1), Lukas Scheinost (1), Wolfgang Schreiber (1), Harald Herkner (1), Christof Havel (1)

1. , Department of Emergency Medicine, Medical University of Vienna, Vienna, AUSTRIA

Keywords: Carbon Monoxide, CPAP Ventilation, Oxygen Inhalation Therapy, Hyperbaric Oxygenation

Abstract :

Background:
Carbon monoxide (CO) is a leading cause of morbidity and mortality. Treatment focuses on the rapid elimination of CO and management of hypoxia. Oxygen is the cornerstone of therapy, and usually applied via a reservoir face mask. Hyperbaric oxygen therapy (HBO) eliminates CO faster, but requires extensive equipment and its benefits are discussed controversially.

Non-invasive continuous positive airway pressure (CPAP) ventilation using a tight mask provides an inspired fraction of oxygen of 1.0 compared to 0.6 using a reservoir face mask, and increases gas exchange. As this modality is widely available, it might represent a supplemental approach to current treatment of CO poisoning.

Methods:
Prospective, observational trial at the critical care facility of a tertiary-care hospital's emergency department. Adult victims of CO poisoning were treated either by reservoir facemask (O2 flow 15l/min), or non-invasive CPAP ventilation-support (PEEP 5cm H20, 100% FiO2) until a carboxyhaemoglobin (COHb)-level of 3% was reached. COHb levels were continuously measured and half-life was calculated.

Results:
In total 56 patients were included, 14 were treated by CPAP, 42 by reservoir facemask. Median COHb-half time was 100 minutes (IQR 75-134) with inhalation therapy by reservoir face mask and 64 minutes (IQR 55-74) with treatment by CPAP ($p<0.01$).

Mean difference in half-times between groups adjusted for baseline-differences was 112 minutes (95% CI 9 to 215; $p=0.04$).

Conclusions:
Our findings suggest a potential benefit of non-invasive CPAP ventilation-support in the reduction of COHb half-life in intoxicated subjects. This seems to be justified to be further investigated in randomized controlled trials.

#8059 : Cardiopulmonary resuscitation by emergency medical technicians in Austria - Results from the AURORA-registry (Austrian registry of resuscitation by ambulance-crews)

Preferred format : ePoster

Authors:

Dominik Roth (1), Lukas Leher (1), Wolfgang Schreiber (1)

1. , Department of Emergency Medicine, Medical University of Vienna, Vienna, AUSTRIA

Keywords: Out-of-Hospital Cardiac Arrest, Emergency Medical Services, Registries

Abstract :

Background:
Out of hospital cardiac arrest (OHCA) is a leading cause of death in the western world, and an important field of operation for emergency medical services (EMS). EMS in Austria is organized as a two-tier system, with emergency medical technicians (EMTs) with basic training, many of them volunteers, usually arriving on scene first, and emergency physicians providing follow up-care on-scene later on. Currently, there is no nationwide acquisition of data on EMS-efforts in OHCA in Austria.

Methods:
The AURORA-registry was designed to prospectively collect data on resuscitation by EMTs of the Austrian Red Cross (providing the vast majority of EMS in the nation) according to Utstein-criteria. In addition, country-specific details on EMTs' level of training were recorded.

Results:
From January 2014 to September 2015 a total of 1,544 cases were recorded (546 (35%) female, mean age 71 +/- 17 years), 1,064 (69%) of them were observed cardiac arrests. A traumatic cause was evident in 103 (7%) cases. Bystander-CPR was provided in 596 (39%) cases, and a public access defibrillator was used in 21 (1.4%) cases. Upon arrival of EMS, a shockable rhythm was identified in 661 (43%) cases.

Regarding EMTs, 881 (57%) were volunteers, 1234 (80%) had only basic training ("Rettungssanitäter"), 307 (20%) had advanced training ("Notfallsanitäter"), including venous puncture and the use of drugs. For initial airway management, a laryngeal tube was used in 1019 (66%) cases, bag-valve-mask ventilation in the rest of cases.

Any return of spontaneous circulation (any ROSC) could be achieved in 319 (21%) cases. Rate of survival to hospital was 165 (11%).

Conclusions:
We present the first nation-wide data on OHCA from Austria. Outcomes of our volunteer-based, two-tier system are comparable to other similar countries.

#8060 : RHOMBOENCEPHALITIS: THE IMPORTANCE OF EARLY SUSPICION AND TREATMENT IN EMERGENCY DEPARTMENT

Preferred format : ePoster

Authors:

Doina Soltoianu (1), Albert Moreno Destruels (1), Jesus Galvez Mora (1), Gilmar Pugnet (1), Domingo Ribas Segui (1), Alexis Guzman (1)

1. Emergency Department, Hospital Joan XXIII, Tarragona, SPAIN

Keywords: rhombencephalitis, brainstem encephalitis, infectious, listeria, enterovirus

Abstract :

Introduction:

Rhombencephalitis (RE) refers to inflammatory diseases affecting the hindbrain (brainstem and cerebellum) and has a wide range of possible aetiologies: infections, autoimmune diseases and paraneoplastyic syndromes. Signs and symptoms are irritability, myoclonus, ataxia, and cranial nerve involvement. Listeria is the most common cause of infectious RE. An infection by a virus (Enterovirus 71 and herpes simplex virus) is the second most common and important cause of encephalitis, but in 30-50% of them diagnostic is not available. An accurate imaging differential diagnosis is crucial in the management of these patients. MRIs are abnormal in 100% Listeria cases but in the viral causes MRIs are abnormal only in 70% to 75% of patients.

We present two cases of clinical RE probably caused by virus, however an accurate aetiological diagnostic was not possible.

CASE 1:

A 30 years' woman presenting occipital headache for five days with fever the last 3 days. She experienced from 24 hours' ataxia and diplopia. Social history revealed she works in paediatric emergency department as epidemiological antecedent. Physical examination reveals diplopia and ataxia. Cerebrospinal fluid (CSF) analysis revealed lymphocytic pleocytosis, negative PCR for Enterovirus, Herpes virus, varicella zoster, virus Epstein-Barr, Listeria monocygotenes and Mycobacterium tuberculosis. CT and brain MRI were unremarkable. Blood and CSF cultures were negative. Initially the patient was treated with ceftriaxone and acyclovir, with full recovery. Final diagnostic of Rhomboencefalitis caused by virus was made at discharge.

CASE 2:

A 16 years old patient presenting with fever, oral vesicles and odynophagia. One month ago a hand, foot and mouth syndrome was diagnosed in 15 months' year old brother He had seen his general practitioner (GP), who prescribed amoxycilin-clavulamic for amygdalitis. This failed to relieve his symptoms and in the last 48 hours fell asleep and lethargy with nausea and vomiting.

On examination the patient was comfortable at rest with 37,6ºC. Neurological examination reveals spontaneous and irregular movement of eyes and supranuclear facial paresia. No other alterations were found.

CSF analysis was normal. negative PCR for Enterovirus, Herpes virus, varicela zoster, virus Epstein-Barr, enterovirus, Listeria monocygotenes, Mycobacterium tuberculosis. CT was normal. Brain MRI shows poster-medial lesion over cerebellums pedunculum.

Initial treatment with Ceftriaxone, Acyclovir, Ampicillin and immunoglobulins. Full recovery with final diagnostic of Rhomboencephalitis caused by virus.

CONCLUSION:

Rhomboencephalitis must be suspected early in the emergency department. MRI findings are in most cases not conclusive for a final diagnosis and may be normal for 49% of patients. Nevertheless, lack of changes on brain MRI, along with possible false-negative CSF viral PCR, could still represent a viral rhomboencephalitis. An accurate clinical examination should allow to detect signs and symptoms of RE. If suspected, we recommend empiric therapy with ampicillin and acyclovir for all cases after samples have been obtained from CSF and blood for cultures and the polymerase chain reaction (PCR). A proper diagnosis is mandatory in order to avoid potentially severe and life threatening complications.

#8061 : WÜNDERLICH SYNDROME: SPONTANEOUS RETROPERITONEAL HEMORRHAGE DUE TO RENAL ANGIOMYOLIPOMA

Preferred format : ePoster

Authors:

Doina Soltoianu (1), Gilmar Pugnet (1), Jesus Galvez Mora (1), Albert Moreno Destruels (1), Domingo Ribas Segui (1), Alexis Guzman (1)

1. Emergency Department, Hospital Joan XXIII, Tarragona, SPAIN

Keywords: Wünderlich syndrome, Angiomyolipoma, massive hemorrhage, renal tumor

Abstract :

INTRODUCTION:

Wünderlich syndrome (WS) is a rare entity characterized by spontaneous, non traumatic retroperitoneal haemorrhage. It can be fatal if not promptly recognized clinically. The most common cause is Renal Angiomyolipoma (AML), a benign mesenchymal tumour. The incidence of this tumour is 0,3-3% with a female to male gender ratio 4,5:1, it is estimated that 10million people worldwide have such lesion.

PRESENTATION OF CASE:

A 66 years old male with no history of trauma or anticoagulation was presented to the emergency department with sudden-onset of abdominal pain in left flank initiated 2 hours ago. Associated symptoms included nausea and pallor without fever, dysuria nor digestive disorders. His personal history includes renal calculus and sigmoid adenocarcinoma T3N1 that was undergone to left hemicolectomy 8 years ago. On physical examination he appeared pale, feverless with with normal vital signs: blood pressure 123/80 and oxygen saturations 100% on room air. Abdominal examination revealed pain and peritonism in the upper left quadrant

Initially renal colic was suspected and analgesic treatment initiated. After a few minutes the patient’s symptoms worsened and he developed haemodynamic instability with hypotension, tachycardia and syncope. On examination he presented intense abdominal pain. He was stabilized with crystalloid fluid resuscitation without additional needs. Urgent contrast SCAN showed acute retroperitoneal hematoma (with intraperitoneal spillage). A focal and heterogeneous lesion was identified in contact with left renal upper pole suggesting a renal angiomyolipoma. The patient’s haemoglobin decreased from 16g/dL to 10g/dl so a transfusion of two packed red blood cells was performed.

The patient was clinically diagnosed as Wünderlich syndrome caused by spontaneous haemorrhage of angiomyolipoma. Given the patient's hemodynamic stability, conservative medical management is decided. He was admitted to the ICU for closed monitoring. After some days is transferred to Urology ward where he presents a correct clinical course with analytical stability, remaining hemodynamically stable and afebrile at all times, the patient is discharged.

CONCLUSION

Wünderlich’s syndrome is one of the most feared complications of renal angiomyolipoma and can be fatal if not diagnosed promptly. WS is classically associated with acute lumbo-abdominal pain, palpable mass and general deterioration with hypovolemic shock (Lenk’s triad). Computer tomography is considered gold standard. Management is mainly expectant but in case of haemodynamic instability radical nephrectomy to even embolization may be required. Because of his low frequency of occurrence and potential severe bleeding is important to keep WS in mind in patients with flank pain and hypotension.

#8062 : Granulomatosis with polyangiitis (GPA) revealed by alveolar hemorrhage, ARDS and renalfailure: case report

Preferred format : ePoster

Authors:

houcem ouni (1), Mohamed ali Cherif (2), ons andolsi (1), khaled saidi (1), Najeh Hajjem (1), youssef zied El hechmi (2), Ines Sedghyeni (3), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Granulomatosis ,alveolar hemorrhage,ARDS

Abstract :

Introduction:

Alveolar hemorrhage is a rare but usauallydivastating complication in systematic vasculitis. Early diagnosis and treatment of GPA may lead to a full recovery.

Case report:

A 38-year-old male patient presented to the emergency department (ER) for hemoptysis, arthralgia, asthenia and emaciation. He had a history of nosebleed, tinnitus and dizziness.

His vital signs were as follow: respiratory rate of 30 breaths/min, oxygen saturation with pulse oximetry as 96% with 5 litre/min of oxygen,crackles by lung auscultation, pulse rate of 110 beats/min, angiomas in both elbows and legs and hematuria.

The laboratory tests were creatinine clearance at 23 ml/min, hemoglobin level at 5,8 gr/dl, white blood cells count 13260/ml and platelets count 126000/ml.

Thoracic computed tomography (CT): massive alveolar hemorrhage

GPA has been confirmed with a positive level of antineutrophil cytoplasmic antibodies (ANCAs).

He became increasingly dyspneic due to acute respiratory distress syndrome. He has been intubated. A PiCCO^{R} has been performed. The extravascular lung water index was 24ml/kg. Many hemodialysis sessions have been performed. He received prednisolone and a bolus of cyclophosphamide. He was transfused. The patient presented clinical and biological improvement. However, after the second bolus of cyclophosphamide, he presented a septic shock with pancytopenia. He died 27 days after.

Conclusion:

The patient in this case died due from iatrogenisis due to the side effect of immunosupressor, despite an early diagnosis and treatement. Management of therapeutics in GPA needs to be reviewed in intensive care units.

#8063 : Breaking Bad News: the Take five program.

Preferred format : ePoster

Authors:

Aline Gillet (1), Isabelle Van Cauwenberge (2), Rebecca Tubes (1), Alexandre Ghuysen (2)

1. Medical Simulation Centre, University Hospital Centre of Liege, Liège, BELGIUM
2. Emergency Department, University Hospital Centre of Liege, Liège, BELGIUM

Keywords: Delivering bad news, education, simulation

Abstract :

Introduction

For many years, bad news delivery's impact on patients or their relatives, as well as physicians' stress has been a major concern. On the basis of studies emphasizing the potent efficacy of training courses to help physicians delivering such news, many protocols, like SPIKES, BREAKS or SHARE, have been developed worldwide. However, training to such protocol might be time-consuming and not suitable with junior doctors or trainees' turnover. Indeed, there is currently no teaching program validated to date. We hypothesised that a short simulation program (the TAKE 5 program) could improve bad news delivery performances, reaching a level comparable with longer course programs. We therefore designed the present study to evaluate the potential impact of this standardized 5-hours training program.

Participants and methods

This preliminary study was conducted in the Emergency Department of a tertiary care academic hospital accounting for 90 000 ED census per year, 16 attending emergency physicians, 10 junior residents, and 5 trainees per month. Data were extracted from a 5-months period between November 2015 and April 2016.

The study included three phases over 4 weeks. Video recorded individual role-playing sessions happened the first (T1) and the fourth (T3) weeks. A 3-hour theoretical training group session happened the second week (T2), introducing the basic principles of therapeutic communication and delivering bad news based on the SPIKES protocol. Each role-playing session lasted approximately 1 hour with 10 minutes briefing and medical case acknowledgement, 10 minutes role-plays and 40 minutes group debriefing. We created an 8 scenarios database (paediatric with severe asthma attack, road accident, intracranial bleeding) for the role-playing sessions.

Bad news delivery performance evaluation was based on a 14 points retrospective assessment tool (1). We collected data about the status and impact of a stressful event at 3-days using the french version of the IES-R scale (2). We applied Student t-tests for statistical analysis.

Results

A total of 14 volunteers (10 trainees and 4 junior emergency physicians) were included in the study. On average, bad-news delivery process took 9'45'' at T1 and 10'20'' at T3. Form T1 to T3, bad-news delivery performance increased significantly for both the junior emergency physicians and trainees ($p=0.0003$ and $p=0.0006$, respectively). Further analysis revealed that most relevant increases concerned the "situation" ($p<0.001$), "presentation" ($p=0.009$), "knowledge" ($p=0.037$), "emotions" ($p=0.01$) and "summary" ($p=0.001$) steps. Interestingly, we also found a significant decrease of the impact of bad-news delivery on trainee physicians' stress ($p=0.006$).

Conclusion

These preliminary results indicate some potential for this new standardized course of breaking bad news delivery. Apart from allowing physicians increase their communications skills, we believe that this simple 5-hour simulation-training program could alleviate physicians' stress when they happen to break bad news.

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#8067 : The platelet to lymphocyte ratio as a predictor of mortality in non ST elevated myocardial infarction

Preferred format : Oral presentation

Authors:

KAMEL MAJED (1), BACCOUCHE RAMLA (2), KHEDIJA ZAOUCHE (3), boubaker radhia (2), KILANI MOHAMED (2), achouri abderrahim (2), HAMIDA MAGHRAOUI (3), MOHAMED MODHAFFER (3), CHOKRI HAMOUDA (3), NEBIHA BORSALI FALFOUL (3)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA

Keywords: blood cell count, prognosis, ecute coronary syndrom

Abstract :

INTRODUCTION

The platelet to lymphocyte ratio is an easily available inflammatory biomarker for coronary disease.

The study aim was to assess the ability of this ratio to predict in hospital mortality of patients with non-elevated ST myocardial infarction (NSTEMI).

METHODS

It was an observational prospective study conducted in an emergency department. We excluded patients who had a ST elevated myocardial infarction. We included patients who met criteria of NSTEMI who consulted the emergency department in January 2016.

RESULTS:

We enrolled 85 patients. The mean age was 67 years ± 11 years. Fifty patients were males. 53% of patients were smokers, 57% had hypertension, 37% diabetes, 21% coronary disease and 15% had heart failure. A depressed ST segment was found in 58.8 % of cases, inversed T wave in 47.1%, left bundle bloc in 13%, right bundle bloc in 11% and atrial fibrillation in 9%. The mortality was 13%. The mean PLR of dead patients was significantly higher than PLR of survivors with 362 ± 499 vs 198 ± 185 (p=0.04).

CONCLUSION:

PLR can be used as in independent factor to predict mortality of patient with NSTEMI in emergency department.

#8068 : Liquitab Detergent Capsules; cleaning up paediatric emergencies. The introduciton of a new practice guideline to OLCHC

Preferred format : Oral presentation

Authors:

Eanna Mac Suibhne (1)

1. Our Lady's Childrens Hospital Crumlin, Our Lady's Childrens Hospital Crumlin, Dublin, IRELAND

Abstract :

INTRODUCTION

Exposure to the contents of Liquid detergent capsules is a common presentation to the emergency department in OLCHC. The adverse effects of liquitabs can vary, and depend on the route and significance of exposure. Their understandable attraction pose a significant risk to the pediatric population, and with little public knowledge of these dangers, the continued danger of exposure necessitates the requirement for enhancing clinician knowledge and improving management of these patients. A practice guideline was introduced to the emergency to provide an evidence based guideline on the management of patients presenting to the ED with exposure (splash and ingestion) to liquid detergent capsules

METHODS

A rigorous literature search was conducted, investigating for studies related to Liquitab exposure and for the existance of any previous guidelines. Information was sought from the National Poisons information service and toxbase. Departmental teaching delivering updates on the development of the guideline steered the direction of the guideline in its inital phases. Practice guidelines were drafted and underwent assessment/ revision by a guidelinees committee in Our Ladys Childrens Hospital Crumlin. The inclusion of speciality review was pivotal. Approvment was sought from Opthamology, Plastics, General Surgeons and Gastroentrology prior to the introduction of the guideline into the Emergency Department.

CONCLUSION

The introduction of this guideline will allow for the safe assessment of patients presenting with any degreee of exposure to liquid detergent capsules. The enhancment of clinician knowledge facilitates a safe discharge and the involvmemt of various specialties caters for coperative enviornment in managing patients requiring further managment. A parent information leaflet, administered on discharge, also aims at improving public knowledge and recommends safety tips, reducing the liklihood of further presentations.

#8069 : Predictive value of the neutrophil to lymphocyte ratio of patients with non ST elevated myocardial infarction

Preferred format : Oral presentation

Authors:

KAMEL MAJED (1), BACCOUCHE RAMLA (2), KHEDIJA ZAOUCHE (3), boubaker radhia (2), Kallel mohamed amine (2), abdelwaheb mghirbi (2), HAMIDA MAGHRAOUI (3), MOHAMED MODHAFFER (3), CHOKRI HAMOUDA (3), NEBIHA BORSALI FALFOUL (3)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA

Keywords: blood cell count, prognosis, acute coronary syndrom

Abstract :

INTRODUCTION

The inflammation is well known in the initiation and propagation of acute coronary syndrome. Subtypes of white blood cells are indicators of inflammation in this specific population. The study aim was to evaluate the neutrophil to lymphocyte ratio (NLR) in prediction in hospital mortality of patients with non-elevated ST myocardial infarction.

METHODS

It was an observational prospective study conducted in an emergency department. We excluded patients who had a ST elevated myocardial infarction. We included patients who met criteria of NSTEMI who consulted the emergency department in January 2016.

RESULTS:

We enrolled 85 patients. The mean age was 67 years ± 11 years. Fifty patients were males. 53% of patients were smokers, 57% had hypertension, 37% diabetes, 21% coronary disease and 15% had heart failure. A depressed ST segment was found in 58.8 % of cases, inversed T wave in 47.1%, left bundle bloc in 13%, right bundle bloc in 11% and atrial fibrillation in 9%. The mortality was 13%. The mean NLR of dead patients was significantly higher than NLR of survivors with 11.6 ± 14. 5 vs 5.5 ± 5,2 (p=0,009)

CONCLUSION:

NLR can be used as in independent factor to predict mortality of patient with NSTEMI in emergency department.

#8070 : Falls prevention: starting at the beginning (QIP)

Preferred format : ePoster

Authors:

Tamkeen Pervez (1), Rosa McNamara (1)

1. Department of Emergency Medicine, St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK

Keywords: Early falls prevention, Awareness, Emergency Department, Vigilance, Communication, Quality improvement project

Abstract :

Falls prevention: starting at the beginning (QIP)

Dr T Pervez[1], Dr R McNamara[1]

Department of Emergency Medicine, St Marys Hospital, Imperial College Healthcare NHS Trust, London, UK

INTRODUCTION:

In-hospital patient falls is a burning issue with, nearly 240,000 falls reported from acute and community hospitals in England and Wales every year. Of these, nearly 1400 result in hip and other fractures. The financial burden of this on the NHS is over £15 million per year, albeit precise figures of the overall costs are much likely to be higher due to associated invisible costs

RATIONALE:

The Emergency department (ED) patient cohort and ergonomics profoundly increases the risk of falls in patients in the department. Furthermore, a significant number of the inpatients begin their hospital journey at the ED.

AIM:

To reduce the number, and subsequent consequences, of in-hospital falls at the front door by increasing awareness and vigilance; carrying out early assessment and introducing early fruitful interventions.

METHOD:

A pragmatic quality improvement project (QIP) carried out by the introduction of simple and cost-effective measures in ED. The initiative consisted of 2 phases: phase 1 – focused on increasing awareness and phase 2 - focused on falls prevention. PDSA approach was used for project development, progression and assessment. Careful processing mapping led to clear identification of primary and secondary drivers, which were then used to identify aims and objectives.

RESULTS:

Delivered outcomes recorded in the form of stakeholder satisfaction, reduction in the number of falls and reduction in the severity of injuries sustained secondary to the number o falls. Prospective database, questionnaires and structured interviews were conducted to achieve this.

CONCLUSION:

Increasing awareness and taking measures preventive measures helped to reduce the number, and impact, of falls in the ED. The QIP also formed an integral part of the current frailty-friendly ED project in the Trust. It encouraged awareness and vigilance across the wider multidisciplinary team, having a holistic impact on the hospitalised patients. The project also received a positive reaction on the social media and won second prize at the RSM meeting (presented in the early stages of the project).

#8071 : Consultus Interruptus: Unscheduled Interactions within the Emergency Department

Preferred format : ePoster

Authors:

Sandeep Gill (1), RAJ PAW (2), PETER DOYLE (2), Ameer Shah (3), Sarah Shakkshir (4), MUNIR ABUKHDER (4)

1. , NHS, Birmingham, UK
2. Dudley Group of Hospitals, NHS, DUDLEY, UK
3. , NHS, Dudley, UK
4. , University of Birmingham, Birmingham, UK

Keywords: Emergency Department, Emergency Medicine, Unscheduled Interactions, Interruptions, Medical Coordinator

Abstract :

Introduction

It is well recognised that the job of an EM consultant involves multitasking and dealing with multiple unscheduled interactions (UI). The fluid, unpredictable, time pressurised and multi-professional nature of EM makes it particularly susceptible to UI. An increasing number of UI can result in increased error. An Increasing number of decisions, irrespective of complexity can lead to error and decision fatigue. We aim to map the number of UI an EM consultant faces when on shift.

Objectives

This study attempted to answer the following questions:

- In a day how many unscheduled interactions does the senior EM physician deal with?
- How many of these are interactions are clinical interactions?
- What is the average length of time spent dealing with these unscheduled interactions?

Methods

This prospective observational study took place at a single centre urban ED in the West Midlands. The study period was from 1.12.15 to 23.12.15. An EM consultant was trailed on shift by a medical student who noted down all the non-patient interactions that the consultant had. The consultant had no input into data collection. The nature of the UI, the time spent and the outcome was recorded on a simple data collection form. This was then collated and analysed.

Results

- A total of 23 shifts over 135hrs 34min were observed.
- There was a mix of early (0800-1600), late (1600-2100) and weekend shifts.
- All 10 members of the consultant body were followed.

Total Number of UI in study period: 2082

Average Number of UI per hr: 17.95 UI/hr.

UI rate (time per UI) 3min 21seconds

Average time per UI 87.5sec (Range 10s–34 mins)

Clinical Interaction vs Non Clinical Interactions: 94% vs 6%

Conclusion

In this single centre study of an urban UK emergency department 40% of shop floor consultant time is spent dealing with UI. The majority (94%) of these UI related to clinical interactions. In this study this equates to 17.95 UI per hour with an average time spent dealing with each interaction of 87.5 seconds

Discussion

The nature of modern EM necessitates a senior EM physician running a shift on order to cope with the vast number of UI that must be resolved. Combining the intensity of this role with an individual patient load is not feasible and departments should consider the initiation of a ‘captain of the ship’ ‘Fat Controller’ role along with a second senior EP to provide individual consultant level care to the sickest individuals who require senior input.

#8072 : Cerebral thrombophlebitis following head injury: a case report

Preferred format : Oral presentation

Authors:

Majed Kamel (1), Mghirbi Abdelwaheb (1), Zaouche Khedija (1), Kilani Mohamed (1), Khelil Mohamed Hassen (1), Maghraoui Hamida (1), Modhaffer Mohamed (1), Hamouda Chokri (1), Borsali Falfoul Nebiha (1)

1. Emergency Departement of La Rabta Teaching Hospital, University of Manar 1, Tunis, TUNISIA

Keywords: cerebral venous thrombosis, head injury, CT scan

Abstract :

Introduction:

Cerebral venous thrombosis is a rare complication of head trauma which is sometimes difficult to diagnose. We report a medical observation who presented post-traumatic cerebral venous thrombosis revealed by signs of intracranial hypertension and psychiatric disorders.

Case report

A 24-year-old man presented to the emergency department (ED) one hour after a head traumatic injury. He had head and chest trauma and lost consciousness for undetermined period after a bicycle accident. At physical examination, he was conscious with no neurological abnormalities. He could not move his left arm because of shoulder dislocation. Computed tomography, performed 6 hours later, showed right fronto-temporo-parietal acute subdural hematoma without midline shift, right temporal petechial contusion, displaced fracture of the occipital condyle and non-displaced fracture of the scapula. There was no need for neurosurgery and the shoulder dislocation was reduced.

The patient was admitted in the emergency observational unit and was discharged after 24 hours. Two days later, he complained severe headache and multiple episodes of vomiting, dizziness and visual illusions. Computed tomography scan of the brain with contrast injection revealed left lateral sinus thrombosis extending to homolateral internal jugular venous. The patient was given anticoagulation and admitted in the neurology intensive care unit.

Comments:

Repeating CT scan of the head is recommended in the management of traumatic brain injury if there is a worsening of neurological disturbances and a contrast injection may be required to rule out cerebral venous thrombosis which requires specific treatment.

#8073 : Dear SIRS, you can be SWEET but I hate you! A sweet syndrome mimiting severe sepsis

Preferred format : ePoster

Authors:

majed kamel (1), Mohamed Amine Kallel (2), Khedija Zaouche (2), Hamida Maghraoui (2), Chekib Bouali (2), Jobrane Mansouri (2), Chokri Hammouda (2), nebiha Falfoul Borsali (2)

1. emergency departement of la rabta teaching hospital, univeristy of MANAR I, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA teaching hospital, University of MANAR I, tunis, TUNISIA

Keywords: SIRS, SEPSIS, SWEET syndrom

Abstract :

Introduction

Skin disorders are common on emergency department especially when associated with fever. Twenty five percent to forty percent are related to a decompensation of a preexisting skin disorder [1]. In 1964, Sweet describes a “strange eruption” which is immunologically mediated and since that date the dermatitis bears his name [2].In the emergency department, the diagnosis of this pathology may be difficult especially when the presentation is severe or associated with fever since it face the physician to a therapeutic dilemma: giving antibiotics or steroids.

Case presentation

A 43 years old man with no past medical history was transported to the emergency department by the mobile emergency service with a chief complaint of weakness and fever associated with a disseminated skin eruption. he was conscious but very weak and he has fever about 28.5°C. SBP/DBP was about 90/60 mmHg and HR about 96 per minute. Initially he was managed as severe septic syndrome since we found nitrites in urine sample associated with SIRS. A PCT was performed and the amount was less then 0.5ng/ml so we performed a skin biopsy which showed a neutrophilic infiltration consistent with Sweet syndrom. The patient was given steroids and had noticeable improvement of his complaints.

Conclusion

Sweet syndrome is a possible diagnostic in patient with skin eruption and non infectious SIRS in the emergency department

#8075 : POST TRAUMATIC EPILEPSY 34 YEARS AFTER A BULLET IN THE HEAD

Preferred format : ePoster

Authors:

majed kamel (1), KILANI MOHAMED (1), zaouche khedija (1), Kallel mohamed amine (1), mghirbi abdelwaheb (1), boubaker radhia (1), maghraoui hamida (1), bouali chakib (1), hamouda chokri (1), borsali falfoul nebiha (1)

1. Emergency Departement of La Rabta Teaching Hospital, UNIVERSITY OF MANAR I, tunis, TUNISIA

Keywords: post traumatic epilepsy, penetrating brain injury, emergency department

Abstract :

Introduction: Post traumatic epilepsy (PTE) is defined by the occurrence of one or more seizures beyond the first week following head trauma and has been linked to region, type, and severity of injury. We report a case of a patient who experienced seizures 34 years after a penetrating brain injury.

Observation: A 60 years-old diabetic patient came to the emergency department after a household accident causing mild head trauma without loss of consciousness.On first examination, the patient had a Glasgow coma scale of 15/15, scratch on the forehead, his blood pressure was 150/80 mmHg, his pulse was 100 bpm and the temperature was 38 °C.Half an hour after his arrival, the patient experienced a left hemibody convulsion that have secondarily generalized with an altered state of consciousness. Concomitant capillary blood glucose was greater than 5 g/l. Seizure stopped after the administration of 1mg intravenous clonazepam and the patient recovered consciousness rapidly.On the second examination, there was no meningeal syndrome, a left post-critical hemiparesis with a left positive babinski signs. The skin examination found several scars on the right lower limb related to projectiles inlets. Patient interview revealed that he is a veteran of the 1982 Lebanon war. Laboratory tests and arterial blood gases were normal.Brain CT-scan showed, a bullet-shaped metallic foreign body lodged in the left hippocampus with no signs of recent hemorrhage. CT also showed the projectile entry point as a complex fracture of the left midparietal bone. The bullet path consisted of a sequellar left temporal hypodensity and no exit wound.The lumbar puncture showed no relevant abnormalities. No source of infection has been retraced. The patient was put under carbamazepine. He kept persistent temporal epilepsy characterized by loss of awareness of surroundings. He has been admitted to the neurology department.

Conclusion: this case illustrate that penetrating head injuries, largely gunshot wounds, increases the likelihood of developing PTE for more than 30 years after the injury. Military population and veterans in particular may require long-term neurologic follow-up.

#8076 : What Makes and Effective Shop floor leader: The Senior Doctor

Preferred format : Oral presentation

Authors:

Sandeep Gill (1), Mark Pell (2), Chris Turner (2), Shewli Rehman (3), Hamid Ilyas (3)

1. , NHS, Birmingham, UK
2. UHCW, NHS, Birmingham, UK
3. HEFT, NHS, Birmingham, UK

Keywords: Emergency Medicine, Leadership, Shop floor

Abstract :

Introduction

High quality effective leadership is associated with improved outcomes for patients and increased staff satisfaction. Previous work at UHCW had identified traits that were regarded positively in trauma team leaders. A combined team of clinicians from UHCW and HEFT felt that during this time of particular pressure, shop floor leadership qualities, as stated by other staff, would be of use to guide behaviours

Aims

We aimed to identify the qualities staff valued in shop floor medical leadership. We also aimed to identify behaviours that were felt to be unhelpful as well as identifying Senior tier doctors (Consultant/Middle Grade) who were most felt to run a good floor.

Methods

We conducted a qualitative survey across 3 departments in the West Midlands over one month in early 2015. We used an anonymous questionnaire which first collected demographics then responses to the following questions

1. What characteristics do you associate with effective shop floor leadership?
2. What characteristics do you associate with ineffective shop floor leadership
3. Are any staff particularly good? Please tell us why.The responses were assessed to spot themes and agreed upon by the authors.Answers were codified by a group of 4 of the authors with disputes settled by discussion.**Results**A total of 101 responses were received with a broad spectrum of staff answering. All codified results were assessed and it was deemed the best way to represent the data was in the form of word clouds. Each word present in the cloud has a larger presence in relation to the frequency of it being mentioned as a response.**Discussion**Interestingly the attributes most highly regarded by staff were that the senior shop floor doctor was approachable and supportive. With less a of need for good communication skills or their enthusiasm at work. This would imply that staff see the senior doctor as being somebody to be able to turn to in need without fear of rebuke. This is reinforced by a high number of the negative attributes being aspects of interpersonal interactions and areas that would represent a barrier to being a supportive and approachable member of staff.The ability to aid decision making when turned to for advice is clearly relied upon as a key with both a lack of availability and then being unable to make decisions seen as negatives. The observation that a dichotomy of both seeing patients in the department is a positive but then not being available is a negativeCommunication is not seen as positive attribute to be good at as much as it is seen to be a negative if its done poorly.**Conclusion**Being approachable is viewed as a good characteristic in a leader with unavialability and bad interpersonal skills as a negative attribute.

#8077 : Clinical features of severe intoxications associated with analytically confirmed use of NBOMe

Preferred format : Oral presentation

Authors:

Eleonora Buscaglia (1), Davide Lonati (1), Valeria Margherita Petrolini (1), Sarah Vecchio (1), Mara Garbi (1), Marta Crevani (1), Azzurra Schicchi (1), Giulia Scaravaggi (1), Pietro Papa (2), Antonella Valli (2), Loretta Rocchi (2), Laura Rolandi (2), Elisa Roda (1), Teresa Coccini (1), Marcello Di Tuccio (2), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Laboratory of Analytical Toxicology, Clinical Chemistry Service, IRCCS Policlinico San Matteo Foundation, Pavia, Pavia, ITALY

Keywords: NBOMe, poisoning, intoxication, clinical toxicology

Abstract :

Background: A novel class of synthetic hallucinogens called NBOMe has emerged as new psychoactive substances (NPS) since 2009. NBOMe are N-2-methoxybenzyl analogues of the respective 2C-X substituted phenethylamines, and they were first synthesized for use as tools to activate 5-HT2A (serotonin) receptors at the Free University of Berlin in 2003 (1).

Participants and methods: A study was conducted through the Italian Emergency Departments network referring to the Pavia Poison Control Centre (PPCC) in order to evaluate the clinical features and the prevalence of analytically confirmed intoxications by NBOMe over the last two years (2014-2015). Cases were assessed for age, history, acute clinical manifestations, outcome, treatment and toxicological-analytical investigations.

Case series: Among the consecutive cases referred to the PPCC for suspected/confirmed poisoning by NPS between 2014 and 2015, 11 cases of NBOMe intoxication were evaluated (age ranging from 16 to 27 years-old; 82% males). Specific laboratory investigations (liquid chromatography-mass spectrometry) were performed in all the cases on urine and/or blood specimens; 7 patients were positive for 25I-NBOMe, 2 for 25B-NBOMe, 1 for 25C-NBOMe and 1 for 25I- and 25H-NBOMe; patients urine samples were also positive for 2C-I (7 cases), THC (7), amphetamines (3), MDMA (2) and ketamine (1 case). The patients referred assumption of LSD or another hallucinogenic substance (n= 6), mescaline (n=1), other or unknown substances of abuse (n=3), or no assumption. Three patients (27%) took part to a rave party. The most common clinical manifestations were severe psychomotor agitation (91%), tachycardia (64%), seizures and rhabdomyolysis (45%), confusion (36%), hyperthermia (27%), coma, mydriasis, hallucinations and violent behavior (18% each); no lethal case was registered. The treatment consisted in sedation with benzodiazepines (6 cases), intubation, and respiratory support (5 cases). Hospital stay ranged from 10 hours to 11 days for the patients that needed intensive care treatment.

Conclusion: This case series confirms the presence of at least 4 types of NBOMe molecules (25I-, 25B-, 25C- and 25H-NBOMe) in the Italian territory. Seven patients were positive for 25I-NBOMe and 2C-I: this may be due to the metabolism of NBOMe to 2C analogue, or to the simultaneous intake of 25I-NBOMe and 2C-I. Clinicians should be aware of the presence of this new psychoactive substance and its potential for toxicity, and they should suspect possible NBOMe assumption in patients reporting the recent use of LSD or other hallucinogens. All the cases have been reported to the National Early Warning System.

Acknowledgements: Study carried out with the support of DPA - Presidency of the Council of Ministers.

Reference: 1. Kyriakou C, Marinelli E, Frati P, Santurro A, Afxentiou M, Zaami S, Busardo FP. NBOMe: new potent hallucinogens--pharmacology, analytical methods, toxicities, fatalities: a review. Eur Rev Med Pharmacol Sci. 2015 Sep;19(17):3270-81.

#8078 : MASSIVE PROTOCOL RECEPTION IN THE EMERGENCY DEPARTMENT

Preferred format : Oral presentation

Authors:

Cruz Saleme (1), Karla Hernandez (1), Hector Montiel (1)

1. Emergency Department, ABC Medical Center Methodist Network, Mexico, MEXICO

Keywords: emergency, disaster, massive protocol reception

Abstract :

No country, people or person is exempt from being involved in an emergency or disaster involving resource mobilization. In the next 3 decades, 70% of the population will be affected by some type of disaster or emergency, caused by climate change and many other derivatives of social violence, the developing countries will be hit hardest.

Patient care in the emergency room requires strategic response efforts with pre-established policies and training of physicians in the emergency department and they, in turn, lead and guide the activity of other areas, medical and administration body.

Our Centre has a specific training program to all medical and non-medical members to know what measures of prevention, mitigation, preparedness and alert in an emergency or disaster specific communication internal and external risks are. Associated with this, training is provided on massive programs referred patients receiving code yellow or red or epidemiological traumatic origin. |

During the event response is has a control unit that determines its impact generating activities support and assistance to those affected with a strategy of triage color input and subsequent zoned income.

Post-event analysis for improvement plans and continuity in education are made, it is attempted rehabilitation activities impact the population.

Policies are within the Crisis Plan, Risk and Epidemics of the institution, which includes the Program Emergency Management Response to Epidemiological and Biological Hazards Program Contingencies. Emergencies are led by a Strategic Crisis Committee, with the essential activities: Internal and External Communication, Coordination Emergency Committee (Operating Crisis), Human Resource Management, Evaluation and Financial Support, Health Care and Triage, Evaluation and support for Nursing, Operations Control Emergency Supply, Logistics rehabilitation of affected areas, legal support, which are held together in the same physical space and time.

There have been multiple events Emergency in our hospital, one of them was secondary to an explosion Maternal and Child Hospital in Cuajimalpa in which affected patients, newborns, mothers and medical personnel, traumatic injuries and burns, same as they were transferred to our unit for proximity. They were served simultaneously 37 patients, 8 patients by triage category were in red, 5 yellow and green policontundidos other category.

Pediatric patients mostly had no identification by name or characteristics, so that their post-DNA identification parents gave.

the local response to the emergency services are coordinated, in turn, was made immediate transfer of two adult patients Specialized Center in Burns and days to a pediatric patient to the Burn Unit at Hospital Galveston.

#8079 : Buckingham Medical Students' Community First Responder Scheme

Preferred format : ePoster

Authors:

Andrew Neves (1), Matthew Beck (1)

1. , University of Buckingham , Buckingham, UK

Keywords: Medical Students, Community, Responders,

Abstract :

The Buckingham Medics’ Community First Responder (BMCFR) Scheme was started in August 2015, and was created by medical students following some research into average medical service response times, and the population demographic of the town.

The scheme allows medical students to complete additional training to enable them to respond to potentially life threatening cases on behalf of South Central Ambulance Service. The response is always within a ten-minute driving radius, and encompasses a range of ailments from minor injuries to cardiac arrest. Within the first 3 months, over 100 calls were attended and a much larger interest has been drawn; with hope to extend responder hours to 24/7 within the next few months.

This scheme helps the local community by providing first response medical cover, and it helps medical students to use and apply their knowledge first hand, which seems to be beneficial to the students are cursory data of OSCE performance between responders and non-responders suggests those who are responders do better in first year exams. More data is being collected to conduct a clinical audit by the end of 2018, looking at first hand clinical experience and examination performance.

#8080 : Angioedema. Nasal vestibulitis.

Preferred format : ePoster

Authors:

Juan Antonio Rivero (1), Enrique Caro (1), Daniel Fernandez Vargas (1), Eduardo Rosell (1), Pedro Arribas (1), Francisco Temboury (1)

1. Critical care and emergency service, Malaga, Malaga, SPAIN

Keywords: Angioedema, Vestibulitis. Immunocompromised.

Abstract :

History:

Male 69 years referred pain in the right nasal vestibule 24hours evolution with declines during the last hours, spread to appreciate holofacial eyelids edema and fever up 39'5ºC and shivering.

From the previous days it presents box progressive facial swelling. The family reports that in the previous days food material by nostrils, with further manipulation by the patient, presenting from the last 24 hours swelling, redness, and blisters fluctuation around the facial bones, with pain on palapción

AP: severe COPD. Iª chronic renal. Permanent AF anticoagulated with rivaroxaban. Lung carcinoma with liver metastases in trataminto with palliative chemotherapy.

Physical exploration:

Purulent nasal area in both halls, columella and upper lip philtrum.

Facial swelling from chin to glabela associated with redness, heat and intense tenderness. Lobby with purulent nasal discharge erythematosus. Great bilateral palpebral edema preventing eye opening.

Investigations:

Blood tests: Blood count: Leukocyte 35100, neutrophilia 92%. Hb 7'9, Platelets 293000. Coagulation: PT activity 78.6%. Venous blood gases: pH 7.11. Biochemistry: glucose 379, urea 52, creatinine 1.74, normal ions, PCR 245, Procalcitonin 6.71.

TAC skull and sinuses: mucosal thickening of both maxillary sinuses with partial occupation of the left and anterior ethmoid cells for soft tissue density material, as well as thickening of the mucosal lining of the left maxillary sinus. Significant increase in thickness and density of soft tissue to diffuse facial level, which could be related to inflammatory-infectious process. focal bone defect with cortical thinning and front right supraorbital level.

Final diagnosis:

Facial cellulitis in immunocompromised patient

Evolution:

Admission is decided in observation area given the severe sepsis box of origin in skin and soft tissue facial and cervical region, starting treatment with ceftriaxone, cloxacillin and methylprednisolone.

Given the proper evolution during the first 24 hours admission is decided in charge of Internal Medicine discarded surgical approach given the palliative stage of his previous illness.

After almost a month of hospitalization, and after adding to valaciclovir intravenous treatment is decided discharged home after progressive improvement of the infection with facial and cervical recovery.

Conclusions:

However minimal possible entry must take special precautions in cancer patients being immunocompromised and complications that might entail.

#8081 : Evolution of claims in a Hospital Emergency Unit

Preferred format : ePoster

Authors:

Pilar Conde (1), Jesus Moreno (2), Alberto Moreno (3), Vanesa Gil (4), Eduardo Chichilla (4), Jose Maria Rojas-Marcos (4)

1. (Emergency Department and Intensive Care Unit of the Traumatology and Rehabilitation Center, VIRGEN , junta de andalucia, Sevilla,
2. (Technological R&D Group, VIRGEN DEL ROCÍO UNIVERSITY HOSPITAL - Seville, Spain), junta de andalucia, Sevilla, SPAIN
3. (Technological R&D Group, VIRGEN DEL ROCÍO UNIVERSITY HOSPITAL - Seville, Spain), junta de andalucia, Sevilla,
4. Emergency Department and Intensive Care Unit of the Traumatology and Rehabilitation Center, VIRGEN DEL ROCÍO UNIVERSITY HOSPITAL , junta de andalucia - Sevilla , Servicio Andaluz de Salud, Sevilla, SPAIN

Keywords: Claims, evolution, medical errors.

Abstract :

OBJECTIVES:

In order to improve the quality of care we performed the analysis of users' claims. In this analysis we have explored possible changes in its characteristics and assess improvements made during a time period of two years.

METHODOLOGY:

It was made a descriptive retrospective study of the claims made in observation emergency department, excluding claims directed to other units. Years of study: 2000 and 2015. Variables analyzed: reason, characteristics, justification or cause of the claim. The statistical program SPSS was applied to analyse the results and make inferences through the chi-square technique.

RESULTS:

Total number of emergencies: 79,200 (year 2000) 77,816 (year 2015) Total Claims: 39 (0.05%) (year 2000) 64 (0.08%) (year 2015). Cause of the claim: delay of care: 15 (38%) (year 2000) and 20 (31%) (year 2015); inappropriate manner: 4 (10%) (year 2000) and 19 (30%) (year 2015); lack of information 1 (3%) and 2 (3%) (year 2015), technical or architectural problems and lack of privacy: 2 (5%) (year 2000) and 1 (2%) (year 2015) Restrict the access of more than one companion: 11 (28%) (year 2000) 0 (year 2015); Disagreement in care 7 (18%) (year 2000) and 16 (25%) (year 2015): lack of health personnel 0 (year 2000) and 1 (2%) (year 2015); Computer errors: 0 (year 2000) and 2 (3%) (year 2015); Administrative process 0 (year 2000) and 1 (2%) (year 2015) Diagnostic errors 1 (3%) (year 2000) and 1 (2%) (year 2015) Other 1 (3%) (year 2000) and 3 (5%) (year 2015). Unjustified claims. 88% (year 2000) and 91% (year 2015), Proper claims 12 % (year 2000) and 9% (year 2015). Avoidable claims: correcting architectural defects 30% (year 2000) (it includes not allowing companions and inadequate facilities) and 0% (currently solved). Increased health personnel (currently increasing): 32% and 15 % (it includes delay of care, lack of information and inadequate treatment)

CONCLUSIONS:

1.The most common cause for claim is the delay of care. This comparison shows that this indicator decreased over time (38% and 31%)

2. Patients reported and increased of the lack of information, inadequate manner and disagreement in care. probably for persisting the lack of personnel, as well as avoidable claims

3. There were not reported justified claims caused by medical errors.

4. The number of claims increased by 64% in the years compared.

5. Only 12% and 9% of claims were appropriate.

#8082 : Systemic Inflammatory Response Syndrome or Q SOFA: that's the question!

Preferred format : Oral presentation

Authors:

KAMEL MAJED (1), BACCOUCHE RAMLA (2), NEILA MGHAIETH (3), ASMA CHARGUI (3), achouri abderrahim (2), MOHAMED MODHAFFER (3), KHEDIJA ZAOUCHE (3), HAMIDA MAGHRAOUI (3), CHOKRI HAMOUDA (3), NEBIHA BORSALI FALFOUL (3)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA

Keywords: SIRS, Q SOFA, EMERGENCY DEPARTMENT

Abstract :

Introduction

Sepsis is the first cause of infection related death. Its diagnosis must be early to start treatment and improve prognosis. Sepsis diagnosis is classically based on the association of two or more Systemic Inflammatory Response Syndrome (SIRS) criteria with suspected infection. The new definition recommends the Q SOFA as quick sequential organ failure witch can be more helpful for the management of septic patients. We hypothesized that both SIRS and Q SOFA can be used in all the ED users in the prediction of a poor prognosis.

The aim of this study was to evaluate the prognostic value of Q SOFA in emergency population and to compare SIRS to Q SOFA in prediction of in hospital mortality in septic patients.

Methods

We conducted a prospective observational and descriptive study in the emergency department of la Rabta teaching hospital during two months. Inclusion criteria were: adult patients presenting to the emergency department and required hospitalization in observational unit. Exclusion criteria were: patients under the age of 18, injured patients, patients in cardiorespiratory arrest. We evaluated in-hospital mortality, organ failure and need of hospitalization in intensive care unit.

Results

342 patients were included. The mean age was 59 years with a sex ratio of 1.47 in the past medical history, we found diabetes (36%), hypertension (25.4%) and cardiac pathology (9.9%). Final diagnoses were sepsis (54.1%), heart failure (21.1%) and decompensated diabetes 15.8%. 49.5% of patients with SIRS had organ failure vs 14.5% without SIRS ($p<0.001$). SIRS was correlated with in hospital mortality: 16.8% in patients with SIRS vs 4.3% in patients without SIRS ($p=0.008$). The in-hospital mortality was about 14.3% with a statistically significant association with Q SOFA: 27.3 % of patients with a Q SOFA ≥2 vs 8.2% of patients with a Q SOFA < 2 ($p<0.001$). A Q SOFA ≥ 2 was significantly correlated with developing organ dysfunction: 65.5% vs 31.5% of patients with a Q SOFA < 2 ($p<0.001$). 54.1% of patients had a sepsis or a severe sepsis: SIRS wasn't correlated with in hospital mortality: 20.1% in SIRS group vs 18.8% in group without SIRS criteria. Q SOFA was correlated with in hospital mortality in septic cases: mortality was 28.2% in patients with a Q SOFA ≥2 vs 14 % in patients with a Q SOFA <2 ($p=0.01$).

69 patients didn't met the SIRS criteria: 9.1% died and had a Q SOFA≥2 vs 3.4% died with Q SOFA<2. There was no correlation between Q SOFA and in hospital mortality ($p=0.41$). Ten of them developed organ failure: 4 had a qSOFA < 2 vs6 with a Q SOFA≥2 ($p<0.001$).

Conclusion

Both SIRS and Q SOFA can be used to determine critically ill emergency patients with a superiority of q SOFA especially for septic patients.

#8083 : Witnessed cardiac arrest and VT/VF as initial rhythm are still a strong predictor of survival after OHCA – results from the Eastern Bohemia Region-the Czech Republic.

Preferred format : ePoster

Authors:

Michal Plodr (1), Jaroslava Krencikova (2), Monika Praunova (2)

1. Faculty of Military Health Sciences University of Defence Hradec Kralove and Emergency Medical Services of the Hradec Kralove Region, Emergency Medical Services of the Hradec Kralove Region, Hradec Kralove, CZECH REPUBLIC
2. Emergency Medical Services of the Hradec Kralove Region, Emergency Medical Services of the Hradec Kralove Region, Hradec Kralove, CZECH REPUBLIC

Keywords: cardiac arrest, ventricular fibrillation, survival rate, witnessed collapse

Abstract :

Introduction: Out-of-hospital cardiac arrest (OHCA) is a significant cause of death in developed countries. Although early treatment has been improved in several ways, the global survival rate after OHCA still does not exceed 5-10 %.

Methods: The authors present a retrospective cohort study including 519 OHCA from the Eastern Bohemia Region-the Czech Republic from January 1 to September 31, 2015. The witnessed collapse, initial rhythm VT/VF and 30-day survival rate were recorded. The primary outcome was survival to hospital admission and survival to hospital discharge with CPC 1,2.

Results: Overall survival rate to hospital admission was 38,5 % (n=200) and overall survival rate to hospital discharge was 14,6 % (n=76), resp. survival rate to hospital discharge with CPC 1,2 was 8,7% (n=45). Witnessed collapse occurred in 45,7 % cases (n=237) and 57,4 % (n=136) patients survived to hospital admission and 16,9 % (n=40) survived to hospital discharge with CPC 1,2. Combination of the witnessed collapse and VT/VF as initial rhythm had 33,3 % (n=79) patients, 82,3 % (n=65) of them survived to hospital admission and 44,3 % (n=35) survived to hospital discharge with CPC 1,2. Patients with combination of witnessed collapse and VT/VF had considerably the best chance of both survival and good neurological outcome.

Conclusions: We proved that the witnessed collapse and VT/VF as initial rhythm are the strong predictor of survival after OHCA with good neurological outcome (CPC1,2)

#8084 : The resuscitation trolley: An overview of the situation at la Rabta Hospital in Tunisia

Preferred format : ePoster

Authors:

KAMEL MAJED (1), KHEDIJA ZAOUCHE (2), abdelwaheb mghirbi (3), achouri abderrahim (3), Kallel mohamed amine (3), MOHAMED MODHAFFER (2), HAMIDA MAGHRAOUI (2), CHOKRI HAMOUDA (2), NEBIHA BORSALI FALFOUL (2)

1. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, tunis, TUNISIA
2. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, LA RABTA HOSPITAL, TUNIS, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA TEACHING HOSPITAL, UNIVERSITY OF MANAR I, tunis, TUNISIA

Keywords: Resuscitation trolley, wards, equipement, recommandations

Abstract :

INTRODUCTION

The emergency trolley allows physicians to have rapidly access to emergency equipment and drugs in cases of life-threatening emergencies.

The aim of our study was to investigate if there is an emergency trolley in all the wards of la Rabta teaching hospital in Tunisia and to propose practical recommendations to improve eventual insufficiency.

METHODS

This was a cross-sectional descriptive study conducted at la Rabta teaching hospital in Tunisia during April 2015.

A survey was conducted in all the wards related to the existence, the composition and the maintenance of an emergency trolley.

We analyzed the composition and the arrangement of the components.

RESULTS

Only 36% of participant wards had already an emergency trolley, in those wards the management, the composition and the maintenance was done by a dedicated nurse without a physician contribution. Only one third of those trolley contained resuscitation drugs and a quarter contained a cardiac monitor with defibrillator.

Those trolleys were used in all situations even those witch not urgent and the components were not regularly verified.

Conclusion

Our data showed a lack of emergency trolleys disponibility in our hospital probably due to lack of the information regarding the usefulness utility.

#8085 : Compensation of shock following Injury

Preferred format : ePoster

Authors:

Mohammad Ansari (1), Qazi Zaman (1), Ahmad Ismail (1)

1. , george elliot hospital, Birmingham, UK

Keywords: Shock Liver

Abstract :

An 18 year old boy presented to the emergency department. He was hit by a moving arm of a machine over his right lower chest. There was a large bruise over the lower part of the chest. His pulse rate was 100bpm with a BP of 120/80. He was tender in the right hypochondrium. The diagnosis of a ruptured liver was made and he was booked for theatre. He was given 10mg of morphine and was admitted to the ward. He was seen by a senior Consultant. At that time he was noticed to have been sitting in bed comfortably while his pulse rate was 80 bpm and his blood pressure of 120/80. It was decided to delay the surgery because of his present condition.

Two hours later the patient became ill. He became breathless; pulse rate was recorded to be 110 bpm and he had a BP 90/50. He was transfused blood and a chest x ray was performed which showed fluid in the right of the chest. A diagnosis of a ruptured diaphragm was made and he was taken to theatre. A right thoracotomy was performed. Upon opening the chest his liver popped out which was in two pieces. On further exploration it transpired that his right kidney was separated from the renal artery and vein, and was only attached to the right urethra. An incision was extended to the abdomen; and a right nephrectomy was performed. The liver was repaired.

The patient recovered and was discharged home.

Conclusion:

Young patients compensate well for a time before collapsing suddenly which is exactly what happened in this case.

#8086 : Rickettsial Infection : A case report

Preferred format : ePoster

Authors:

ons andolsi (1), Mohamed ali Cherif (2), houcem ouni (1), khaled saidi (1), youssef zied El hechmi (2), Malek Hsouna (3), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis, TUNISIA
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: Rickettsia,case,emergency

Abstract :

Introduction :

Rickettsiae are zoonotic infections caused by obligate intracellular bacteria of the genera Rickettsia and Orientia, belonging to the family Rickettsiaceae and transmitted to humans by the bites of arthropods, the number of Rickettsia species pathogenic has increased considerably. In recent years the incidence has increased globally. The clinical presentation is little specific as is the case described below.

Case report:

A 42-year-old man with no past medical history presented to our emergency department with icterus febrile since one week. The patient also complained of odynophagia, dysphagia, epigastric pain and recurrent episodes of vomiting. On physical examination the patient was conscious, temperature 39.3 °C, mucocutaneous icterus, non extensive non necrotic purpura, conjunctival hyperemia and Sore throat. Abdominal examination revealed mild tenderness over the epigastric region and moderate hepatosplenomegaly. The rest

of physical examination was unremarkable,

Laboratory investigation revealed hepatic cytolysis (4 times above normal), cholestasis, thrombocytopenia 43000 elm/mm3, inflammatory biological syndrome with CRP 114, leukocytosis 18840elm/mm3. Serology for CMV; hepatitis A, B and C; with HIV were negative. An immunological test was negative.

An abdominal ultrasound completed by an abdominal CT showed a homogeneous moderate hepatosplenomegaly.

Ophthalmologic examination showed decrease visual acuity with non granulomatous bilateral panuveitis with retinal vasculitis and retinal necrosis of the posterior pole in favor of rickettsies and leptospirosis.

He was treated with Ampicilline during 10 days then with Levofloxacine during 7days.

The evolution was marked by the persistence of fever, also to the worsening of cholestasis and cytolysis. 10 day the thrombocytopenia began regress.

Serology for rickettsial finally came back positive. The patient was discharged home on hospital day 17, only requiring ocular and paraclinical followup.

Conclusion:

Rickettsies remain little known. They have no pathognomonic signs, although there are signs and symptoms that are highly suggestive, such as the presence of fever, rash, lymphadenopathy, and an eschar (tache noire). Unfortunately not always and not all rickettsies present typical signs and symptoms. In most cases clinical suspicion together with a positive serology is sufficient to make the diagnosis of rickettsiosis. Doxycycline is the drug of choice for all of the known rickettsies.

At present there is no vaccine and the best prevention is using repellents.

#8087 : Major trauma presenting to a tertiary centre in Ireland.

Preferred format : Oral presentation

Authors:

Justine Jordan (1), Marie Therese Cooney (2), Rachael Doyle (2), David Menzies (3), John Cronin (3)

1. Emergency Dept SHO, St. Vincents University Hopsital, Dublin, IRELAND
2. Consultant Geriatrician, St. Vincents University Hopsital, Dublin, IRELAND
3. Consultant in Emergency Medicine, St. Vincents University Hopsital, Dublin, IRELAND

Keywords: Trauma, elderly, epidemiology

Abstract :

Major trauma presenting to a tertiary centre in Ireland.

Background

Traditionally major trauma has been viewed as a disease of young men involved in high energy transfer mechanisms. With the aging population in Europe the face of major trauma is changing.

Aim

The aim of this study was to describe the demographics of major trauma presenting to a tertiary urban university hospital in Ireland over a 48-month period.

Methods

St. Vincent's University Hospital (SVUH) was the first institution in Ireland to contribute to the Trauma Audit & Research Network (TARN) database and has been doing so since September 2013Demographics, mechanism of injury, Injury Severity Score (ISS), length of stay (LOS) and time to CT are presented in this study.

Results

A total of 862 patients were included from September 1st 2013 to August 31st 2015. Of this population 52.3% were male. The mean age at presentation was 62.6 years (SD 22.4). 449 patients (52.0%) were >65 years, with a strong female preponderance (160 males (35.6%) and 289 females (64.3%) over 65 years). The most common mechanism of injury was "fall less than 2 metres" (n=511, 59.3%), followed by vehicle collision (n=145, 16.8%). In the over-65 population, 81.7% (n=367) suffered a fall less than 2 metres. 65.5% had an ISS of 1-14 and 34.4% a score of greater than >15. The median ISS was 9 (range 1-57). The mean length of stay was 21.0 days (SD 33.8). 51 patients (5.9%) died, of whom 39 were over the age of 65 (i.e. 8.7% of this group).

Conclusion

Our trauma database included more patients over the age of 65 than under, and the predominant mechanism of injury was one of low energy, i.e. fall from less than 2 metres. Our data is in keeping with other recent studies from large trauma databases.(1) It highlights the need to tailor our major trauma services to specific needs of the elderly.

References

1. The changing face of major trauma in the UK. Kehoe A, et al. Emerg Med J 2015; 32:911–915.

#8088 : Prehospital sepsis screening protocol installation and management

Preferred format : ePoster

Authors:

Egle Zelbiene (1), Nedas Jasinskas (1)

1. Emergency department, Lithuanian University of Health sciences hospital Kaunas clinics, Kaunas, LITHUANIA

Keywords: sepsis, prehospital care, quick sofa criteria, lactate test

Abstract :

Early recognition of sepsis is difficult in prehospital setting without protocol based screening. Patients with sepsis are prioritized in order to lower treatment cost and start early care initiation. Better survival rates occur from early diagnosis and treatment of sepsis. Accurate recognition of sepsis is important to initiate care in ambulance and to inform Emergency department before delivering a patient.

Methods. Identification of sepsis was made using a quick sofa (sepsis related organ failure assessment) criteria presented in 2016 and blood lactate test in prehospital emergency medical service. Quick sofa criteria were declared by the Third International Consensus Definitions for Sepsis and Septic shock (Sepsis-3). The prehospital protocol team installed quick sofa criteria and blood lactate test question to touch pads used in everyday ambulance practice. The comparison is made between prehospital sepsis screening protocol and independent clinical judgement. The outcomes are based on diagnosed sepsis cases in hospital. Results. Prehospital sepsis screening protocol can potentially improve recognition of sepsis and early treatment initiation also impacting the outcomes. Further research is needed for a full evaluation of prehospital sepsis screening protocol impact on outcomes of early sepsis identification.

#8089 : How heart and kidney work together; the cardiorenal syndrome

Preferred format : ePoster

Authors:

Sabine Beks (1), Emma Röttger (2), Eva Slag (3)

1. senior resident ED, Albert Schweitzer hospital , Dordrecht , THE NETHERLANDS
2. junior resident , Albert Schweitzer hospital , Dordrecht, THE NETHERLANDS
3. ED physician, Albert Schweitzer hospital , Dordrecht, THE NETHERLANDS

Keywords: myocardial infarction, ventricular septal rupture, acute kidney injury, cardiorenal syndrome

Abstract :

Introduction:

Acute kidney injury and cardiac pathology are daily seen problems at the Emergency Department. We present a case that shows the close relation between cardiovascular disease and kidney dysfunction. The presented patient was found to have a rare cardiac complication.

Case description:

A 77 year old, previously healthy woman was brought to our Emergency Department by ambulance after referral by her family doctor with the suspicion of dehydration. The previous week she was treated with amoxicillin/clavulan acid for a suspected pulmonary infection; dyspnoeic and ill, without coughing or fever. One day after starting treatment the patient got diarrhoea. Because of weakness she was lying in bed for a week.

On physical examination the patient was slightly confused with a Glasgow Coma Scale of E4M6V4. Patients heart rate was 62/min, her blood pressure 124/68 mmHg, and she had a respiratory rate of 13-17/min and oxygen saturation 97% with three litres oxygen. She was hypothermic (34.7 degree Celsius) with cold acra. Auscultation revealed a loud murmur of the heart, grade III-IV/VI. Crepitation was heard over the lungs. Pitting oedema of her ankles was visible.

The chest x-ray showed an enlarged heart and fluid in the fissure without other signs of heart failure. Pathological Q's in V2-V3 and ST-elevation in V2-V6 were visible on the electrocardiogram. Blood results revealed disturbances of renal- (creatinine 207, urea 52.3, sodium 122, potassium 5.3) and hepatic function (bilirubin 49, GGT 63, AF 89, ASAT 305, ALAT 179, LDH 697). Arterial blood gas analysis was normal. The cardiac markers were also elevated (troponin I 5.34 and CK 241). An additional echocardiography showed, besides akinesia of the apex and apical septum, a rupture of the apical septum and a dilated right ventricle.

Patient was transferred to an academic hospital because of the possible need for cardiothoracic surgical intervention. Three days later the patient died.

Discussion:

In this case the diagnosis initially seemed easy because of the history of diarrhoea and low oral intake after recently prescribed antibiotics: dehydration. Taking a closer look at all the preformed examinations another diagnosis was more plausible; a semi recent anteroseptal myocardial infarction complicated by septum rupture, followed by renal and hepatic impairment as a result of forward failure.

Ventricular septal rupture is a rare complication of myocardial ischemia that normally presents within three to four days after the infarct. A majority of patients with acute myocardial infarction develop acute kidney injury within 72 hours. Cardiorenal syndrome implicates the coexistence of cardiovascular and renal disease. Clinical outcome is poor.

Conclusion:

There is a close association between cardiac and renal function (cardiorenal syndrome). A cardiac cause of acute kidney injury should be taken into consideration especially when the history and clinical presentation do not match. In addition, women with a myocardial infarction may present with atypical symptoms, leading to an increased complication risk.

#8090 : A RARE CAUSE MIMICKING ACUTE APPENDICITIS: INTERNAL HERNIA WITH COLONIC MALROTATION

Preferred format : ePoster

Authors:

Mesut Yur (1), Bünyami OZOGUL (1), Esra Dısci (1), Mehmet Ilhan Yildirgan (1)

1. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, ERZURUM, TURKEY

Keywords: ACUTE APPENDICITIS, INTERNAL HERNIA,COLONIC MALROTATION

Abstract :

Introduction: Intestinal malrotation is a developmental anomaly of the midgut. It can be asymptomatic and generally diagnosed incidentally or during checking for atypical syptoms in adults. Intestinal malrotation can mimic other diagnoses as acute appendicitis.

Case: We present a 23 year old man with having clinical syptoms indicating acute appendicitis in Adıyaman State Hospital. He had right lower quadrant pain and nause. He didn't discribe any alimentary tract symptoms in his history and there was no significant medical or surgical history. The patient operated with diagnosis of acute appendicitis and we saw a midgut malrotation with internal hernia behind the non fixed transverse colon. After hepatic flexure, colon was heading inferior and passing lateral site of assending colon with having omentum. Under the cecum, colonic segment was crossing over to the left side of abdomen. This crossing segment was mobile that not adhered to retroperitoneum. Appendectomy and fixation of colonic segment were applied and operation finished successfully. He was discharged postoperative 6th day with good recovery.

Discussion: Midgut malrotation presents usually in the first month of life. But some asymptomatic cases present in adulthood due to obstruction or other diseases redounded laparotomy. We can face with this diagnose rarely in adulthoods except for childhood or infants. This type of midgut malrotation with internal hernia, mimicking acute appendicitis, hasn’t been seen untill we operated this case.

Conclusion: We can be faced with midgut malrotation during examination or laparotomy. We have to be carefull and consider midgut malrotation in emergency services and surgery clinics.

#8091 : Successful treatment using ECMO for a case of massive pulmonary thromboembolism with hemodynamic collapse

Preferred format : ePoster

Authors:

Aurelija Navickaite (1), Akvile Saulyte (1), Robertas Samalavicius (2), Rokas Serpytis (3), Giedrius Navickas (3), Rasa Palsauskaite (3), Pranas Serpytis (3)

1. Faculty of Medicine, Vilnius University, Vilnius, Lithuania , , Vilnius, LITHUANIA
2. University Hospital Santariskiu Klinikos, Centre of Cardiothoracic Surgery, Vilnius, Lithuania, , Vilnius, LITHUANIA
3. University Hospital Santariskiu Klinikos, Centre of Cardiovascular Disease, Vilnius, Lithuania., , Vilnius, LITHUANIA

Keywords: massive pulmonary thrombembolism, ECMO, successful treatment, good outcome, extracorporeal membrane oxygenation, right heart thrombus, bleeding, coagulopathy, hemodynamic collapse

Abstract :

INTRODUCTION: Pulmonary thromboembolism (PTE) is a common clinical condition related to increased mortality. Furthermore, patients with PTE presenting with hemodynamic instability or right heart thrombus show higher mortality due to rapid hemodynamic deterioration. Various treatment methods of massive PTE have been developed and therapeutic approaches discussed.

CASE DESCRIPTION: A 59-year-old man was admitted to Vilnius University Hospital Santariskiu Klinikos emergency room complaining of severe dyspnea, pain in the lower part of the chest and subfebrile fever. Further investigation findings in CT angiography showed massive PTE with thrombus in the right heart and deep vein thrombosis (DVT). Standard anticoagulation and thrombolytic therapies were initiated. The patient developed a hemodynamic collapse. Consequently mechanical ventilation and veno-arterial-venous extracorporeal membrane oxygenation (ECMO) at the flow rate of 3.4 L/min were introduced. ECMO was successful for blood oxygenation and stabilization of the cardiopulmonary function. Later the patient developed a bleeding from arterial cannula and upper respiratory tract; heparin was discontinued and blood cells transfusions were initiated. A catheter-directed embolectomy was performed with no effect. Hemodynamics was stabilized and ECMO was changed from veno-arterio-venous to a veno-venous. A CT angiography showed no thrombus in the main pulmonary arteries and heart chambers, ultrasonography of the lower limbs revealed no signs of DVT. Once the bleeding from the upper respiratory tract stopped oral anticoagulants were introduced together with the low molecular weight heparin. The patient was successfully weaned of ECMO after 45 days once the blood oxygen saturation was stabilized. ECMO system was changed three times during the treatment. The patient was weaned of mechanical ventilation after 48 days. The patient stayed for 81 days in a critical care unit.

CONSLUSIONS: We suggest that extracorporeal membrane oxygenation may be an effective treatment option for patients who have massive pulmonary thromboembolism with circulatory collapse even when hrombolysis and thrombectomy have failed and conventional anticoagulant therapy is contraindicated due to active bleeding.

#8092 : Stridulous sisters: a background of functional illness leading to diagnostic uncertainty

Preferred format : Oral presentation

Authors:

Craig Swinburne (1)

1. Department of Paediatrics, Wishaw General Hospital, Wishaw, UK

Keywords: stridor, children, bacterial tracheitis, functional

Abstract :

Stridulous sisters: a background of functional illness leading to diagnostic uncertainty

The differential diagnosis of stridor in children is broad and includes a number of infective and non-infective causes. We present the unusual case of two sisters, aged 10 and 15 years (patient 1 and patient 2), who presented to the emergency department together with acute onset stridor. Both complained of identical symptoms, notably general malaise, sore throat, chest pain, intermittent fever and difficulty in breathing. Both sisters described worsening inspiratory stridor in the hours prior to admission. Cough was not a prominent feature and voice quality appeared to be normal in both cases. Both sisters were known to have a background of functional illness. Patient 1 did not respond to initial therapy (nebulised adrenaline and dexamethasone) and stridor was noted to be intermittent during admission, with symptoms settling during sleep and when medical staff were not present. Patient 2's stridor settled following nebulised adrenaline and dexamethasone and did not recur. Patient 1 was diagnosed with bacterial tracheitis with characteristic appearances on flexible laryngoscopy. Patient 2 was diagnosed with a viral upper respiratory tract infection. Functional overlay was suspected in both cases. Bacterial tracheitis is a rare but life threatening cause of airway obstruction that must be considered in all patients presenting with stridor. A background of functional illness can cause diagnostic uncertainty, as in this case. As clinicians we must remain unbiased and ensure that appropriate management is instituted for all patients. Functional stridor is a diagnosis of exclusion.

#8093 : The Initial Lactate Level, Neutrophil to Lymphocyte Ratio and Platelet to Lymphocyte Ratio As Predictors of Severity of Carbon Monoxide Poisoning

Preferred format : Oral presentation

Authors:

HALIL IBRAHIM CIKRIKLAR (1), MURAT YUCEL (1), IHSAN HAKKI CIFTCI (2), YUSUF YURUMEZ (1)

1. DEPARTMENT OF EMERGENCY MEDICINE, SAKARYA UNIVERSITY FACULTY OF MEDICINE, SAKARYA, TURKEY
2. DEPARTMENT OF MICROBIOLGY, SAKARYA UNIVERSITY FACULTY OF MEDICINE, SAKARYA, TURKEY

Keywords: Carbon Monoxide Poisoning, Lactate, Neutrophil to Lymphocyte Ratio, Platelet to Lymphocyte Ratio

Abstract :

Introduction: The aim of this study was to investigate the initial lactate levels in patients with CO poisoning, and to compare these results with carboxyhemoglobin (COHb) levels, neutrophil to lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR).

Methods: A retrospective cross-sectional study was carried out among patients with CO poisoning, who were admitted to the ED between December 2014 and January 2015. The study data were extracted from a hospital database system using International Classification of Diseases-10 diagnosis codes. The patients were divided into two groups according to their initial lactate levels (Group 1: lactate value <1.85 mmol/L and Group 2: lactate value >1.85 mmol/L).

Results: A total of 94 patients with CO poisoning were enrolled in this study (37 patient in Group 1 and 57 patient in Group 2). Baseline characteristics of the study population are shown in Table 1. COHb levels of Group 2 (17.51 ± 11.62) were found to be statistically significant when compared with those of Group 1 (10.97 ± 7.69) (p=0.003). NLR of Group 1 (3.54 ± 2.35) were higher when compared with those of Group 2 (2.33 ± 1.75) and the difference found to be statistically significant (p=0.005). PLR of Group 1 (147.46 ± 79.65) were higher when compared with those of Group 2 (108.33 ± 53.41) and the difference found to be statistically significant (p=0.005). A positive correlation found between lactate and COHb (r=0.419, p < 0.001), negative correlations found between lactate and NLR (r=-0.086, p= 0.411) and lactate and PLR (r=-0.279, p=0.006)

Conclusion: In evaluating patients with CO poisoning, initial lactate level may be taken into consideration as an adjunctive parameter of severity, together with the laboratory markers, such as the NLR, PLR and levels of COHb.

#8095 : The development of the advanced clinical practitioner (ACP) curriculum and credentialing programme in the UK

Preferred format : Oral presentation

Authors:

Mary Dawood (1)

1. Emergency Service, Imperial College NHS Trust , London, UK

Keywords: advanced clinical practitioner,curriculum credentialing

Abstract :

Emergency care globally, faces significant challenges with longevity and increasing patient attendances and a shortage of doctors choosing this specialty as a career choice. The UK is no exception and one of many initiatives to address this issue is the development of the advanced clinical practitioner role.(ACP) Over the past two decades emergency nurse practitioner roles with a focus on minor illnesses and injuries have become ubiquitous and in some areas nurses have further progressed their roles assessing a wide variety of acute illnesses and injuries to meet local needs.

Educational and professional regulatory frameworks in the UK have not kept pace with these developments and as a result practice will vary from place to place and there is no clear definition or understanding of what competences the ACP possesses. Higher Education Institutions provide high quality Masters level courses in advanced practice and many nurses undertaking these roles will undertake a Masters degree, but these programmes do not include specialty specific competences or nationally defined curricula. There is variation in the range of competences acquired, and no standardisation of the level of competence of the practitioner. In response to this, the Royal College of Emergency Medicine (RCEM) and Health Education England (HEE) set up an advanced clinical practitioner group (ACP) curriculum development group. Their intention was to establish and develop a national curriculum which would provide standardisation and consistency,ensure patient safety, and allow transferability of competences from employer to employer. The long term aim is that employers will have a workforce consisting of qualified, credentialed ACPs multi-professional workforce to meet future demands for emergency care.

For the Credentialing process ACPs (predominantly nurses and paramedics working in emergency care) will use an e-portfolio to collect evidence against each requirement in the Emergency Care ACP curriculum. Trainee ACPs will be working within a learning environment, the quality of which is overseen by Health Education England under Local Education and Training Board (LETB) Quality Frameworks. It is anticipated that the learning environment in the ED for junior doctors and other learners will be strengthened by credentialed ACPs. A trained panel will assess the evidence to decide whether the trainee ACP has achieved the defined competences required in the curriculum. Those meeting the required standard will have a statement of competence which details what they as an ACP can do within a defined scope of practice; This presentation will describe the development of the curriculum and the progress,pitfalls, challenges and benefits to date.

#8096 : Rapid sequence intubation (RSI): reality in two urban universitary hospitals in Santiago de Chile

Preferred format : ePoster

Authors:

Ludwig von Plessing (1), Barbara Lara (1), Carlos Basaure Verdejo (1)

1. Emergency Medicine, Pontificia Universidad Católica de Chile, Santiago, CHILE

Keywords: rapid sequence intubation, airway

Abstract :

Objectives

1) To describe the prefered premedication drugs, sedatives, neuromuscular blockages and their doses for RSI in different clinal scenarios.

2) To assess the association between any selected RSI drug protocol and their effectiveness in terms of laringoscopy's attempts and use of bougie.

Methods

We conducted a propective observational study in two urban university hospitals in Chile. Both centers receive 55.000 and 146.000 Emergency Department (ED) visits per year. A convience sample of consecutive adult patients requiring RSI in the ED during one year were included. Data regarding the estimated patient weight, selected sedatives, neuromuscular blockers, use of premedication, their doses, number of attempted laringoscopies and the use of bougie were collected. All data was collected prospectively in an electronic database.

Results

Hundred and seventy six patients were included. The mean age was 59 years old. The reasons for intubation were need for airway protection (44,8%), respiratory failure (27,8%), rapid clinical deterioration (18,1%) and need for emergency procedure (9%).

Sixty three percent of the patients received succinilcholine as paralitic agent and a 35,8% received rocuronium.

A 33,5% were suspected to have an ongoing neurological emergency. Of these patients, the 64,4% received fentanyl as a premedication drug as compared to a 20,5% of patients without a neurological emergency ($p<0,001$) and a 2% received lidocaine. The most frequently used sedatives in neurological emergencies were etomidate (59,3%) and propofol (39%). Most neurological patients were paralized with succinilcholine (71,2%) and rocuronium (28,8%).

Emergency physicians identified 29,5% of patients with shock. All of them received volumen and 53,8% also received pressors pre-intubation. Half of these patients were sedated with etomidate, while a 48,1% received ketamine. As compared to patients without shock, were 86% received etomidate and 10,4% received ketamine ($P<0.05$). Fifty seven percent of patients received succinilcholine and the remainder 42,3% received rocuronium.

The dose of succinilcholine used in patients that were determined to be hemodinamically unstable was significantly higher than the dose used in those patients without hemodinamical instability (1,7 mg/Kg v/s 1,54 mg/Kg; p0,02). No other dose differences were found to be statistically significant for etomidate, ketamine, propofol or rocuronium.

In the whole cohort, a mean of 1,3 laringoscopy attemps were necesary for succesfull intubation [1-6]. There was no difference in laryngoscopy attemps between the use of succinolcholine or rocuronium. The use of bougie was neccesary in 27,6% of the succinilcholine intubations and in 30% of rocuronium intubations ($p>0.05$).

Conclusions

Even though both hospitals have a great variety of sedatives and paralitics available in the ED, the most frequently used drugs were etomidate and succinilcholine regardless of the clinical scenario. Interestingly, we found a tendency to use higher doses of paralitics and lower doses of sedatives in patients with hemodinamic instability as sugested by international guidelines.

#8097 : Nurses' knowledge of cardiopulmonary arrest and resuscitation in hospital settings

Preferred format : Oral presentation

Authors:

Sandro Vidmanic (1), Adriano Friganovic (2)

1. Department of Emergency Medicine, University Hospital Centre Rijeka, Rijeka, CROATIA
2. Department of Anesthesiology and Intensive Medicine, University Hospital Centre Zagreb, Zagreb, CROATIA

Keywords: cardiopulmonary arrest, resuscitation, education, knowledge, nurses', emergency department

Abstract :

BACKGROUND: ''Science of Resuscitation'' is continuously advancing, and clinical guidelines have to be regularly updated in order to follow the development and offer the health care workers the best procedures for treatment. Early identification and effective therapy procedure for patients with deteriorating conditions can prevent the development of cardiopulmonary arrest. Besides the doctors, there is a need for constant professional training of nurses as well. According to the the Croatian Nurses Council nurses have obligation for constant renew already acquired knowledge and adopt new knowledge in accordance with the latest achievements and findings in the field of nursing.

AIM: This research aimed to investigate levels of nurses knowledge in the field of resuscitation in the departments of emergency medicine.

METHODS: Cross sectional multi - centre study has been conducted. The target population were nurses that are employed in departments of emergency medicine. The quantitative approach has been applied in several University Hospitals in Croatia with questionnaire prepared for the purpose of the research.

RESULTS: Results of a research conducted on a sample of 91 nurses of the University Hospital Centre Zagreb, University Hospital Centre Rijeka and University Hospital Centre Osijek showed that the level of theoretical knowledge is about 75%. Also, the analysis determined a positive correlation of additional education to the research results. A nurse with quality education represents an exceptionally valuable medical team member, and consequently, the quality of their education improves the patient's hospital care.

CONCLUSION: Health care professionals show a high degree of motivation for continued education (which is the foremost indicator of knowledge and skill acquisition at organized permanent education programs) and the willingness for saving human lives, which contributes to the advancement of the practice and efficiency of resuscitation in cases of pulmonary arrest.

#8098 : Can the efficiency of WBC be Increased by Using Hematologic Inflammatory Parameters on Acute Appendicitis Diagnosis?

Preferred format : Oral presentation

Authors:

Sukru Arslan (1), Erdem Karadeniz (1), Mucahit Emet (2), Bunyami Ozogul (1), Sabri Selcuk Atamanalp (1)

1. General Surgery, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, ERZURUM, TURKEY
2. Department of Emergency medicine, ATATÜRK ÜNİVERSITY MEDİCAL FACULTY, ERZURUM, TURKEY

Keywords: Acute Appendicitis, NLR, WBC, Negative Appendectomy

Abstract :

Purpose: The rate of negative appendectomy in patients suspected of appendicitis is still high. Here, we evaluated the efficiency of parameters like white blood cell(WBC), Neutrophil Leukocytes Ratio(NLR), Mean Platelet Volume(MPV) and Red Blood Cell Distribution Width(RDW) in decreasing the negative appendectomy ratios.

Material and Method: 804 operated acute appendicitis patients in seven years were examined retrospectively. The patients were divided into 2 groups according to the pathology reports (Group AA: Acute Appendicitis, Group NA: negative appendectomy). The age, gender, preoperative WBC, NLR, RDW and MPV values, intraoperative findings, postoperative pathology results and etiologies were recorded.

Results: Of the patients, 58.2 were male and mean age was 30.8±11.9. Logistic regression analysis using enter method and taking age, gender (dichotom) and NLR showed that being female (wald: 6.284, OR: 1.77, 95%CI: 1.133-2.765, p=0.012) and having high NLR (wald: 4.541, OR: 1.057, 95%CI: 1.004-1.111, p=0.033) were independent parameters for negative appendectomy. Area under the curve (AUC) for WBC and NLR to diagnose negative appendectomy patients among patients with prediagnosed appendicitis were 0.598 (95%CI:0.535-0.660; p=0.003) and 0.621 (95%CI:0.556-0.685; p<0.0001), respectively.

Conclusion: Using WBC together with NLR might decrease Negative Appendectomy rates.

#8099 : Helping the doctor to being a doctor - The future Role of Physician Assistants in central emergency departments

Preferred format : ePoster

Authors:

Christina Isfort (1), Julia Gratopp (2), Manuel Geuen (3), Michael Wessels (4)

1. Physician Assistant, praxisHochschule Rheine, Schweinfurt, GERMANY
2. Physician Assistant, praxisHochschule Rheine, Detmold, GERMANY
3. Research Fellow, praxisHochschule Rheine, Rheine, GERMANY
4. Professor, Hochschule für Gesundheit, Bochum, Münster, GERMANY

Keywords: central emergency department, Physician Assistant, Ensuring Supply, Delegation, Health professionals

Abstract :

Background

In consideration of rising patient’s figures, demographic change and multimorbidity, the emergency care is an important field in healthcare systems [1]. Actually, ensuring supply of emergency care is a great challenge [2]. The emergency department (ED) belongs to the high risk area of a hospital [3]. The patient’s amount can´t be planned and the different certified employees lead to different assessments of the urgency of treatment [4]. The clinical emergency care has made a development into the professionalization, standardization and adjustment to international relations during the past years [5].

Aim

To show the characteristics of a central emergency department and the professional opportunities or possibilities of a Physician Assistant in emergency care units.

Methods

A structured literature research by PubMed in Medline and EMbase was conducted. Additional, experts were interviewed to different subjects of the clinical emergency care and the job profile of the Physician Assistant. These results were compared to the evidence-based knowledge.

Results

Characteristics of the future emergency care are centrality, cooperation and independence [6, 7]. The centralization can contribute to professionalization of structures and working procedures [7]. In the last 10 years more and more central provisional ED´s were established [8]. So far, the technical qualifications of the employees in ED´s is not regulated, indeed, the DGINA recommends an education of specialists for emergency medicine [6, 8].

Discussion

Emergency care is currently highly influenced by the sector separation and technical interests. But actually, the patient should be on focus of the economy and medicine [1]. Besides, the takeover of the emergency patients is delayed by the specialised emergency departments. This often results in conflicts between different specialised divisions to the detriment of the emergency patients [9]. From medical point of view the optimum medical treatment has priority [10]. Nevertheless resource shortage and the use of scarce resources with regard to public welfare should not be neglected [1].

In this dilemma Physician Assistant's offer the possibility to implement physician-relieving structures and thus lead to a reduction of resource shortage.

Conclusion

The future emergency department should be organised centrally, guarantee evidence- based medical care and transfer the initial symptoms into a reasonable diagnosis. The exclusion of life-menacing differential diagnosis is a key task [11].The legal basic conditions to the organisation and financing of the emergency care must be adapted to the high-class standards of an evidence- based medicine [12]. The central emergency department should guarantee the quick certified first care and contribute to the efficiency increase in the hospital [13]. The centralisation of the available resources to a central emergency department is recommended in general, but the necessary personnel qualification must still be regulated. Above all, certified staff is the condition for an optimum patients care [14]. The implementation of PA´s in central emergency departments would help doctors to being doctors.

#8100 : An unusual presentation of aortic saddle embolism

Preferred format : Oral presentation

Authors:

Olayinka Oginni (1), Peadar Gilligan (2), Galamoyo Nfila (3)

1. Reg EM Beaumont Hospital Dublin Ireland, Beaumont Hospital Dublin Ireland, Dublin, IRELAND
2. Consultant Emergency Medicine Beaumont Hospital, Beaumont Hospital Dublin Ireland, Dublin, IRELAND
3. SpR Emergency medicine Beaumont Hospital Dublin Ireland, Beaumont Hospital Dublin Ireland, Dublin, IRELAND

Abstract :

TITLE OF PAPER:

An unusual presentation of aortic saddle embolism

Abstract type (please select only one):

1. ORIGINAL RESEARCH **2. CASE REPORT/CASE SERIES** **3. OTHER** (e.g. clinical governance, clinical audit, and quality improvement initiative) **CASE REPORT**

Author(s) Title (Dr., Mr., Ms., Prof. etc), Professional Grade, Department and Hospital (**please underline name of presenter**):

Dr G. Nfila, SpR EM, BH

Dr O. Oginni, Reg EM, BH

Dr P. Gilligan, Consultant EM, BH

Contact e-mail address: galanfila@gmail.com

Contact telephone number: 0872483373

My preferred format for the presentation of this abstract is (please select only one): Poster

POSTER

Name of PRINCIPAL AUTHOR:

Dr Galamoyo Nfila

Date: 16/05/2016

TITLE OF PAPER

An unusual presentation of saddle aortic embolism

INTRODUCTION

A saddle embolism of the aorta causes an acute ischemia of the lower extremities. In a third of patients, various degrees of sensory and motor deficits occur, but sudden paraplegia is seen rarely and its cause is unclear.

METHODS

We report a case of an unusual presentation of saddle aortic embolism just above the bifurcation of the aorta

RESULTS

An 82 yr old woman with background history of CVA presented with sudden onset of lower back pain radiating to both legs and progressed to paralysis of both legs. ECG showed new onset AFIB, ABG revealed metabolic acidosis and lactate of 5.5

Her lower limbs were mottled, pale, cold with absence of pulses. She was paraplegic with reduce anal tone. CT angio reveal a large saddle embolism just above the bifurcation of the abdominal aorta,

She was given oxygen, intravenous fluids (saline), she was anticoagulated and transferred to vascular as appropriate.

CONCLUSION

Doctors must remember that the cause of lower back pain, paraplegia and loss of sensation doesn’t always represent caudal equine syndrome. In this patient, the cause of her paralysis and loss of sensation could be as a result of ischemia of the spinal cord from occlusion of arteries via branches from abdominal aorta or from ischemia of peripheral nerves

#8101 : Appropriateness of utilization of a physician-staffed rescue helicopter in Austria

Preferred format : Oral presentation

Authors:

Richard Rezar (1), Gilbert Sandner (2), Barbara Hallmann (1), Stefan Heschl (3), Geza Gemes (1)

1. Department of General Anaesthesiology, Emergency- and Intensive Care Medicine, Medical University of Graz, Graz, AUSTRIA
2. EMS Service, Austrian Red Cross, Graz, AUSTRIA
3. Department of Cardiac Anaesthesiology and Intensive Care Medicine, Medical University of Graz, Graz, AUSTRIA

Keywords: aeromedical, dispatch

Abstract :

Background: Physician-staffed rescue helicopters are a high-end and very expensive resource of limited availability, therefore a deliberate dispatch system is of paramount importance. This retrospective observational study aims to evaluate how often the use of a helicopter was justified at a single rescue helicopter base in southern Austria.

Methods: Austria operates a dense network of ground-based physician-staffed prehospital response units and an additional coverage with rescue helicopters during daylight conditions. The protocol sheets and electronic records of the rescue helicopter base in Graz, Austria of a one-year time period were screened and entered into a database. The respective helicopter serves a population of about 900,000 people and 9,000 square kilometers covering both heavily populated urban areas, rural areas and poorly accessible mountain regions and can thus be viewed as representative for a large part of Austria´s territory. Three aspects of helicopter deployment were considered: rapid transport priority to a maximum care hospital according to the emergency physician´s diagnosis, use of the helicopter for extrication purposes and in inaccessible areas and the provision of invasive prehospital medical treatment provided by the specialized aeromedical crew. A scoring system incorporating these three aspects was generated to evaluate whether the utilization of the helicopter was justified or whether the call could have been attended to by a ground-based crew. Interhospital transfer missions and missions which were cancelled en-route were excluded from the analysis.

Results: From July 1st, 2014 until June 30th, 2015 1043 primary missions were the helicopter landed and attended to a call were registered. In 43,8% of those cases, there was no evidence of any benefit of the deployment of the helicopter versus a ground-based physician response unit (e.g. non-life threatening medical condition in close proximity to a ground-based crew). In the other 56,2%, we found at least some indication of an advantage of helicopter utilization. In 31,7% of all cases, there was a clearly comprehensible advantage of the helicopter as a rescue vehicle (e.g. severe multiple trauma in a poorly accessible mountainous area).

Conclusion: Despite the limitations of retrospective reviews, this study suggests that a large fraction of calls attended to by aeromedical crews could have been resolved employing ground-based emergency crews. Since rescue helicopters are a scarce and expensive resource, further studies to investigate the reasons for our findings are warranted and an audit system of feedback and quality control seems advisable.

#8102 : Double referral in the combined front office policy: can triage be improved to prevent double referral?

Preferred format : ePoster

Authors:

Lutfullah Nabizadah (1), Elke Lunshof-Hobbelink (2), Maarten Kok (1)

1. Spaarne Gasthuis, Spaarne Gasthuis, Haarlem, THE NETHERLANDS
2. Spaarne Gasthuis, Spaarne Gasthuis, AMSTERDAM, THE NETHERLANDS

Keywords: emergency department, general practitioner, combined office policy, triage, referral, double referral

Abstract :

***Background*:** Of the patients presenting to the Emergency Department (ED) of our hospital, 53% are self referred. Approximately 80% of these patients present with a low emergency complaint which could be treated by the general practitioner. The Netherlands has an unique system of combined front office policy. Self referral patients are registered at the front desk of the ED and are triaged to either the ED or to the general practitioner (GP). Theoretically, patients can be triaged to the GP initially with a second referral to the ED by the GP, based on their complaint and need for further specialist care. This activity is time consuming for both healthcare professionals and patients and neither cost-effective nor patient friendly.

Objective: To identify patients characteristics in the double referral group on which primary triage could be improved to prevent double referrals.

***Methods and Results*:** In a retrospective study of all patients presented to the ED of the Spaarne Gasthuis Haarlem in 2014, 20.801 patients were self-referral. In this group, 6925 patients were triaged to the GP initially and eventually 430 patients (6%) were referred secondary to the ED. From this 430 patients, 147 had complaints of the extremities (34%), 62 came with abdominal pain (14%) and 24 patients present with a syncope (6%). In comparison with the total amount of initial GP presentations, 10% (147/1426) of the extremity presentations were double referred. In the syncope group this was 17% (24/136) and for abdominal complaints the ratio is 20% (62/302). Of these patients with abdominal complaints, 36% are triaged as urgent and 53% are admitted to hospital.

Conclusion: Combined front office policy works well and reduces the amount of self referral patients to the ED, only 6% of self referred patient triaged to the GP is double referred to the ED. Recording to their complaints, patients with abdominal complaints and syncope are more likely to need further specialist care. More specific analysis of these patient groups and the triage definitions could improve overall performance of the triage system in the combined front office.

#8103 : CT brain imaging rates in aged care residents presenting to peninsula health

Preferred format : Oral presentation

Authors:

fergus mcgee (1)

1. Hospital admission risk program, Peninsula Health Melbourne, Melbourne, AUSTRALIA

Keywords: CT Brain,frail elderly,change in outcomes,mortality rates

Abstract :

ABSTRACT

Aim

The aim of the study was to clarify how many , the indications and the outcomes. Did the acute service investigations change management or outcomes?

Methods

Data for the CT Brain scans performed in 2011 on over 75 y old patients in ED or as inpatients was generated. From this the Aged care residents were identified, and 3 months from July to September examined. The patient history was reviewed for premorbid mobility and cognitive function and a basic Nursing home category of 1-4 allocated dependent on this assessment. Then CT brain studies, and histories were reviewed for clinical indications, acute changes on scan, change in management, interventions, or transfers to tertiary care. The focus of the study was mainly on trauma , but data for ? stroke and delirium patients was also collected.

Results

There were 2780 scans in 2011, 781 of which were on aged care residents. Only 14 - 18 % scans showed acute changes, fewer changes in management and only 4 transfers. Number of repeat scans on same patient confronting, age and frailty of patients would override benefit in many cases, and the negative side to the process was understated with significant emotional and physical morbidity for the patient and an emotional roller coaster for the family with little discernible benefit. Mortality was the same across all groups and no different whether scan abnormal or not.

Conclusion

The status quo on management of this common problem needs to be reviewed and a variation on the CT head guidelines developed.

#8104 : Rare case of Brucellosis In A 3 months Old Infant Transmitted By Breast Milk

Preferred format : ePoster

Authors:

Soumaya Bensliman (1), Lubna Ghali Amin Andraous (1)

1. Emergency Department, Hamad General Hospital, Doha, QATAR

Keywords: Brucellosis, Brucella Melitensis, Breast milk, Blood culture, Serum agglutination test

Abstract :

Introduction:

Brucellosis is the most common zoonotic disease worldwide. Infection can be transmitted to humans through direct contact with infected animals or their secretions or products of conception, and through consumption of potentially infected milk, milk products, or infected meat[1].

Human-to-human transmission is rare & due to blood transfusion, tissue transplantation. It has been reported in pregnant women and may lead to spontaneous abortion, intrauterine fetal death or delivery of infected neonates. Neonatal infection can be acquired trans-placentally,during delivery and rarely through breast milk.[2]

Methods:

We present a case of a 3 months old infant who was diagnosed with Brucellosis, probably transmitted through breast feeding.

Case:

3 months old infant, previously healthy, presented to Pediatric Emergency at Hamad General Hospital with fever for two weeks and vomiting for three days. She was full term, delivered via normal vaginal delivery & on breast feeding. No cough/ URTI symptoms/ diarrhea.

On examination, she was febrile temperature 38C, mildly dehydrated, tachypnic respiratory rate 40/min, BP: 90/60, HRP122/minute, oxygen saturation 98% on room air. Normal throat exam. Chest was clear, cardiovascular examination with normal S1S2. Abdomen was soft, lax, no organomegaly.No skin rashes.No meningeal signs. Initial assessment was Pyrexia of Unknown Origin.

Laboratory findings: WBC 8.1X 10^3(neutrophils 44.2%) Hg 12.3g/dL, Renal function Test, serum electrolytes & urine analysis were normal.Patient was admitted to hospital, septic workup sent & started on empirical antibiotic (IV Ceftriaxone) and IV fluids.Later Blood culture was positive for gram negative cocco-bacilli (Brucella species).

Her mother had history of ingestion of unpasteurized camel milk, 9 months ago in Mauritania,and was asymptomatic. Serum agglutination test done to the patient was positive for Brucella Melitensis, titers (1:1280).

Accordingly,intravenous Rifampicin and Trimethoprim–Sulphamethoxazol (Bactrim) were started for five days then shifted to oral Bactrim and Rifampicin for two weeks.She responded well to treatment and was discharged home in good condition after couple of days.

Her mother was consulted & educated. Serology done to her which was positive & was treated accordingly.

Discussion & Conclusion:

The patient has most probably acquired Brucellosis through breast milk. Emergency physicians should be alerted to the disease in endemic areas and to this rare route of transmission. Detailed history & physical examination is mandatory.Symptoms, signs, and first-line laboratory findings are often non specific.[2]

Accordingly, Blood culture & serum agglutination tests should be performed in any child with prolonged fever, especially in endemic areas. The serum agglutination test remains the most popular diagnostic tool for brucellosis. Titers greater than 1:160 are considered diagnostic in conjunction with a characteristic clinical presentation.

Treatment is effective, but disease prevention is crucial. We emphasize that the eradication of Brucellosis can be achieved by aggressive preventive measurements,including elimination of the vector & infected animals,vaccination of newborn animals,education of families, and enforcement of control measures[1]

Acknowledgment:

The authors declare no conflict of interest

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#8106 : Prognosis interest of pulse oxygen saturation at hospital admission in survivors of non-hypoxic cardiac arrest

Preferred format : Oral presentation

Authors:

Steven Lagadec (1), Joséphine Escutnaire (2), Francois Xavier Laborne (1), Marion Menay (2), Valentine Baert (2), Agnes Thivellier (1), Bruno Garrigue (1), RéAC GR- (2)

1. SAMU-SMUR, Centre Hospitalier Sud Francilien, Corbeil essonnes, FRANCE
2. EA 2694, Registre électronique des Arrêts Cardiaques (RéAC), Université Lille Nord de France, Lille, FRANCE

Keywords: cardiac arrest, ROSC, hyperoxia, pulse oxygen saturation

Abstract :

Introduction: The hyperoxia in the first 24 hours of return spontaneous circulation (ROSCS) following a cardiac arrest aggravates the neurological outcome and mortality hospital. It is recommended to adjust the oxygen to obtain a pulse oxygen saturation target range between 94 and 98%. From the national data of the french electronic register of cardiac arrest (RÉAC), we compared the values of pulse oxygen saturation post ROSC observed at hospital admission with prognosis neurological and hospital mortality.

Méthod: Prospective, comparative, multicenter studie based on RÉAC between July 2011 and August 2015. The inclusion criteria were the ROSC with pulse oxygen saturation admission ≥94%, vital status and scale CPC (Cerebral Performance Categories scale, gradually pejorative 1 to 5) at 30 days. CPC and survival rates are compared by level of pulse oxygen saturation (98% or less vs more 98%) by Fisher exact test. We then conducted a multivariate logistic model factors related to survival at D30, including the level of pulse oxygen saturation (≤ or> 98%) and the main prognostic factors confounding.

Results: We included 3727 ROSC. Univariate analysis showed no relationship between the values of pulse oxygen saturation and observed mortality or the CPC to D30 has been objectified. In multivariate analysis, there are no link between the level of pulse oxygen saturation at the admission and mortality at day 30 (p = 0.82). The median time between RACS and admission Hospital is 49 minutes.

The recommendations of the target values in post ROSC are not followed to the stage pre-hospital (66% pulse oxygen saturation> 98%).

Variables	OR [IC95]	p-value	OR adjusted [IC95]	p-value
age	0.98 [0.976-0.984]	<0.001	0.970 [0.965-0.975]	<0.001
male	1.618 [1.385-1.896]	<0.001	1.608 [1.333-1.944]	<0.001
no flow	0.958 [0.947-0.970]	<0.001	0.965 [0.951-0.979]	<0.001
low flow	0.936 [0.928-0.944]	<0.001	0.927 [0.917-0.937]	<0.001
traumatic cause	0.316 [0.223-0.436]	<0.001	0.150 [0.095-0.229]	<0.001
Bystander	1.812 [1.556-2.115]	<0.001	1.220 [0.988-1.507]	0.065
pulse oxygen saturation at the admission				
94-98%	1		1	
99-100%	1.109 [0.956-1.287]	0.17	1.021 [0.853-1.223]	0.82

Conclusion: The study suggests that the level of pulse oxygen saturation in the early phase of the ROSC has no link with hospital mortality. This could be explained by a delay or duration of exposure to hyperoxia particularly short between prehospital ROSC and the hospital admission. If this study did not determine a threshold exposure time, compliance with the recommendations is binding, however, and the use of an alarm set pulse oxygen saturation above 98% and close nursing supervision remains recommended especially during prolonged exposure times.

#8107 : Cars kill, bikes thrill. The spectrum of cycling trauma presenting to an Irish Emergency Department.

Preferred format : Oral presentation

Authors:

James Foley (1), John Cronin (1), John Ryan (1)

1. Emergency Medicine, St. Vincent's University Hospital, Dublin, IRELAND

Keywords: cycling, trauma, emergency department

Abstract :

Introduction

Cycling has been shown to have significant health and environmental benefits. Public rental bicycle and tax incentive schemes have been introduced in Ireland in recent times and the Central Statistics Office (CSO) reported in the 2011 census that there was a 9.6% increase in the number of people cycling to work when compared to 2006. As the number of cyclists increases, this may lead to more cycling injuries presenting to hospital.

St. Vincent's University Hospital (SVUH) participates in the Trauma Audit and Research Network (TARN). This database aims to enhance trauma care by auditing and researching injury and systems of care and by integrating trauma services within and between hospitals. A trauma case must meet strict inclusion criteria to be included in TARN encompassing: trauma (irrespective of age), length of stay criteria and isolated injury criteria. Currently there is little published research on the prevalence of cycling injuries presenting to emergency departments (EDs) and specifically relating to the traumatic injuries that cyclists may present to hospital with.

The aim of this study is describe the cycling related traumas that have presented to this hospital from September 2013 to May 2015.

Methods

This is a retrospective review of patients with a cycling-related injury presenting to the ED of St. Vincent's University Hospital (SVUH) from September 2013 to May 2015. Subjects were identified by interrogating the TARN database in SVUH. Only cases that met the inclusion criteria for TARN were included in this study.

Results

Demographics

During the study period there were a total of 87 cycling traumas that presented to SVUH. 65 patients (74.7%) were male. The mean age of the patients was 37 years (Standard deviation (SD) 2.0; range 3-85). 79 cyclists (90.1%) visited ED for their trauma.

Injury

The mean ISS was 14.5 (SD 10.5; 4-43). An ISS between 1-8 was recorded in 15 patients (17.2%), 9-15 in 25 patients (28.7%) and 47 patients (54.0%) had an ISS greater than 15. The mean GCS was 10 (SD 5; 3-15). The mean probability of survival (Ps) was 93.9 (SD 15.1; 1.6-99.8).

Outcomes

There were 3 mortalities in this group. The mean LOS was 16.3 days (SD 27.7; 1-198). 16 patients (18.4%) were admitted to the ICU with a mean LOS of 7.8 days (SD 9.7; 1-31). 9 cyclists (10.3%) were transferred in from other facilities to this ED, 2 cyclists (2.3%) were transferred in and subsequently transferred out to another facility while 14 cyclists (16.1%) were transferred out to other facilities for further care.

Conclusion

This study highlights the significant trauma that cyclists can endure with over half the patients sustaining an ISS of greater than 15. There was significant demand placed on resusictative care both in ED and in the ICU due to the severity of the injuries. More research is required to fully evaluate the extent of cycling injuries in Ireland and this data may guide injury prevention strategies in the future.

#8108 : Ocular manifestations as a guide of disease activity in systemic lupus erythematosus. A case report

Preferred format : ePoster

Authors:

Teresa Escolar (1), Miguel Rivas (1), Jose Manuel Abascal (2), Peña Lopez (1), Michelle Soler (1)

1. Emergency Department, Lozano Blesa Clinic Hospital, Zaragoza, SPAIN
2. Emergency Department, Lozano Blesa Clinic Hospital, zaragoza, SPAIN

Keywords: ocular manifestations, systemic lupus erythematosus, vasculitis

Abstract :

Introduction

Systemic lupus erythematosus is a multisystem disease of unknown etiology characterized by numerous autoimmune phenomena with lesions in multiple organ systems. Ocular manifestations of systemic lupus erythematosus (SLE) include mucocutaneous involvement of the eyelids, secondary Sjogren's syndrome, optic neuropathy. Retinal vasculitis and optic neuritis are two of the most vision-threatening complications that can be associated with the disease. Ocular manifestations are often associated with wide-spread systemic inflammation which can be fatal. Thus, immediate recognition and treatment is vital for a positive outcome.

Case report

A 47 year old female patient, with systemic lupus erythematosus, treated with hydroxychloroquine 400 mg/day, was admitted for third time during the last week because she referred repeatedly 20-minutes-long episodes of periphery photopsias in both two eyes and a temporal visual field defect above the horizontal. No other symptoms were associated.

At presentation in the emergency department on this occasion, she underwent a complete ophthalmological examination, which was normal, as well as the neurological one.

The general examination revealed no disorders.

The laboratory evaluation, neuro- radiological studies and cardiovascular evaluation showed no alterations.

Having the history of patient in mind and taking into account these features we suspected the clinical diagnosis of vasculitis due to SLE, therefore the patient was discharged and referred to rheumathology, from where more specific laboratory test were requested revealing abnormal titers of antinuclear antibodies and increased of erythrocyte sedimentation rate. The levels of antiphospholipid antibodies, complement levels and screening for thrombophilia were within normal range.

She was treated with oral prednisone (60mgr per day) and hydroxychloroquine successfully.

Discussion

The patient was admitted at the emergency department time and time again during the last week and discharged every time because of the absence of alterations at the examination and the complementary test.

Ocular manifestations is suggestive of high disease activity during the history of SLE and may reflect systemic vascular damage. Thus, immediate recognition and treatment is vital for a positive outcome (as in our case). Therefore close communication between the emergency department and rheumatology is critical in the effective management of these complex clinical situation

#8109 : A review of cycling injuries presenting to a suburban university teaching hospital in Dublin

Preferred format : Oral presentation

Authors:

James Foley (1), John Cronin (1), John Ryan (1)

1. Emergency Medicine, St. Vincent's University Hospital, Dublin, IRELAND

Keywords: cycling, dublin, trauma, minor trauma

Abstract :

Objective: The Central Statistics Office Ireland (CSO) reported following the 2011 census that there was a 9.6% increase in the number of people cycling to work compared with 2006. This ultimately leads to a higher prevalence of injuries and hospital attendances. The Road Safety Authority of Ireland (RSA) estimates from their provisional report that there were 12 pedal cyclist fatalities on Irish roads in 2014. There is little published data on cycling injuries in Ireland and the present study aims to describe the cycling related injuries presenting to the emergency department (ED) of a tertiary urban university hospital.

Methods: This is a retrospective review of patients with a cycling-related injury presenting to the ED of St. Vincent's University Hospital (SVUH) from 1st of January to 31st of December 2014. We used the ED Maxims © database to retrospectively review all cycling presentations to the ED in 2014. We searched for bike, cycling, bicycle in triage notes to identify patients that presented to the department following a bike-related incident. We also made use of Syngo © radiology database to access radiology reports for the same cohort of patients.

Results: There were 534 cycling related injuries presenting to the ED during the study period. 71.2% of the patients were male. 14.8% of patients presented following a collision with a motor vehicle. There were 2 mortalities during the study period with 5 patients sustaining an injury severity score greater than 15. 40 patients required admission to hospital following their injury with 6 of these patients spending time in the intensive care unit. 10 patients required transfer to other facilities for specialist care.

Conclusion: The Road Safety Authority in Ireland collates data regarding cycling injuries using police reports alone and does not use hospital data. Our study revealed that there was a significant number of cycling injuries presenting to this ED and that the majority of these injuries didn't involve motor vehicles and therefore may not be reported by the police. Cycling injuries have a significant impact on EDs with significant use made of radiology, ED review and outpatient clinics and admission facilities. Cycling is now a very popular means of transport and exercise activity in Ireland and using hospital based data, it is possible that EDs may provide a vector for guiding injury prevention strategies in the future.

#8110 : OPTIMIZATION OF PATIENTS HOSPITAL TO AGE AND SEVERITY OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Preferred format : ePoster

Authors:

MARIA CORCOLES VERGARA (1), DANAE FERNANDEZ-CAMACHO (2), BLANCA DE LA VILLA ZAMORA (1), MARIA CONSUELO QUESADA MARTINEZ (1), NURIA RODRIGUEZ GARCIA (1), PASCUAL PIÑERA SALMERÓN (1), CESAR CINESI GOMEZ (1), JOSE ALONSO AGUILERA (2)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, EXACERBATION, SEVERITY

Abstract :

Introduction
Chronic obstructive pulmonary disease (COPD) is defined as obstruction usually progressive and irreversible airway. It involves large consumption of resources in health given the high frequency of Hospitalization

Objective
Assess whether there is an adaptation of hospitalization in response to gravity as FEV1 and / or age (75 years) with attention to the frail elderly.

Material and methods
observational, retrospective study in a General Hospital with an area of 200,000 inhabitants and 275 urg / día.Se included patients with previously diagnosed COPD by spirometric who presented to test from January 2012 to July 2015 due to worsening of their disease. It was analyzed was taken as basis baseline ill patients according to GOLD and age grouping sign> or

Results
They consulted by 1029 COPD exacerbation patients.
According GOLD, 273 (26.5%) patients had very severe stage. Of which 191 are admitted to hospital (70%) and are discharged 82 (30%).
severe patients 446 (43.35%), admitted to the hospital 277 (62.1%) and are discharged 169 (37.9%).
Moderates 290 (28.18%), admitted to the hospital 181 (62.4%) and are discharged 109 (37.6%)
Mild 20 (1.94%), admitted to the hospital 9 (45%) and are discharged 11 (55%)
By age, 564 (54.7%) are> or equal to 75 years. 365 (64.7%) admitted to the hospital. 199 (35.3%) they are are discharged home.
465 (45.3%) were patients aged

Conclusions
With respect to the baseline severity by FEV1 patients with severe or very severe baseline stage they enter more than mild or moderate as is normal.
In relation to age, there is a slightly higher percentage of patients of patients aged> or equal to 75 who earn more revenue although the percentages are similar in both age groups.
Overall an adaptation of hospitalization is performed based on the baseline stage with a tendency to objectify hospitalization without major differences according to age.
The healthcare professional should attempt a proper matching of income of patients with COPD exacerbations for proper optimization of health resources.

#8111 : Bronchodilator treatment of patients with COPD at home in the emergency department and at discharge. Are clinical practice guidelines followed?

Preferred format : ePoster

Authors:

MARIA CONSUELO QUESADA MARTINEZ (1), NURIA RODRIGUEZ GARCIA (1), BLANCA DE LA VILLA ZAMORA (1), DANAE FERNANDEZ-CAMACHO (2), MARIA CORCOLES VERGARA (1), PASCUAL PIÑERA SALMERÓN (1), CESAR CINESI GOMEZ (1), JOSE ALONSO AGUILERA (2)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, EXACERBATION, Bronchodilator, Clinica Practice Guideline

Abstract :

Introduction
Chronic obstructive pulmonary disease (COPD) is a health problem of great magnitude and intensification is a major cause of morbidity and mortality. Consumes many resources with increased incidence foreseeable in the immediate future.

Objective
Rate track clinical practice guidelines (CPG), analyzing bronchodilator treatment they receive at home in emergencies and at discharge.

Material and method
descriptive, observational and retrospective study General Hospital with population of 200,000 and 275 emergency / day. 1167 patients treated with COPD exacerbations from January 2012 to July 2015 with FEV1 <70% were included proven. home treatment in emergency and high: the variables were collected.

Results
Of the 1167 patients who met criteria for inclusion in the study, home treatment bronchodilator which were prior to the aggravation was: b2 inhaled short-rescue action in 285 (24.5%) patients, b2 inhaled long-acting 71 (6.1%) and 5 (0.4%) nebulized. 87 (7.5%) were receiving anticholinergic (AC) inhaled short-acting, 815 (69.8) AC long and 25 share (2.1%) nebulized. 855 (73.3%) were receiving inhaled corticosteroid treatment and 5 (0.4%) nebulized.
After evaluation in the emergency room, treatment was initiated in boxes with inhaled b2 in 19 (1.8%) patients and 781 (67%) nebulized. 131 (11.2%) patients were treated with inhaled anticholinergic and 854 (73.2%) with nebulized. 121 (10.4%) patients received inhaled corticosteroid, 440 (37.7%) nebulized and 838 (71.8%) Intravenous corticosteroid. Of the patients who consulted, 371 (36.1%) were discharged without income and bronchodilator prescribed treatment was: b2 inhaled short acting in 259 (22.3%) patients, b2 inhaled long-acting 50 (4.3%), b2 inhaled rescue 112 (9.6%) and 41 (3.5%) nebulised. 79 (6.8%) patients treated with short-acting inhaled AC, 212 (18.2%) AC long and 50 share (4.3%) with nebulized. In 252 (21.6%) were prescribed oral corticosteroids, 246 (21.1%) inhaled and 49 (4.2%) nebulized.

Conclusion
Against the GPC, where the main treatment are bronchodilators, in our series only 65-75% received bronchodilators (beta2 or anticholinergics). The use of systemic corticosteroids was largely as indicated by the GPC. We think that despite being a known disease requires training and dissemination of GPC for better management of this patients in the emergency room

#8112 : Vaccination, O2 home and bronchodilator therapy by age in COPD patients

Preferred format : ePoster

Authors:

MARIA CONSUELO QUESADA MARTINEZ (1), BLANCA DE LA VILLA ZAMORA (1), DANAE FERNANDEZ-CAMACHO (2), MARIA CORCOLES VERGARA (1), NURIA RODRIGUEZ GARCIA (1), CESAR CINESI GOMEZ (1), PASCUAL PIÑERA SALMERÓN (1)

1. EMERGENCY DEPARTMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN
2. EMERGENCY DEPARMENT, HOSPITAL GENERAL UNIVERSITARIO REINA SOFIA, MURCIA, SPAIN

Keywords: COPD, Bronchodilator, Vaccination, Clinica Practice Guideline

Abstract :

Introduction
Chronic obstructive pulmonary disease (COPD) is a health problem of great magnitude and intensification is a major cause of morbidity and mortality. Consumes many resources with increased incidence foreseeable in the immediate future.

Objective
Assess the recommendations of clinical practice guidelines (CPG), analyzing vaccination, oxygen therapy and bronchodilator therapy at discharge according to age.

Material and method
descriptive, observational and retrospective study General Hospital with population of 200,000 and 275 emergency / day. 1167 patients treated with COPD exacerbations from January 2012 to July 2015 with FEV1 <70% were included proven. vaccination, home oxygen therapy and bronchodilator therapy at discharge: the variables were collected.

Results
1167 patients who met criteria for inclusion in the study, 595 (50.98%) received vaccination, grouping by age, 1003 are ≥ 65, 51 (5.08%) they received flu vaccine, 436 (43.36%) against flu A and 37 (3.68%) pneumococcal. 196 are <65, 16 (9.46%) were vaccinated for influenza, 44 (26.03%) influenza A and 11 (6.50%) Pneumococcal.
Grouping by age, we observed that 594 (51.16%) were ≥ 75 years and 567 (48.8%) <75 years. Of ≥ 75 years receiving home oxygen therapy by 237 (39.89%) compared with 175 (30.86%) in <75 years.
Of the patients who received bronchodilator treatment at discharge 914 (78.72%), 458 (77.1%) were ≥ 75 years and 456 (49.9%) <75 years. They received no treatment 247 (21.27%), of which 136 (22.9%) ≥ 75 and 111 (19.6%) <75 years.

Conclusion
Contrary indicating the GPC on the recommendation of vaccination in COPD patients ≥ 65 years to reduce the risk of complications in our series, only 43.3% patients received vaccine against influenza A, 5.08% and 3.68% against pneumococcal flu.
Similarly and against the recommendations in our series only 77.1% of ≥ 75 years received bronchodilators, most notably objectifying this therapeutic error <75 years where they received treatment only 456 (49.9%).
O2 home use is higher in ≥ 75 years for minors.
Despite being a known disease requires training and dissemination of GPC for better management of patients in the emergency room this.

#8113 : Accuracy of 3 pre-endoscopic risk scores in patients with upper gastrointestinal bleeding at a University Hospital in Chile. A retrospective study.

Preferred format : Oral presentation

Authors:

Nicolás Mena (1), Flavio Ayala (1), Barbara Lara (1), Rosario Diaz (1), Cristóbal Kripper (1), Bernardita Elicer (1), Francisca Donoso (1)

1. , none, Santiago, CHILE

Keywords: Blatchford, pre-Rockall, AIMS65, Upper gastrointestinal bleeding

Abstract :

Introduction

Upper gastrointestinal bleeding (UGB) is a frequently encountered lifethreating condition presenting to the emergency department (ED) that emergency medical clinicians must know how to adequately evaluate. To properly risk stratify these patients, the use of risk scores has been widely recommended in international guidelines as a way to predict mortality, risk of re-bleeding and need for intervention. The Glasgow-Blatchford Score (GBS), pre-endoscopic Rockall (pre-RS) and AIMS65 are 3 of the most used rules that have been externally validated in a variety of European, Australasian and Northamerican populations. However, no studies have validated their accuracy in our country.

The aim of our study was to measure mortality in patients with UGB and explore the performance of these three pre-endoscopic risk scores in predicting need for intervention (endoscopic, surgical or radiological).

Participants and Methods

We conducted a retrospective, observational study in patients aged 15 years and older that consulted to the emergency department of a university hospital in Santiago, Chile. Based on our electronic health record (EHR) we selected patients who were diagnosed in the ED with Hematemesis (K92.0), Melena (K92.1) or Unspecified Gastrointestinal Hemorrhage (K92.2) according to ICD-10 between April 2013 and July 2015. We excluded all patients with do not resuscitate order, those with incomplete laboratory or endoscopic studies and those in whom UGB was ruled out during in-hospital evaluation. All independent variables required for GBS, AIMS65 and pre-RS were collected from the EHR. In-hospital mortality, need for intervention (endoscopic, surgical or radiological) and blood transfusion were collected from EHR. Death at 30 days for those that were alive at hospital discharge was determined based on the national registry database. The epidemiological profile of included patients was reported as descriptive statistics. We assessed the accuracy of these scales using area under the receiver operating characteristic curve (AUROC).

Results:

Five hundred and forty nine patients fulfilled inclusion criteria. After excluding those that met exclusion criteria, 290 patients were reviewed. The median age was 63 years [range, 17-97] and 52.7% were male. In-hospital mortality occurred in 15 patients (5.1%), 122 (42.0%) required intervention and 139 (47.9%) received blood transfusion.

Accuracy of risk scores to predict in-hospital mortality was: AIMS65 (AUROC = 0.82, 95% CI, 0.70-0.93) and pre-RS (AUROC = 0.81, 95% CI, 0.72-0.89). Those two scores tended to be more accurate than GBS (AUROC = 0.68, 95% CI, 0.55-0.82) in predicting mortality (P=0.08). GBS predicted any adverse outcome (mortality, intervention or transfusion) (AUROC = 0.82, 95% CI, 0.77-0.87) significantly better than pre-RS (AUROC = 0.74, 95% CI, 0.68-0.8) and AIMS65 (AUROC = 0.68, 95% CI, 0.62-0.74) (P<0.0001).

Conclusion:
All three risk scores adequately predicted outcomes. AIMS65 and pre-RS showed a particularly good accuracy for inpatient mortality and GBS was significantly better in predicting any outcome. These findings support the role of pre-endoscopic scales in the emergency department in our setting.

Acknowledgements:

No conflict of interest.

#8114 : Ultrasound accuracy in detecting tendon tear vs local wound exploration in limb penetrating injury

Preferred format : Oral presentation

Authors:

Javad Seyedhosseini (1), Narges Mohamadrezaei (2)

1. Tehran University of Medical sciences, Shariati Hospital, Tetran, IRAN, ISLAMIC REPUBLIC
2. Tehran University of Medical sciences, Shariati Hospital, Tehran, IRAN, ISLAMIC REPUBLIC

Keywords: Ultrasound,tendon injury,local wound exploration

Abstract :

Abstract:

Objectives: Tendon ruptures are common musculoskeletal injuries containing 7% of all visits by physicians in the United states and up to 50 % of all sport injuries .correct and timely diagnosis of tendon injuries is obviously important for the correct treatment and consequently for minimizing the community costs.MRI has become the standard of diagnosis tool but it is an expensive and overused measure. Now a day Ultrasound is being used increasingly by radiologists and non-radiologists in the United States as a useful method in vast areas. There fore the preset study is going to validate diagnostic ability of Ultrasound in tendon injuries among penetrating extremity trauma by using clinical wound exploration as standard measure.

Methods:

Patients with penetrating extremity trauma with suspected tendon injury based on history and physical exam were evaluated respectively by sonography and wound exploration separately and blind. The results were analyzed to validate sonography as an alternative diagnostic test

Results:

60 patients ,51 male and 9 female , 28 patients under 30 years old and 32 patients 30 and more with 11 lower extremity and 49 upper limb injury and 32 extensor zone and 28 flexure zone injury were evaluated. The overall sensitivity and specificity were 94.4% and 100% respectively.

Conclusion:

Similar to the results of compared studies sonography sensitivity and specificity were near equal. Validation reveals that sonography is a usefull measure for differentiating injured tendon from intact one but small size of our samples preclude comparison between partial and total injuries

#8115 : Effects of Dispatcher-assisted Cardiopulmonary Resuscitation on Survival Outcomes by Age Group in Pediatric Out-of-hospital Cardiac Arrests

Preferred format : ePoster

Authors:

Ki Bong Baek (1), Sang Do Shin (1), Kyoung Won Lee (1), Young Sun Ro (1)

1. , Laboratory of Emergency Medical Services, Seoul National University Hospital Biomedical Research Institute, Seoul, KOREA, REPUBLIC OF

Keywords: Cardiac Arrest, Bystander Cardiopulmonary Resuscitation, Dispatcher

Abstract :

Objective

We studied the effect of a dispatcher-assisted cardiopulmonary resuscitation (DA-CPR) program on pediatric out-of-hospital cardiac arrest (OHCA) outcomes by age groups.

Methods

All emergency medical services (EMS)-treated pediatric OHCAs in Korea were enrolled between 2012 and 2014, excluding cases witnessed by EMS providers and those with unknown outcomes. Exposure was bystander CPR (BCPR): BCPR-with-dispatcher assistance (DA), BCPR-without-DA, and No-BCPR. Endpoint was survival to discharge. Multivariable logistic regression analysis was performed. The final model with an interaction term was evaluated to compare the effects across age groups.

Results

A total of 1529 patients (32.8% BCPR-with-DA, 17.3% BCPR-without-DA, and 54.6% No-BCPR) were included in the final analysis. BCPR-with-DA and BCPR-without-DA were 43.2% and 15.5% in 0-12 months old, 33.1% and 21.8% in 1-8 years old, and 25.7% and 16.0% in 9-18 years old group, respectively. Both BCPR-with-DA and BCPR-without-DA were more likely to have higher survival to discharge (8.8% and 12.1%) compared with No-BCPR (3.9%). The adjusted ORs (95% CIs) for survival to discharge were 1.77 (1.04-3.00) in BCPR-with-DA and 2.86 (1.61-5.08) in BCPR-without-DA compared with No-BCPR. By age groups, the adjusted ORs (95% CIs) in BCPR-with-DA and BCPR-without-DA were 2.18 (1.07-4.42) and 2.27 (1.01-5.14) for 9-18 years old group; 2.32 (0.64-8.44) and 6.21 (1.83-21.01) for 1-8 years old group; 1.06 (0.41-2.77) and 2.00 (0.64-6.18) for 0-12 months old group, respectively.

Conclusions

BCPR regardless of DA was associated with improved survival outcomes after OHCA in pediatrics. However, the associations between DA-BCPR and survival outcomes were different by age groups.

#8116 : Evaluation of patients with ventriculoperitoneal shunt in the Division of Pediatric Emergency Medicine.

Preferred format : Oral presentation

Authors:

Laden Jafari (1), Ozlem Teksam (2), Dilek Yalnizoglu (1)

1. , none, Ankara, TURKEY
2. -, -, Ankara, TURKEY

Keywords: Ventrikuloperitoneal shunt, shunt dysfunction, shunt infection, children

Abstract :

Background and Aims:

Hydrocephalus is a common chronic disorder that could be a result of various etiologies. Ventriculoperitoneal (V-P) shunting is an established long-term treatment option for hydrocephalus and is one of the most common neurosurgical procedures. Rapid and accurate evaluation of the V-P shunt system in the emergency room setting is necessary as shunt malfunction may be associated with increased morbidity and mortality. Patients with V-P shunt dysfunction frequently present with clinical signs and symptoms of increased intracranial pressure including nausea, vomiting, headache, altered level of consciousness and swelling at the shunt site. However, the prediction of complications of V-P shunt is still remains unclear. The objective of this study is to evaluate the diagnostic utility of head computed tomography (CT) and to evaluate signs, symptoms and laboratory results in patients with suspected V-P shunt dysfunction and infection.

Methods:

We retrospectively reviewed medical records including signs, symptoms, laboratory and head CT / MRI results in patients with suspected V-P shunt dysfunction between January 2005 and June 2014. One hundred and thirteen patients and 252 visits were reviewed. Each neuroimaging study was classified as “normal” (unchanged or decreased ventricle size) or “abnormal” (increased ventricle size). We classified a patient as having a ventricular shunt dysfunction if operative revision for relief of mechanical causes of altered shunt flow was needed within 72 hours of initial ED evaluation. Shunt dysfunction within 30 days of the PED visit was also evaluted.

Results:

The most common complaints were fever, vomiting and altered consciousness. There is no relation between complaints and the infection or malfunction of shunt ($p>0,05$). Seizure is inversely related to shunt malfunction ($p<0,05$). The thrombocytosis (>500000mm3) is significantly predictive of shunt infections($p<0,05$). The abnormal results of head CT was not significantly associated with surgical shunt revision within 72 hours and 30 days of initial ED admission ($p>0,05$).

Conclusions:

There is no significant sign and symptom to decide about shunt malfunction and infection. Although the computed tomography utilization for suspected ventriculoperitoneal malfunction commonly uses, it is not clear effect of CT results on decison of shunt surgery.

#8117 : Defibrillation success in out-of-hospital cardiac arrest: How important is recurrence of ventricular fibrillation after successful shock?

Preferred format : Oral presentation

Authors:

Martin C. Sassen (1), Dana M. Spies (1), Birgit Plöger (1), Susanne Schaumberg (1), Clemens Kill (1)

1. Department of Emergency Medicine, Philipps-University, Marburg, GERMANY

Keywords: defibrillation, recurrence of ventricular fibrillation, OHCA, ALS

Abstract :

Purpose of the study
In out-of-hospital cardiac arrest (OHCA) with ventricular fibrillation (VF) guidelines recommend defibrillation with biphasic shock[1], followed by chest compressions for two minutes before analyzing shock success. If then VF is detected again, it is unclear whether VF sustained or - after being terminated by defibrillation - recurred within the two-minutes-cycle of chest compressions[2]. We investigated the frequency of persistent versus recurrent VF under chest compressions after defibrillation with rectilinear biphasic shock.

Materials and Methods
In Marburg-Biedenkopf-County, Germany (252,000 inhabitants), we enclosed 20 consecutive cases (starting March 2015) in a retrospective study of resuscitation attempts by ALS-ambulance in OHCA with initial VF. ECG recordings of the defibrillator corpuls3 were analyzed by three independent investigators from the beginning of the CPR until two minutes after the third shock. ECG was edited with filters from 2-10 Hz to reduce chest compression-artifacts. Successful shock was defined as termination of VF within 5 seconds after the shock[3]. A relapse was defined as recurrent VF in the interval between 5 seconds after a shock and the following shock.

Results
We analyzed 54 shocks of 20 patients. 68.5% of the shocks were successful (n=37), but the recurrence-rate of VF was 81.1% (n=30). Shock 1 (n=20) was successful in 75% (n=15), VF-recurrence-rate 86.7% (n=13). Shock 2 (n=18) was successful in 72.2% (n=13), VF-recurrence-rate 84.6% (n=11). Shock 3 (n=16) was successful in 56.3% (n=9), VF-recurrence-rate 66.7% (n=6).

Conclusions
Although VF was terminated by rectilinear waveform defibrillation in 69%, VF recurred within the two minutes of chest compressions in 81%. Since it is unclear to which extend chest compressions influence the risk of VF-relapse after successful shock, further studies need to re-evaluate the best shock-compression-analysis algorithm for OHCA with initial VF.

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#8118 : Association between acute phase course of systolic blood pressure and early neurological improvement in stroke patients treated with rtPA

Preferred format : ePoster

Authors:

Junsoo Seok (1), Kyounghwan Kim (1), Sungkyoo Kim (1), Hyeonsong Kim (1), Ki Young Jeong (1), Jong-Seok Lee (1), Young Gwan Ko (1)

1. Department of Emergency Medicine, Kyung Hee University Medical Center, Seoul, KOREA, REPUBLIC OF

Keywords: acute stroke, blood pressure, prognosis

Abstract :

Background

The relation between systolic blood pressure (SBP) and neurological outcome in acute ischemic stroke is not well understood in spite of research for more than a decade. Conflicting results of the previous studies may be attributed to the difference in methodological design and passing over the potential effect of blood pressure course on stroke outcome. This study aimed to evaluate the relation between SBP tendency during acute phase of ischemic stroke and early neurological outcome in patients treated with intravenous thrombolysis.

Methods

A total of 155 ischemic stroke patients who received intravenous recombinant tissue plasminogen activator (rtPA) were retrospectively examined. Blood pressures were measured every 15 minutes for the first 6 hours from the administration of rtPA (0–6 h), then every 30 minutes for the next 6 hours (6–12 h). Time course was divided into 4 phases by every 3 hours. The average, standard deviation, coefficient of variation (standard deviation / average x 100) of SBPs during the periods of 0–3 h, 3–6 h, 6–9 h, and 9–12 h were calculated. Data on baseline demographics, vascular risk factors (hypertension, diabetes mellitus, atrial fibrillation, dyslipidemia, and obesity), pre-stroke disability (using the modified Rankin Scale score), stroke severity (using the National Institutes of Health Stroke Scale score), time of rtPA administration, and laboratory parameters were collected. Early neurological outcomes were assessed at 24 hours after thrombolytic therapy. To determine independent predictors for early neurological improvement (National Institutes of Health Stroke Scale score of 0–1, or of decrease ≥8-point), a multiple logistic regression analysis fitted with backward stepwise selection procedure was performed. Two-way repeated-measures analysis of variance was used to compare the 12-hour SBP course between the patients with and without early neurological improvement.

Results

Patients with early neurological improvement (n=43) showed higher frequency of dyslipidemia, higher triglyceride level, lower HDL-cholesterol level, and lower SBPs during the periods of 3–6 h, 6–9 h, and 9–12 h, in univariate analysis. On a multiple logistic regression model, atrial fibrillation and mean SBP during 6–9 hours were independently associated with early neurological improvement after adjustment of covariates. Comparing the time course of SBPs, mean SBP values in patients with good outcome constantly reduced until 9 hours after thrombolysis, whereas those without neurological improvement showed plateau pattern in their SBP course.

Conclusion

The tendency of average SBP level during 3–12 hour after rtPA therapy was predictive of early neurological outcome at 24 hours in ischemic stroke patients.

#8119 : An alternative method for increasing medical interns' chest tube insertion skills: A display mannequin

Preferred format : ePoster

Authors:

Ozgur Tatli (1), Suha Turkmen (1), Melih Imamoglu (1), Yunus Karaca (1), Mustafa Cicek (1), Metin Yadigaroglu (1), Selen Bayrak Tamer (2), Olgun Asik (1), Murat Topbas (3), Suleyman Turedi (1)

1. Department of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, TURKEY
2. Departmen of Emergency Medicine, Karadeniz Technical University, Faculty of Medicine, Trabzon, TURKEY
3. Department of Public Health, Karadeniz Technical University, Faculty of Medicine, Trabzon, TURKEY

Keywords: chest trauma, pneumothorax, haemothorax, chest tube, display mannequin, medical training

Abstract :

Introduction

Medical education naturally requires non-patient practical training sessions as much as theoretical training. Simulation-based training therefore plays an important role in this context. Chest tube insertion is a vitally important procedure in the emergency department. This study assessed the effect on intern physicians' chest tube insertion skills of a low-cost chest tube simulation model developed by ourselves.

Methods

A dummy was prepared for training simulation using a display mannequin. Medical interns then received instruction concerning pneumothorax and the chest tube procedure. Each intern's procedural skill was assessed using the "*Chest Tube Application Skill Check List*" prepared by the authors. Each item on the list was scored separately. A mean was then calculated for the total scores obtained.

Results

All 63 interns taking part in the study reported that the simulation model we developed closely resembled reality. Interns' mean procedural skill score was 40.9±1.3 out of a possible 42. The maximum score of 42 was achieved by 39.7% of the interns, while another 33.3% achieved a score of 41. Eighty-five percent of the participants succeeded in inserting the tube with an appropriate technique by achieving a score of 40 or more.

Discussion

The low-cost model prepared by us using a display mannequin was successful in terms of developing intern physicians' chest tube insertion skills. This model can be used to improve the chest tube insertion skills of medical interns during medical training.

#8120 : Lifting the Boundaries of the EDs in Helsinki

Preferred format : Oral presentation

Authors:

Eeva Tuunainen (1), Veli-Pekka Harjola (1), Johanna Kaartinen (1), Maaret Castren (1)

1. , Helsinki University Hospital, Helsinki, FINLAND

Keywords: Residents, assignments, collaboration, training, rotation, curriculum, mentorship

Abstract :

Who gets whom?

Lifting the Boundaries of the EDs in Helsinki

Emergency Medicine is the 50th and the newest specialty in Finland, founded in 2013. Currently training in emergency medicine is in all five University hospitals in Finland and tens of emergency departments work as a training facility to new enthusiastic residents.

Resident who have chosen this new specialty are particularly tough, and they need to be. Challenges to change antiquated systems are huge, in the administrative level and especially in the middle of the night when resident are facing patients who everyone wants to treat or nobody wants to treat.

Therefore we need to lay some interfaces, lines, that'll move as the knowledge and experience of the residents grows. Eventually, in Finland, Emergency Medicine specialists will be in charge of the EDs. But right now we need to set where we are and where we are heading. And this is something that we need to do together, in the administrative level and among residents.

Due to the rotation placements, residents get to know and trust each others knowledge and skills. This itself lays a level of trust towards the EM. However, we found it to be extremely important to go around different specialties emergency clinics and 'introduce ourselves'. What can we do now, what are our expectations from you, what do they expects from us and of course how can we get there, together? Without residents fighting in the ED at 3 am.

We started these face-to-face introductions in the spring of 2015. Under a careful supervision of our Professor, the residents went thru different clinics, having multiple meetings of the bilateral expectations when working together in the ED.

The reaction was positive, every time. Clinic after clinic reacted with enthusiasm and cooperation to work together to make the EDs of Helsinki more focused, patient oriented and efficient. Based on these meetings we were able to design distribution of the basic patient cases between specialties, collaboration between clinics, short trainings in the clinics own facilities and possible future research topics.

When discussing directly to the EM residents the chiefs of different department could understand more clearly what do we need to learn in terms of treating patients from their specialty better.

Emergency Medicine being such a new specialty in Finland we don't have our own seniors or supervisors yet. We must gain our knowledge and experience from the rotations, short trainings and under the supervision of the other specialists.

And we are truly fortunate to say that they agreed to do so.

#8121 : Early rule-out of acute coronary syndrome at the emergency department before and after implementation of the new European Society of Cardiology guidelines

Preferred format : ePoster

Authors:

Calvin Kienbacher (1), Verena Fuhrmann (1), Raphael Van Tulder (1), Christof Havel (1), Wolfgang Schreiber (1), Harald Herkner (1), Dominik Roth (1)

1. , Department of Emergency Medicine, Medical University of Vienna, Vienna, AUSTRIA

Keywords: acute coronary syndrome, troponin t, clinical practice guidelines

Abstract :

Background:
Thoracic pain is one of the most frequent symptoms encountered at emergency departments, and the early diagnosis or rule-out of life-threatening causes, such as acute coronary syndrome (ACS) is a key competence of emergency medicine. Fast and safe diagnosis is crucial for patient safety, whereas quick rule-out is essential to deal with increasing overcrowding of emergency departments.

In August 2015, the European Society of Cardiology (ESC) published new guidelines for the management of non-ST-elevation ACS. The rise of high-sensitivity Troponin T (hs-Tnt) assays allowed the introduction of “early rule-out” algorithms but might also lead to an increasing number of patients with “low positive” baseline hs-Tnt levels who require further observation.

We aimed to assess the impact of the implementation of the new guidelines on the frequency of early rule-out and prolonged observation/repeated testing at the setting of a high-volume tertiary care emergency department.

Methods:
At our emergency department at a 2,200-bed tertiary care university hospital, approximately 90,000 patients are seen per year. We conducted a pre- and post-changeover analysis 3 months before (July to Sept 2015) and 3 months after (Oct to Dec 2015) transition from old (hs-Tnt cutoff 30ng/l, 3-hour rule-out) to new (hs-Tnt cutoff 14ng/l, 1-hour rule-out) guidelines, comparing proportions of patients requiring repeated testing using the chi-square test.

Results:
During the study period a total of 5,448 cases of symptoms suspicious of acute cardiac origin were treated (3,451 before; 1,997 after (consistent with previously observed seasonal variation in cardinal symptoms at our department); 2,370 (43.5%) female; age 55 (+/-19) years).

The proportion of patients fulfilling early-rule out criteria decreased from 68.0% (2,348 patients) before to 59.8% (1,195 patients) after implementation of new cutoffs. Due to the new guidelines, the proportion of patients requiring repeated testing significantly ($p<0.01$) increased from 21.5% (743 patients) to 24.7% (494 patients), whereas the proportion of positive results in repeated testing significantly ($p=0.02$) decreased from 43.1% (320 patients) to 36.7% (181 patients).

Conclusions:
In our high-volume, real world setting implementation of the new ESC guidelines led to a minor rise in prolonged observation, mainly explained by an increase in eventually negative repeated testing.

#8122 : Do you even listen to me? Gender-related differences in the perception of prodromes of out-of hospital cardiac arrest caused by myocardial infarction

Preferred format : ePoster

Authors:

Elisabeth Lobmeyr (1), Fritz Sterz (1), Wolfgang Schreiber (1), Harald Herkner (1), Raphael Van Tulder (1), Michael Poppe (1), Patrick Sulzgruber (1), Dominik Roth (1)

1. , Department of Emergency Medicine, Medical University of Vienna, Vienna, AUSTRIA

Keywords: Resuscitation, Myocardial Infarction, Gender, Out-of-Hospital Cardiac Arrest

Abstract :

Background: Out-of-hospital cardiac arrest (OHCA) is still one of the main reasons of death in the western world, 70% caused by cardiovascular complications. While bystander CPR and early defibrillation proved to be most beneficial for favorable positive outcome, these measures are often delayed due to neglect and ignorance of leading cardiac symptoms. This implies a crucial role for relatives and friends to recognize symptoms early.

Objectives: We aimed to assess differences in the perception of prodromes by relatives and friends of male and female victims of OHCA due to acute myocardial infarction (AMI).

Methods: From January 1, 2006 to December 31, 2015, we prospectively collected data of all patients treated for OHCA due to AMI at our high-volume tertiary care centre. Demographic and clinical characteristics, as well as details on history, diagnostic findings and therapy were analyzed. The frequency of any suspected cardiac prodromes observed by relatives was compared between women and men using the chi-square test.

Results: In total, 531 patients (101 (19%) women; age 59+/-12 years) met the inclusion criteria. Cardiovascular risk factors, risk profile according to GRACE score (182 (IQR 161-210) in women vs. 178 (151-204) in men), cardiac arrest-related factors (e.g. witnessed arrest 38% vs. 37%; lactate level on admission 7 (IQR 4-9) vs. 6 (4-9) mmol/l) as well as AMI-related characteristics (e.g. STEMI 63% vs. 62%; most frequent location of infarction anterior wall 45% vs. 44%) were very similar between women and men.

Suspicious prodromes were, however, remembered significantly more often in male than in female patients (10% vs. 3%, p=0.03).

Conclusions: Despite very similar risk profiles to male victims, family and friends of female victims with OHCA far less often remember prodromes which were interpreted as potentially of cardiac origin. The general public thus needs to be encouraged further to listen attentively, especially to women with cardiac risk factors.

#8123 : Emergency department violence

Preferred format : Oral presentation

Authors:

Maghraoui Hamida (1), Ajala Lobna (1), Mghirbi Abdelwaheb (1), Kilani Mohamed (1), Kallel Mohamed Amine (1), Majed Kamel (1), Zaouche Khedija (1), Hamouda Chokri (1), Borsali Falfoul Nebiha (1)

1. Emergency Departement of La Rabta Teaching Hospital, University of Manar 1, Tunis, TUNISIA

Keywords: violence, emergency departement, self-evaluative survey

Abstract :

Introduction:

Caregivers are exposed to bad treatment, threatening and annoyance when working especially those of the emergency department. We observe more violence in the emergency department. The purpose of this study was to identify the main causes and consequences of violent acts against nurses in the emergency department and to evaluate the prevalence and the role of the gender in the different types of violence.

Methods: We conducted an observational study based on a retrospective self-evaluative survey on the last twelve months.

Results:

We selected 45 nurses for the study. The response rate was 82.2%. 59.5% were aged between 25 and 35 years. 48.6% was working between 1 and 5 years. Violent acts had occurred in outpatient emergencies in the morning by a rate of 67.7%. 70.3% of cases occured at the vital emergency rooms and trauma unit. The aggressor was the accompanying (67.6%) and the couple accompanying- patient in 32.4% of cases. The main reasons were waiting (81.1%) and the lack of staff (45.9%). The attacks were mostly verbal (100%), insults (86.5), criticisms and threats (81.1%). Physical assault (78.4%) were mainly type of horseplay (67.6%) and kicking (32.4%). Immediate reactions of neurses were discussion with the aggressor (78.4%) and physical reaction (2.7%. Our study did not showed an effect of gender on the frequency and nature of the assault. 51.4% of nurses expressed a desire for the inclusion of gender in the distribution in the night shift. We founded psychological impact in 78.4%, these effects were showed as well in work and private life in 75.7% of nurses.

29.7% of incidents led to complaints. In 86.5%, the supervisor was informed. The solutions proposed by the staff were the constant need for a police officer in 75.7% and the increase of the number of caregivers in 62.2%.

Conclusions:

Emergency workers are frequently exposed to violence. Institutional solutions should be taken to improve working conditions and staff safety.

#8124 : Application of telemedicine between primary care and emergency department of the Hospital of Barbastro

Preferred format : ePoster

Authors:

Juan José Eito Cuello (1), Ana Graciela Moreno Mejia (2), María Dolores Loncan Margalejo (3), Clara Loriente Martinez (2), Beatriz Benito Ruiz (4), Manuel Griabal Garcia (4), Pilar Canellas Sanchez (4), Ana Maria Arilla Albas (4)

1. Jefe del Servicio de Urgencias, Hospital de Barbastro, Barbastro, SPAIN
2. Servicio de Urgencias, Hospital de Barbastro, Barbastro, SPAIN
3. Centro de Salud Monzón, Servicio de Salud Aragón, Huesca, SPAIN
4. Urgencias, Hospital de Barbastro, Barbastro, SPAIN

Keywords: telemedicine, emergency, primary care

Abstract :

INTRODUCTION:

The application of new communication technologies for the realization of medical consultation between the different services of emergency primary care and reference hospital, allows the advice from doctors hospital emergency of the patient without the need to scroll to hospital and can offer different options for the correct diagnosis of pathological conditions and provide early therapeutic response, optimizing time and quality of care.[1,2,3]

TARGET

Describe the process of medical care for patients with urgent health problems using new technologies of medical consultation between primary care and hospital emergency doctors.

MATERIALS AND METHOD

Prospective study of medical interconsultations made through videoconferencing and / or calls between the emergency department of the Hospital of Barbastro and its different primary care centers over a period of 12 months (01/01/2016 - 31 / 12/2016).

At the present time obtained a sample of 35 interconsultations, it will proceed to the final analysis of statistical data through SPSS

RESULTS

Pending final results at the time of shipment. At the current time of sending present work it has obtained a sample of 35 interconsultations, all of which have been phone calls. Only 10 patients were sent for evaluation and hospital admission. The rest was followed by his primary care doctor. The most frequent reason for consultation with 42% was questions of interpretation of diagnostic tests, followed with 28% dyspnea in patients with chronic obstructive pulmonary disease.

CONCLUSION

With the data obtained is too early to draw reliable conclusions but it can be noted that the time has facilitated communication between professions Primary care and emergency departments, reducing uncertainty professional must make a medical decision in a short period of time optimizing of this form the medical care of the patients.

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#8125 : Review of cases of patients attended with attempted suicide in the Emergency Service of Barbastro Hospital.

Preferred format : ePoster

Authors:

Juan José Eito Cuello (1), Ana Graciela Moreno Mejia (2), Juan Alberto Magallón Puy (3), Francisco Francia Franco (4), Isabel Torres Peña (3), Beatriz Toribio Velamazán (3), César Gargallo Bernad (3), Jean Elie Marcelin (2)

1. Jefe del Servicio de Urgencias, Hospital de Barbastro, Barbastro, SPAIN
2. Servicio de Urgencias, Hospital de Barbastro, Barbastro, SPAIN
3. Urgencias, Hospital de Barbastro, Barbastro, SPAIN
4. Servicio de Urgencias, Hospital de Barbastro, Barbastro, FRANCE

Keywords: suicide, psychiatry, emergency

Abstract :

INTRODUCTION:

Suicide attempts are a diverse pathology in his presentation and potentially serious,[1] it is important early medical valuation and stabilization,[2] without forgetting the essential psychiatric medical evaluation.[3] In peripheral hospitals who do not have medical psychiatrists is essential referral to hospitals with psychiatric services for valuation.

TARGET

Describe the characteristics of patients with suicide attempts, valued at an emergency department of a peripheral hospital that does not have psychiatrist on call.

MATERIALS AND METHOD

It is a Descriptive transversal study of patients with suicide attempts who consulted the emergency department for a period of twelve months (01/01/2015 - 31/12/2015).

After having obtained a sample of 35 patients, it was proceed to a statistics analysis obtained with SPSS.

RESULTS

The average age was 44,9 years, being 66,6% of them woman.

80% of patients who made a suicide attempt was treated with a level of triage III, 46% of patients was treated at the start by a resident in the emergency department, 100% of the attention was supervised by a medical specialist.

53% of patients were transferred to a hospital that had service psychiatry. 27% were referred to Domicile and 20% requested voluntary discharge

CONCLUSION

When making the first assistance to these patients, it is noteworthy that most have a low level of triage (III) and also are valued by medical residents at first, but stresses that 100% are supervised by medical specialists.

The availability of short-stay units (units of 24 hours of observation) with capacity to serve psychiatric patients who have had suicide attempts in peripheral hospitals or have call psychiatrist could help reduce the high number of transfers to other hospitals.

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#8127 : Are patients with asthma that arrive in emergency department treated following the recommendations?

Preferred format : ePoster

Authors:

Luis Escobar y Alvaro (1), María Trenza Peñas (2), Joaquín Jimenez Gonzalez (1), María Ángeles Mayol Villescas (1), Ricardo Barragán Alarcón (1), Clara Sanchez Parra (1)

1. Emergency Department, Hospital Rafael Mendez, Lorca, SPAIN
2. Emergency Department, Hospital Juan XXII, Tarragona, SPAIN

Keywords: asthma, exacebations, treatment, inhaled corticosteroids,

Abstract :

Introduction: Asthma is a highly prevalent disease that presents commonly to the emergency department (ED) in acute exacerbation. Recent Spanish Ashtma Management Guide(GEMA) has set the management for both regular therapy, with 6 therapeutic steps, and exacerbation therapy.
Objetive: To determine whether patients with asthma treated in the emergency department for exacerbations had a previous treatment, had been treated in the emergency room, and have been discharged with treatments that followed the recomendations of the Spanish Ashtma Management Guide(GEMA)
Method: Prospective study of patients treated in emergency for exacerbation of asthma, checking pretreatment, during emergency admission and discharge fitted the guidelines.
Results: We studied 117 clinical reports of patients treated for asthma exacerbations in the ED of our Hospital during 2015. 6 patients were in the first therapeutic step, 11 in the second, 45 in the third, 37 in the fourth, 11 in the fifth, and 7 in the sixth. Only 35% of the patients were recieving treatment according to the GEMA guidelines, 23% were overtreated, and 42 were not recieving enogh treatment. In emergency admission 85% of the patients (99) were treated according to the guidelines, and 15% (18) were overtreated, with 0 patients not recieving enough treatment. 27 patients were admitted to the hospital ward. Of the 90 patients discharged, 66% were prescrieved treatment according to the guidelines, 12% were not recieving enough treatment and 22% were overtreated.

Conclusion: low compliance is found in the application of clinical guidelines in patients with asthma so it is necessary to find tools to improve the correct application of the recommendations of clinical pathways.

Naomi Petersen

#8128 : Sedation with nitrous oxide (N2O) in children, a clinical guide to implementation and use in everyday practice.

Preferred format : Oral presentation

Authors:

Naomi Petersen (1), Femke Gresnigt (1)

1. Emergency department, OLVG Amsterdam, Amsterdam, THE NETHERLANDS

Keywords: Nitrous oxide (N2O), minor procedures, children, emergency department, pediatric department, adverse events

Abstract :

Introduction – In the emergency department (ED) and pediatric department (PD), minor procedures in children are often challenging due to anxiety and lack of cooperation by the child. Nitrous oxide (N_2O) seems a suitable agent for procedural sedation (PSA). It has a rapid onset and offset, no fasting period is required and self-administration is possible. Although safety and efficacy were proven in international literature, PSA with inhaled N_2 O is only minimally used in Dutch hospitals. In this study we describe the implementation of procedural sedation with nitrous oxide in our hospital in a two year cohort.

Methods – All patients that underwent procedural sedation (PSA) with N_2O (50%) in the emergency and pediatric department were retrospectively identified. Data on patient characteristics, type of procedure, depth of sedation and adverse events were recorded. PSA was performed using standardized pre-sedation assessment, monitoring during procedure and post-sedation discharge criteria. Concomitant use of systemic analgesia was contra-indicated. All medical staff was trained according to protocol, this included theoretical background training and supervision during the first five procedures. Knowledge of advanced life support was required. PSA could be executed by a well-trained nurse without supervision of a doctor.

Results – During 2014 and 2015, 202 patients received PSA with inhaled N_20, 48 patients were excluded due to missing data. 154 patients were included in this study. These were 86 boys and 68 girls with a mean age of 6,6 years (SD 3.9 years). Sedation was successful in children from the age of two years old. Procedures in which sedation was used; wound care (N=106), venous access (N=25), reduction of fracture (N=15), lumbar puncture (N=4), the administration of a plaster cast (N=2) and placement of a urine catheter (N=2).

97,4 percent of children had an ASA classification score of one. Mean duration of procedure was 17 minutes (SD 9,8 minutes).

Most reported side effect was laughing (N=57).There were no reported major adverse events. There were 16 reported cases in which comfort and suppression of anxiety during PSA were inadequate and the patient was uncomfortable during the procedure. There were seven reported cases in which the procedure could not be successfully completed. One procedure had to be aborted due to malfunction of equipment. The other six procedures included; stitching of wounds to the face (N=3), placement of a urine catheter (N=2) and reduction of an incarcerated inguinal hernia (N=1). These procedures are known to be unpleasant and painful, especially in young children.

Conclusion– Sedation with nitrous oxide is safe, feasible and effective for both patient and medical staff in minor procedures in the emergency and pediatric department. In the vast majority (96.1%), sedation was successful. In more painful procedures, sedation without concomitant analgesia proved to be inadequate (N=6) and procedures could not be completed. For this reason the use of concomitant systemic analgesia with opiates was included in our protocol in 2016. Implementation of procedural sedation with N_2O requires adequate training of medical staff and a close collaboration between the emergency and pediatric department.

#8131 : Development of compartment syndrome in post resuscitation period: an unusual complication of carbon monoxide poisoning

Preferred format : Oral presentation

Authors:

Dinka Lulic (1), Ivan Gornik (1), Anita Lukic (2), Mirjana Miric (3), Nina Cvjeticanin (3), Boris Tomasevic (3), Ileana Lulic (3)

1. Department of Emergency Medicine, University Hospital Centre Zagreb, Zagreb, CROATIA
2. Department of Anaesthesiology, Reanimatology and Intensive Care Medicine, General Hospital Varazdin, Varazdin, CROATIA
3. Department of Anaesthesiology, Reanimatology and Intensive Care Medicine, University Hospital Centre Zagreb, Zagreb, CROATIA

Keywords: Compartment syndrome; Post resuscitation period; Carbon monoxide poisoning

Abstract :

Purpose of the study: Carbon monoxide (CO) poisoning is a significant cause of morbidity and mortality worldwide. CO is a colorless, odorless, nonirritating, toxic gas produced by the incomplete oxidation of hydrocarbons. CO poisoning is associated with ischaemia/reperfusion injury and systemic circulation of inflammatory cytokines, which can increase capillary permeability and visceral oedema, ultimately resulting in distant organ injury and development of compartment syndrome. Therefore, CO poisoning constitutes momentous diagnosis in patients admitted to Emergency Departments (ED) and Intensive Care Units (ICU). We report a case of out of hospital cardiac arrest (OHCA) survivor after CO poisoning who developed an atraumatic compartment syndrome of the left lower leg. **Case report:** A 32-year-old female was admitted to our Institution's Emergency Department (ED) after OHCA due to CO poisoning. Pre-hospital medical records revealed initial rhythm of asystole that progressed to ventricular fibrillation. Further on the field, she was defibrillated two times, with the return of spontaneous circulation after 30 minutes of advanced-life-support measures being performed. Upon the arrival to the ED, the patient was analgo-sedated, intubated, and mechanically ventilated. Neurological examination revealed GCS 7 (E2, V1, M4), equal pupils (mydriasis), reacting sluggishly to light, and equal left and right motor response. Initial laboratory results conceded of HbCO 33%, pH <6.80, lactate >20, and undetectable pCO_2, HCO_3 and BE values. In the post-resuscitation period therapeutic hypothermia was maintained for 24 hours. CT angiography demonstrated deep venous thrombosis of right vena poplitea, together with narrowing of left popliteal artery. Therefore, an atraumatic isolated left lower leg compartment syndrome was suspected. Extended laboratory results showed high concentrations of myoglobin (59660), creatine kinase (48469), and troponin T levels (765). The treatment included fasciotomia of the left lower leg, and hyperbaric oxygenation. The patient was discharged from our institution two months after initial assessment to another facility for further treatment, which consisted of multidisciplinary management of various medical specialists. **Conclusions:** The diagnosis of compartment syndrome requires a high index of suspicion, especially in OHCA survivors, with altered consciousness levels that confound the neurological examination, since it may lead to a vicious cycle that increases morbidity and mortality.

#8132 : Comparison of two scores in the rule out of cardiac cause of syncope in the emergency department

Preferred format : Oral presentation

Authors:

ines chermiti (1), Hanen Ghazali (1), Ahmed Souyah (1), Anware yahmadi (1), Aymen Zoubli (1), syrine keskes (1), noura ngach (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA

Keywords: syncope, tools, emergency department

Abstract :

Introduction:

Syncope is a major health care problem that accounts for many emergency departments (ED). Physicians' approaches to this condition are varied due to lack of methodical approach. The challenge for the emergency physician is to distinguish between cardiac and non-cardiac syncope. Scores are designed to simplify hospitalization decision. The Evaluation of Guidelines in Syncope Study (EGSYS) score and the San Francisco Syncope Rule (SFSR) score are developed to determine patients with syncope of a cardiac cause.

Objective: The aim of our study was to compare the SFSR and the EGSYS scores in the exclusion of cardiac syncope in ED.

Methods:

Prospective, observational study over 4 years. Inclusion of adult patients admitted to the ED with a diagnosis of syncope. Exclusion criteria: no consent, neurological deficit suggestive of stroke, previous recruitment into the study, collapse related to alcohol consumption, trauma, or seizure activity. A physical examination, an electrocardiogram (ECG) and an orthostatic hypotension test were performed. All patients were explored in the cardiac unit. The final cause of the syncope has been determined after investigations. Patient's management was based on the EGSYS and SFSR score. We compared the two scores using the ROC method.

Results:

Inclusion of 168 patients. Mean age: 52 ± 20 years. Sex ratio=1.62. No medical history was observed in 65 patients (39%). Thirty four patients (20%) had a previous syncope. ECG was normal in 53% of patients.

EGSYS≥3 was found in 44% of cases.
The specificity, sensitivity, positive predictive value (PPV), negative predictive value (NPV) and negative likelihood ratio of EGSYS score were: 73, 70, 55, 84% and 0, 38 respectively. The Area under the curve (AUC) was equal to 0,715; p<0,001; 95% IC [0,828-0,902].

SFSR score was positive in 50% of patients. The specificity, sensitivity, PPV, NPV and negative likelihood ratio of SFSR score were: 64, 77, 52, 84% and 0, 41 respectively. AUC was equal to 0,705; p<0,001; 95% IC [0,619-0,791].

Conclusion:

The EGSYS and SFSR score had good NPV. Outpatient monitoring can be considered if these scores are negative. The EGSYS score seems more performant to rule out of cardiac cause in syncope.

#8133 : Improving the governance of patient safety in emergency care: a systematic review of interventions.

Preferred format : Oral presentation

Authors:

Gijs Hesselink (1), Sivera Berben (2), Thimpe Beune (2), Lisette Schoonhoven (3)

1. Eastern Regional Emergency Healthcare Network, Radboud University Medical Centre, Nijmegen, THE NETHERLANDS
2. Eastern Regional Emergency Healthcare Network, Radboud Univeristy Medical Centre, Nijmegen, THE NETHERLANDS
3. Faculty of Health Science, University of Southampton, Southampton, UK

Keywords: patient safety, incident reports, walk a round, systematic review, reliability and validity, patient safety interventions, governance

Abstract :

Background

Executives of emergency healthcare services (EMS) are increasingly held accountable for patient safety, because emergency care involves high patient safety risks. Care is often delivered to high-acuity patients with unstable vital signs in a fast-paced setting under unpredictable conditions. Also, patient handovers between ambulance, helicopter EMS and the emergency department (ED) involve miscommunication and adverse events. Executives have a fundamental governance role in overseeing and managing safety risks within their service. However, insight in validity, reliability and feasibility of interventions that aim to improve the governance of patient safety within emergency care organizations is lacking.

Methods

We performed a systematic review of the literature. PubMed, EMBASE, Cumulative Index to Nursing and Allied Health Literature, the Cochrane Database of Systematic Reviews and PsychInfo were searched for studies published between January 1990 and July 2014. We included studies evaluating interventions relevant for higher management to oversee and manage patient safety, in prehospital emergency medical service (EMS) organisations and hospital-based emergency departments (EDs). Two reviewers independently selected candidate studies, extracted data and assessed study quality. Studies were categorised according to study quality, setting, sample, intervention characteristics and findings.

Results

Of the 18 included studies, 13 (72%) were non-experimental. Nine studies (50%) reported data on the reliability and/or validity of the intervention. Eight studies (44%) reported on the feasibility of the intervention. Only 4 studies (22%) reported statistically significant effects. The use of a simulation-based training program and well-designed incident reporting systems led to a statistically significant improvement of safety knowledge and attitudes by ED staff and an increase of incident reports within EDs, respectively.

Conclusion

Characteristics of the interventions included in this review (eg, anonymous incident reporting and validation of incident reports by an independent party) could provide useful input for the design of an effective tool to govern patient safety in EMS and EDs. However, executives cannot rely on a robust set of evidence-based tools to govern patient safety within their emergency care organization. Established strategies from other high-risk sectors need to be evaluated in emergency care settings, using an experimental design with valid outcome measures to strengthen the evidence base.

#8134 : 3-year review of unexpected deaths in a tertiary care emergency department: opportunities for improvement

Preferred format : Oral presentation

Authors:

Melissa McGowan (1), Conor Lavelle (2), Alina Toma (3)

1. Emergency Medicine, St. Michael's Hospital, Toronto, CANADA
2. Emergency Medicine Residency Program, University of Toronto, Toronto, CANADA
3. Emergency Medicine, St. Michael's Hospital, University of Toronto, Toronto, CANADA

Keywords: Resuscitation; Quality; Patient Safety

Abstract :

Introduction. The emergency department (ED) is a bustling, chaotic environment creating a milieu that poses a serious risk to patient safety. While clinical deterioration needs to be recognized early, supported by a timely response to optimize clinical outcomes, ED boarding places patients in a vulnerable position where the emergency physician (EP) may not be familiar nor the most responsible physician, thereby creating an error-producing perfect storm when called to the bedside of critically ill, deteriorating patients. We sought to describe ED deaths of patients who were stable upon ED presentation as part of a larger quality improvement and patient safety “code resuscitation” initiative.

Methods. A 3-year (March 2013-March 2016) retrospective review of deaths in the ED was conducted at a single, tertiary care centre. Patients were identified through the Emergency Department Information System. Inclusion criteria were: >18years, Canadian Triage Assessment Score (CTAS) 2-5 at presentation, non- and boarded admitted patients in the ED with a departure location of morgue. CTAS 1 was excluded as these represent the most unstable population requiring immediate resuscitative efforts. Clinical, demographic and administrative data were extracted with 10% of charts independently reviewed by a staff Emergency Physician for inter-rater reliability. Outcomes were time-based from triage.

Results. 38 cases met criteria, 35 were assessed by an emergency physician and 3 were direct to service. Mean age 80.8 years (53-99), 22 (58%) males, 34 (89%) arrived by EMS. 37 (97%) were CTAS 2 with 34 (89%) triaged to “major” clinical treatment area. From triage, mean time to RN Assessment was 0:24hr (0:00-2:53hr) and EP Initial Assessment was 0:56 hr (00:00-5:22hr). Code status was documented in 36 (95%) charts: full code (6, 16%), DNR (30, 79%). 25 cases (66%) had a consult, with 14 (56%) having one consult, 9 (36%) two consults, and 1 (4%) had 3 consults. GIM (n=11, 44%) was most common initial consult service; 5 (20%) had ICU as their first consult, and 3 (12%) as second consult. 27 (71%) were admitted to a service at time of death in the ED, in which EPs documented being called to bedside for peri- or arrest care. Average time-to-death (ED LOS) was 6:05hr (0:45-22:00hr).

Discussion. Early recognition, timely response and optimal management of acutely, deteriorating patients is paramount in determining outcome. Despite a significant amount of work developing rapid response systems to improve morbidity and mortality in a variety of settings and support early identification for those at risk of clinical deterioration, none have been shown to be effective in the ED. While developing interdepartmental processes to support patient flow is fundamental to address ED boarding, implementing a protocol-driven system for goal-directed intervention through a "resuscitation huddle" in the ED has the potential to mobilize multidisciplinary resources and care earlier in the clinical course thereby potentially impacting mortality.

#8135 : Feasibility of a prospective risk analysis to improve patient safety in the chain of emergency care, a pilot study.

Preferred format : Oral presentation

Authors:

Marie-Jose Litjens (1), Sivera Berben (2), Gijs Hesselink (3), Karin van den Berg (3), Miranda Dirx (4), Lisette Schoonhoven (5)

1. Proces and Innovation Department, Radboud University Medical Centre, Nijmegen, THE NETHERLANDS
2. Eastern Regional Emergency Healthcare Network, Radboud Univeristy Medical Centre, Nijmegen, THE NETHERLANDS
3. Eastern Regional Emergency Healthcare Network, Radboud University Medical Centre, Nijmegen, THE NETHERLANDS
4. Limburg Emergency Healthcare Network, Maastricht University Medical Centre, Maastricht, THE NETHERLANDS
5. Faculty of Health Science, University of Southampton, Southampton, UK

Keywords: prospective risk analysis, patient safety, emergency care

Abstract :

Background

Patient safety is an important issue in emergency medicine. However, patient safety management is mainly focused on the care within the emergency department (ED), although safety risks are known to take place in the chain of emergency care. For instance problems in the handovers of emergency care occur in safety incident reports of the general practitioner (GP) practice, ambulance emergency medical services (EMS) and other departments in the hospital. However, these reports are retrospectively focused, and insight in underlying causes is usually lacking. In this pilot study we explored the feasibility of a prospective risk analysis (PRI) in the chain of emergency care from the perspective of professionals, managers and board members.

Methods

The pilot was performed in two emergency regions (provinces) in the Netherlands. Professionals of the emergency GP practice, EMS, ED and neurological department were included. We developed a protocol for the PRI process in the chain of emergency care, based on the health failure mode and effect analysis (HFMEA-light) method. The HFMEA-light method provides insight in safety risks of a care process or a chain of care through a systematic assessment. Furthermore, we developed criteria for the selection of a care process that needs a safety risk assessment. An independent health policy advisor, with ample experience in facilitating PRI within hospitals, guided the PRI process in the (pre)hospital working group. We defined evaluation criteria for professionals, managers and board members of the participating organizations, as patient safety is a responsibility for each of them in a different role.

Results

We performed a PRI focused on changes in the Dutch national guideline for the emergency treatment of patients with a cerebro vasculair accident (CVA), and a PRI focused on handover of medication (errors) in the chain of emergency care. Professionals of the GP, EMS, ED, radiology and neurology identified 14 patient safety risks in the CVA emergency care chain and 15 risks around medication handover. Risks were related to: inadequate or different education of professionals (knowledge and expertise), lack of ICT facilities and hampering communication between ICT systems, lack of synchronization of protocols in different organizations, miscommunication in oral and written handovers, lack of qualified staff for adequate performance of emergency care. The participants formulated a mutual plan for the improvement of patient safety, as part of the method. Professionals, managers and board members reported that the PRI was a useful and practical method, that contributed to a constructive improvement of patient safety (management) in the chain of emergency care. The PRI method connected well with the professional knowledge and expertise (intrinsic motivation) of the participants and improved the patient safety culture, when preconditions on confidentiality and mutual trust were met .

Conclusion

The PRI method provides prospective insight in safety risks in the chain of emergency care. It is a feasible method to improve patient safety (culture) in the chain of emergency care, and professionals, managers and board members reported additional value of the method, with regard to others (retrospective) methods in use.

#8136 : Ischemic heart failure associated with severe anemia

Preferred format : ePoster

Authors:

majed kamel (1), abderrahim achouri (2), Khedija Zaouche (3), Hamida Maghraoui (3), Jobrane Mansouri (3), Chokri Hammouda (3), nebiha Falfoul Borsali (3)

1. emergency departement of la rabta teaching hospital, univeristy of MANAR I, tunis, TUNISIA
2. emergency department of la RABTA, university tunis el MANAR, tunis, TUNISIA
3. EMERGENCY DEPARTMENT OF LA RABTA teaching hospital, University of MANAR I, tunis, TUNISIA

Keywords: anemia, heart failure, acute coronary syndrom

Abstract :

INTRODUCTION

Severe anemia is associated with high risk cardiovascular mortality. Through the sympathetic response to the decrease of oxygen delivery, the heart structure will change and an inflammatory myocardial damage will occur if the anemia is not treated enough early. Megaloblastic anemia due to thiamin or folate deficiency had specific pathophysiology and so specific therapy which we will elucidate through this case report.

THE CASE

A 63 three year-old women was admitted in the emergency department because of a severe respiratory distress associated with chest pain. The initial finding confirmed a congestive decompensated heart failure with evidence of myocardial necrosis as attested by an elevated troponines amount. Furthermore, there was a severe megaloblastic anemia with a hemoglobin amount of 2.1 g/l and a mean cell volume of 120 fl. The situation was improved after a transfusion and diuretic therapy with ventilatory support. The patient was admitted to cardiology ward and further tests were performed in order to investigate the etiology of the anemia and the heart failure.

CONCLUSION

Anemia must be treated and explored without delay especially when is associated with heart disease.

#8137 : Drug anaphylaxis in an emergency department: epidemiology, clinical features and management

Preferred format : Oral presentation

Authors:

mouna gammoudi (1), Hanen Ghazali (1), wided Bousselmi (1), Anware yahmadi (1), syrine keskes (1), Mohamed Mguidich (1), ahlem azouzi (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA

Keywords: anaphylaxis, drug, emergency department

Abstract :

Background:

Anaphylaxis is a serious allergic reaction that is rapid in onset and may cause death. There are few data on the incidence, clinical features and management of patients with acute anaphylaxis presenting to emergency department (ED). Studies report that anaphylaxis was under-diagnosed in ED and emergency management was often in disagreement with international recommendations.

Objective: Describe the epidemiology, clinical features, management and outcome of patients with drug anaphylaxis.

Methods:

Prospective, monocentric study over four years. Inclusion criteria: patients aged over 14 years presenting consecutively to ED with the diagnosis of drug anaphylaxis. Collection of epidemiological, clinical and therapeutic parameters.

Results:

Inclusion of 147 patients. Mean age = 40±14 years. Sex-ratio=0, 8. A history of anaphylaxis was reported in 56% of cases. The median time to consult the ED was 90 minutes, with extremes ranging from 5 minutes to 26 hours. Antibiotics were the most represented drug class among drug allergens (n = 93; 63%), the most incriminated were the penicillins (n=77; 83%). Cutaneous features were present in 95% of patients. Cardiovascular, respiratory, gastrointestinal and neurologic features were found respectively in 64, 45, 21 and 2,7%. An anaphylactic shock was recorded in 56 patients (38%). Anaphylaxis was moderate grade in 136 patients (92%).

Adrenaline was used in 86%of patients, intravenously in 38%. The total median dose of adrenaline was 40 micrograms with extreme dose ranging from 10 to 1400 micrograms. Fluid resuscitation was given to half of the patients. Seventy two patients (52%) received histamine H1 antagonist, 98% corticosteroids. Nighty-nine percent of patients were discharged directly from ED after a mean period of observation as 6 hours. Biphasic reactions were reported in two patients. There was no death cases registered. Patients were all referred to the allergy clinic.

Conclusion:

Identifying the characteristics of drug anaphylaxis presentation to ED and its risk factors helps to improve the diagnosis of this medical emergency and suggest the necessity of a standardized guideline for anaphylaxis management in ED.

#8138 : Non-Invasive Ventilation for acute hypoxic and hypercapnic respiratory failure: determinants of in-hospital mortality

Preferred format : Oral presentation

Authors:

Simona Gualtieri (1), Laura Giordano (1), Arianna Gandini (1), Lucia Taurino (1), Chiara Gigli (2), Francesca Innocenti (1), Riccardo Pini (1)

1. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY
2. Emergency Department High Dependency Observation Unit, Careggi University Hospital, Florence, ITALY

Keywords: Acute respiratory failure; non-invasive ventilation; prognosis

Abstract :

OBJECTIVES: To determine the in-hospital outcome and the factors associated with a prolonged treatment (<48 hours) in a group of patients with acute respiratory failure (ARF), treated with noninvasive ventilation (NIV).

METHODS: This was a retrospective study including all patients with ARF requiring NIV over a eleven-month period, admitted in an Emergency Department High-Dependency Observation Unit (ED-HDU). Clinical data were collected at baseline, 1 hour, and 24 hours; Sequential Organ Failure Assessment (SOFA score) was calculated with the worst clinical parameters during the first 24 hours. The patients were classified into 2 groups: acute hypoxic respiratory failure (ARF1) and acute hypercapnic respiratory failure (ARF2). The primary outcome was in-hospital mortality.

RESULTS: During the study period (April, 2015-March, 2016), 150 patients underwent NIV; in 59 patients NIV was maintained beyond 48 hours and in-hospital mortality was 22% (including 7% ED-HDU mortality); only 1 patient was intubated during ED-HDU staying. Persistence of hypoxia (PaO_2 /FiO_2<200) 1 hour (59 vs 38%, p=0.029)and 24 hours (65 vs 35%, p=0.012) after NIV beginning, tachypnea (RR>29 per minute) at 1 hour evaluation (30 vs 10%, p=0.017) and a depressed level of consciousness (Glasgow Coma Scale, GCS<15) at all evaluation points(before NIV 46 vs 25%; 1 hour: 48 vs 22%; 24 hours: 41 vs 20%, all p<0.05) were more frequent in non-survivors compared with survivors. Persistence of acidosis (pH<7.30) and tachypnea at 24-hour evaluation were more frequent in patients who underwent NIV beyond 48 hours (respectively 10 vs 1% and 20 vs 5%, all p <0.05).

ARF1 group included 101 patients (67%) and ARF2 49 (33%). Mean age was similar in the two groups (77±13 vs 79±9 years, p=NS), while ARF1 patients showed a higher SOFA score than ARF2 (4.6±2.4 vs 3.3±1.8, p=0.036). NIV was considered the ceiling treatment in 26 (26%) ARF1 and in 11 (22%) ARF2 patients (p=NS). In-hospital mortality was 28% among ARF1 and 9% among ARF2 patients (p=0.005); all but one ARF2 non-survivors and 17/28 ARF1 non-survivors underwent NIV as ceiling treatment. Among ARF1 patients, non survivors showed more frequently than survivors persistence of tachypnea at 1-hour and 24-hour interval (respectively 33 vs 9% and 36 vs 7%, all p<0.05); a 1-hour reduced GCS (46 vs 24%, p=0.05) and hypoxemia at 24-hour interval (71 vs 45%, p=0.063) only tended to be more frequent. No parameter significantly predicted NIV prolonged duration. Among ARF2 patients, only an altered level of consciousness at 1-hour and 24-hour interval was significantly more frequent among non-survivors than survivors (respectively 67 vs 18% and 67 vs 15%, p<0.05); a reduced GCS before NIV beginning and at 24-hour interval was more frequent among patients undergoing NIV beyond 48 hours (37 vs 9% and 33 vs 5%, all p<0.05).

CONCLUSIONS: In this experience reported from a real clinical scenario, mortality rate was comparable with previous reports despite the presence of a significant proportion of patients undergoing NIV as ceiling treatment. Among ARF1 patients, who showed the highest mortality, persistence of tachypnea despite NIV implementation was the most significant predictor of a bad outcome.

#8139 : Emotional experience of families in the aftermath of an admission in the emergency department

Preferred format : ePoster

Authors:

ajala lobna (1), maghraoui hamida (2), KILANI MOHAMED (2), Kallel mohamed amine (2), achouri abderrahim (1), mghirbi abdelwaheb (2), Majed Kamel (3), zaouche khedija (2), hamouda chokri (2), borsali falfoul nebiha (2)

1. Emergency Departement of La Rabta Teaching Hospital, UNIVERSITY OF MANAR I, Tunis, TUNISIA
2. Emergency Departement of La Rabta Teaching Hospital, UNIVERSITY OF MANAR I, tunis, TUNISIA
3. Emergency Departement of La Rabta Teaching Hospital, Unversity of Manar 1, Tunis, TUNISIA

Keywords: Emotional experience, families, admission, emergency department

Abstract :

Introduction:

Emergency departments' hospitalizations are no planned and unexpected. Patients and families are exposed to a major overlooked emotional stress.

The objective of this study was to identify the emotional impact of hospital emergency department hospitalizations in the families and its variability based on demographic and medical characteristics of each.

Method: prospective cross-sectional study based on an evaluative hetero Questionnaire (Scale of differential emotions by Izard et al) given to families of patients hospitalized in emergency observational unit.

Results:

Our survey was conducted among 105 parents' patients. We retained 100 records. 61% of cases were women. The average age was 45 years, 69% were aged between 20 and 60 years. 15% of patients had no medical past history. 31% of patients had been previously hospitalized in an emergency department.

92% of parents expressed negative emotions, 83% were sad, 88% had depression's feelings. 70% of the attendants were afraid, the fear was described as very serious, 40% cited anger as the main reaction reported as extreme in 25%. 90% of accompanying persons whose parents had heart disease expressed a strong sense of fear. 82% of patients hospitalized for the first time had reported concern. The lack of information was considered the basis of 93% of emotions.

Conclusions:

According to the survey, the lack of information was the cause of emotions. We need more interest in communication with families and patients hospitalized in the emergency department, the emotional stress would be better managed.

#8140 : Using medical secretaries to relieve clinicians from administrative tasks at a swedish emergency department

Preferred format : ePoster

Authors:

Michele Demir (1), Isabella Diaz Erazo (1), Lena Berg (1)

1. Department of Emergency Medicine Solna, Karolinska University Hospital, Stockholm, SWEDEN

Keywords: Emergency Department, Clinicians, Work load, Routines, Administrative tasks, Relieve, Focus on patients, Medical secretary.

Abstract :

Emergency department work is permeated by a high work load and work pace and emergency department clinicians (nurse assistants, registered nurses and physicians) need to prioritize between the assignments they are conducting. Due to the strained work situation at the emergency department at Karolinska University Hospital in Stockholm, Sweden the present work routines were analyzed in order to identify if and how the work procedures could be optimized. During this inventory it was found that a lot of administrative tasks were performed by the clinicians, time that would have been better spent delivering direct patient care.

The aim with this project was to relieve the clinicians so that they could focus on their main assignment, patient care, by distributing administrative tasks to the profession best suited for conducting these assignments. Medical secretaries were identified to be the most suitable profession for handling administrative tasks since they already have the experience of working administratively.

During a limited period of time, a medical secretary was based at the hub of one medical section in the emergency department, close to both clinicians and patients. Thus, the medical secretary could assist medical staff when needed by performing several administrative assignments. Examples of such assignments were: handling incoming phone calls, documenting vital signs in the patients' electronic medical record, handling referrals and patient charts and answering questions from both patients and their relatives. The test was evaluated after each shift and all clinicians filled in a questionnaire. On the question "How did you experience to have a medical secretary present at your medical section during your shift?" did 72% answer "excellent" and 19 % "very good". The clinicians expressed that they felt relieved in their work strain and the working process became more efficient which in turn contributed to a better work environment. Further, the clinicians also experienced that they had more time to deliver patient care. The intention is to implement this working routine as a permanent solution.

#8141 : Governance of patient safety in emergency care: a mixed-methods study of emergency care services in the Netherlands

Preferred format : Oral presentation

Authors:

Gijs Hesselink (1), Sivera Berben (2), Miranda Dirx (3), Karin van den Berg (1), Lisette Schoonhoven (4)

1. Eastern Regional Emergency Healthcare Network, Radboud University Medical Centre, Nijmegen, THE NETHERLANDS
2. Eastern Regional Emergency Healthcare Network, Radboud Univeristy Medical Centre, Nijmegen, THE NETHERLANDS
3. Limburg Emergency Healthcare Network, Maastricht University Medical Centre, Maastricht, THE NETHERLANDS
4. Faculty of Health Science, University of Southampton, Southampton, UK

Keywords: Patient safety, governance, mixed-methods, qualitative study

Abstract :

Background:

Executives of emergency healthcare services (EMS), such as Helicopter EMS, ambulance EMS and the emergency department (ED), have a fundamental governance role in overseeing and managing safety risks, because they are accountable for the overall quality and safety of healthcare their services provide. In the last decade, attention for the responsibility of executives towards patient safety has rapidly increased. This attention is stimulated by the crucial role executives have in the implementation of quality and safety improvement programmes, and by multiple patient safety incidents with great societal impact and directly related to poor governance. However, insight into the governance of patient safety within high-risk emergency care settings and the chain of emergency care is scarce. This study explores the factors that hinder executives in overseeing and improving safety risks within their own EMS, and in the chain of pre-hospital emergency care.

Methods:

A mixed-methods study was performed in two Dutch regional emergency healthcare networks covering a large part of the southeast Netherlands (provinces Gelderland and Limburg). In the Netherlands, pre-hospital emergency care is provided by General Practitioners (GPs), GP Out of Hours Service, EDs, ground-based ambulance and helicopter EMS and Psychiatric EMS. The Dutch EMS system operates on a variation of the Anglo-American model of EMS care. We performed 28 in-depth interviews with executives from different EMS organisations. The interviews lasted between 40 and 70 minutes and followed a semi-structured format using an interview guide. The guide was based on patient safety and governance literature, the input from experts (n=10) in the field of emergency care, public administration and patient safety, and brainstorm sessions with the research team. A pilot interview with the director of a regional emergency healthcare network was conducted to pre-test and refine the interview guide. Interviews were digitally recorded and transcribed verbatim. Transcripts were analysed based on the Grounded Theory approach. Furthermore, we collected and analysed relevant documents, such as annual reports, board minutes, policy statements, protocols and work instructions, to identify governance activities.

Results: Executives are satisfied with the governance of patient safety within their service. However, the professional autonomy often seems to conflict with the need of executives to be accountable for patient safety. Risk oversight and management are hindered by: the provision of care out of the executives' sight, inadequate tools to measure or assess safety risks and fear amongst staff for the negative consequences of incident reporting. Many services lack a reliable organisation of up-to-date and easy accessible safety protocols. Governance within the chain of emergency care is hindered by conflicting interests and safety norms between services, the absence of an administrative authority and lack of appropriate risk identification tools.

Conclusions: Important safety risks within pre-hospital emergency care may be unnoticed and unmanaged by executives due to: inadequate risk monitoring, absence of a reporting culture and the lack of a shared sense of responsibility among executives for patient safety in the chain. Improvements should focus on these aspects as primary conditions for improving the governance of patient safety within emergency care.

#8142 : Assessment of fluid responsiveness in the critically ills: which role for echocardiography?

Preferred format : Oral presentation

Authors:

Caterina Savinelli (1), Salvatori Mattia (1), Federico Meo (1), Alessandro Coppa (1), Francesca Innocenti (2), Riccardo Pini (2)

1. Emergency Department High Dependency Observation Unit, Careggi University Hospital, Florence, ITALY
2. Emergency Department High Dependency Observation Unit, University-Hospital Careggi, Florence, ITALY

Keywords: Fluid responsiveness; vena cava collapsability index; passive leg raising test.

Abstract :

Background: Volume expansion is a key component of therapy in critically ill patients, although its effect is difficult to predict using conventional measurements. Dynamic parameters, evaluated by echocardiography, have demonstrated a good diagnostic accuracy in several studies, but conflicting results have been reported. Aim of this study was to examine the feasibility and diagnostic accuracy of vena cava collapsibility index (VCCI) and velocity time integral variation after passive leg raising (PLR) in an unselected population of critically ill patients admitted to a sub-intensive clinical setting.

Methods: This is a prospective, observational, pilot study. Unselected critical patients admitted in an Emergency Department High-Dependency Unit (ED-HDU) were evaluated by transthoracic echocardiography to measure vena cava collapsibility index (VCCI) and aortic velocity (AoV) variation during PLR. According to VCCI, patients were considered fluid-responders when the value was ≥50%, non-fluid responders when the collapse was <10% and indefinite response for intermediate values. According to AoV variation after PLR, a positive hemodynamic response was defined as an increase in AoV ≥ 10%. Whenever possible, both VCCI and AoV variation during PLR were evaluated. According to echocardiographic evaluation, three therapeutic options were considered: no intervention, administration of fluids or diuretics. Any change in the therapeutic strategy by the treating physician in the following 12 hours was annotated into the clinical records.

Results: we enrolled 29 patients, mean age 75±13 years; the two most frequent reasons for ED-HDU admission were sepsis (69%) and COPD re-exacerbation (14%). VCCI was feasible in 25 (86%) patients, while PLR could be performed in 13 (45%, p=0.004). According to VCCI, 11 (38%) patients were fluid-responder, 7 (24%) were non fluid-responders and in 7 patients VCCI showed an intermediate value; PLR was concordant with VCCI in 7 patients and it gave a diagnostic result in 6 patients in whom VCCI was not feasible or not diagnostic. According to the echocardiographic evaluation, 6 patients did not receive any treatment, 16 were treated with fluids and 7 with diuretics: the therapeutic option was maintained for the following twelve hours in 23 patients, while it was modified in the remaining 6 patients. This group of patients have been evaluated only by VCCI; 3 of them were fluid-responders, 2 non fluid-responders and 1 in the intermediate group. In these patients left ventricular systolic function was slightly depressed (left ventricular ejection fraction 47±9 vs 54±17% in the remaining patients) and lactate dosage was normal (1.3±0.7 vs 2.4±3.6 mEq/L): these differences were not statistically significant, probably in part as a consequence of the limited population size, and need to be confirmed in a larger study group.

Conclusions: VCCI appears to be very feasible in an unselected population of critically ill patients; the proportion of patients with an indefinite value, who need a further evaluation, is not negligible as well as the proportion of patients in whom the therapeutic option based on VCCI measurement had to be modified in the following hours. PLR has a limited feasibility but it shows a very good diagnostic performance.

#8143 : GHB/GBL/1,4BD overdose: a case series and implementation of a new management protocol

Preferred format : ePoster

Authors:

Mark Haden (1), Paul Dargan (2), John Archer (2), David Wood (2)

1. Emergency Department and Clinical Toxicology, Guy's and St Thomas' NHS Foundation Trust, London, UK
2. Clinical Toxicology, Guy's and St Thomas' NHS Foundation Trust, London, UK

Keywords: GHB, GBL, 1,4BD

Abstract :

Introduction

Gamma-hydroxybutyrate (GHB), gamma-butyrolactone (GBL) & 1,4-butanediol (1,4BD) are recreational drugs which in toxicity can cause sedation and a reduced conscious level. There is a high incidence of GHB/GBL/1,4BD use within the catchment area of St Thomas' Hospital, London (approximately 250 cases/year). Most patients recover completely and spontaneously within 2 to 4 hours without significant intervention and are suitable for discharge direct from the Emergency Department (ED). While a small number of patients may require endotracheal intubation to prevent pulmonary aspiration and maintain adequate ventilation, previous case series have demonstrated very low rates of complications in patients with acute toxicity who are managed conservatively alone (without definitive airway protection).

There are currently no national or international guidelines for the management of patients presenting with acute GHB/GBL/1,4BD toxicity and there is the possibility that these patients may undergo unnecessary interventions and investigations. We conducted a retrospective review of a cohort of patients attending our Emergency Department with acute GHB/GBL/1,4BD toxicity to assess the variation in management of these patients with particular reference to the documented indications for intubation and CT brain.

Methods

Consecutive patients presenting to the ED at St Thomas' Hospital, London, with acute GHB, GBL or 1,4BD toxicity from May-July 2015 were identified from admission records. Patients were included if they self-reported or there was a collateral history of GHB/GBL/1,4BD use. A retrospective case note review was then conducted and documented indications for intubation and/or CT brain were recorded. No analytical confirmation of GHB/GBL/1,4BD use was carried out.

We proposed that acceptable indications for endotracheal intubation were GCS ≤8 and any of: vomiting or signs of aspiration, severe respiratory acidosis (pCO_2 ≥7.5), recurrent seizures (≥2) requiring use of benzodiazepines, in order to facilitate safe transfer or no improvement in GCS after 2hrs observation. Acceptable indications for CT brain were reduced GCS and any of: concomitant head injury, signs of focal neurology/posturing or one or more seizures.

Results

60 patients attended with GHB/GBL/1,4BD toxicity during the study period. 23 patients (38.3%) had an initial GCS≤8. Thirteen patients (21.7%) underwent intubation and sixteen (26.7%) had a CT brain; twelve patients (20%) had both. The documented indications were deemed sufficient in five patients (38.5%) who underwent intubation and in four (25.0%) who underwent a CT brain. All patients who met the criteria for intubation or CT brain were treated appropriately. Intubated patients were extubated after a mean time of 7hrs 9mins (range 45mins to 14hrs 12mins; standard deviation 3hrs 53mins). Two intubated patients (15.4%), who had both vomited prior to intubation, were treated for aspiration and none of the patients who had conservative airway management had any complications. No patients had an abnormal CT brain.

Conclusions

A high proportion of patients in our cohort underwent intubation and/or CT brain and it is possible that some of these may have been avoidable. A new trust guideline and decision-making algorithm for the management of patients with overdose of GHB/GBL/1,4BD was implemented based on the indications for intubation and CT brain listed above.

#8144 : Assessment of community acquired pneumonia with fine's score and a radiological score

Preferred format : Oral presentation

Authors:

Majed Kamel (1), Kallel Mohamed Amine (1), Zaouche Khedija (1), Baccouche Ramla (1), Khelil Mohamed Hassene (1), Maghraoui Hamida (1), Modhafer Mohamed (1), Hammouda Chokri (1), Borsali Nebiha (1)

1. Emergency department of La Rabta teaching hospital, University of Manar I, tunis, TUNISIA

Keywords: Community acquired pneumonia , Fine score , Radiological score, emergency department

Abstract :

Introduction: Community acquired pneumonia (CAP) is a frequent leading cause of hospital admission worldwide. Through this study we investigate the accurancy of Murray radiological score (RS) associated to Fine score (FS) as a triage tool for CAP in the emergency department.

Methods: a prospective observational study including patients admitted in an emergency department of a general teaching hospital for a CAP. FS and RS were calculated on admission and we analysed the rate of hospitalization and outcome at 30 days and analysed the correlation between the two scores. Statistical analysis were based on Chi 2 test with significant statistical difference (SSD) if $p < 0,05$.

Results: 174 CAP, 104 men and 70 women, mean age = 57,5 ± 17,7 years. RS was 3 ± 0 in FS class I (n = 6), 3.6 ± 1.4 in class II (n = 46), 3.54 ± 1.5 in class III (n = 40), 4.1 ± 2 in class IV (n = 67) and 4.33 ± 2 in class V (n = 15). Among patients who were hospitalized in medical ward, 60% of them belongs to class I, 83.3% to class II, 53.4% to class III, 15.1% to class IV and 16.6% to class V. 17.5% of patient hospitalized in ICU had a fine score class III , 52.8% had a class IV and 41.1% had a class V. Checking out was possible for 40% of patients in class I, 13.9% in class II, 22.6% in class III and 11.3% in class IV. Mortality ranged from 2.8% in class II to 41.7% in class V.

We found an association between FS and RS ($r=0.16$, $p=0.034$). The RS in survivors versus not survivors in the FS categories was respectively 3.46± 1.3 vs 5±1 in class II, 3.25 ± 1 vs 5 ± 2.4 in class III, 3.7 ± 1.7 vs 4.8 ±2.3 in class IV and 4 ±1.3 vs 5 ±2.5 in class V. There was a SSD only in category II ($p = 0.01$).

Conclusion: Radiological score may improve Fine score. Further studies with larger cohort are necessary to show better results.

#8145 : Platelet-lymphocyte ratio has a high prognostic significance in patients with multitrauma

Preferred format : Oral presentation

Authors:

Atıf BAYRAMOGLU (1), Mucahit EMET (2), Necati SALMAN (3)

1. Department of Emergency, Ataturk University Medical Faculty , Erzurum, TURKEY
2. Department of Emergency, Ataturk University Medical Faculty , Erzurum, TURKEY
3. Department of Emergency, ETIMESGUT ASKER HASTANESI, ANKARA, TURKEY

Keywords: PLR, Trauma

Abstract :

Backgrounds: Prognostic parameters to differentiate injuries that may cause fatality gain extra importance to save this group of patients on time.

Aim: To determine the predictive significance of haematological markers (neutrophil, lymphocyte and platelet counts, NLR and platelet lymphocyte ratio [PLR]) for mortality in patients with multitrauma.

Methods: Data of all consecutive trauma patients according to ICD-10 that admitted to our ED were taken from database of our hospital retrospectively. The following ICD codes were scanned for this aim: S00 to T88, V00 to Y99, R58, Z04. Of 46,497 records in 6 years, 6,917 patients with available completed records and initial complete blood count (CBC) studied in ED within 30 minutes were included: 5,984 patients who were discharged from the hospital were evaluated as the control group and 933 patients who died at the hospital were evaluated as the study group.

Results: Of the patients, 68%(n=4685) were men and mean age was 42.6± 20.4. The ROC curves to discriminate mortal cases among all trauma patients for PLR, PLT, NLR, and RDW were 0.803 [95% confidence interval (CI). 0.784–0.823], 0.763 (95%CI: 0.741–0.784), 0.412 (95%CI: 0.390–0.435), and 0.380 (95%CI: 0.360–0.399), respectively. When the diagnostic value of the cut-off value of the PLR was taken as 74.18, sensitivity, specificity, +LR and- LR of in patients with mortal trauma were 85.4, 66.7, 2.6 and 0.2, respectively.

Conclusion: We found that PLR is a statistically significant independent predictor of mortality with high sensitivity and specificity in patients with trauma.

#8146 : Informatics in ED – A DGH Experience of Clinical Librarian.

Preferred format : ePoster

Authors:

Imran Zakria (1), Peta Jones (2), Muhammad Qureshi (3), Nasreen Contractor (2)

1. NHS, Tameside General Hospital., Manchester, UK
2. NHS, Tameside General Hospital, Manchester, UK
3. NHS, Tameside General Hospital, manchester, UK

Keywords: ED: Emergency Department, CL: Clinical Librarian, DGH: District General Hospital, CTR: Clinical Topic Review

Abstract :

Background:

Role of clinical librarian (CL) has been established for some time and their valuable input at ward rounds is well recognised, which has expanded into more acute settings recently. Even ED has been advocated to gain benefit from this prosperous resource in high pressure and time constrained environment at larger/academic units.

Objectives:

We looked at our experience of having CL at our ED with annual census of over 85,000 (approx.) patients a medium sized DGH. We had a pilot one year project of informatics ED in-reach for up to 3 day per week targeting consultant led mid-day board rounds on shop floor.

Aims of the intervention were identified:

1. Acquisition of up to date evidence based information for clinical dilemmas posed by ED team, recognising time constraints.
2. Embedding Informatics in clinical team to bridge the gaps in utilisation of available resources in an era of information overload in acute settings, efficiently and accurately.
3. Giving CL insight and development into requesting patterns of clinicians and translation of information into practice.
4. Add value to the teaching experience of board rounds for juniors and inculcate some academic interest.

Methods & results:

We reviewed the kind of information being asked and who was asking and how. How much literature review was being done and the time it was consuming? What information and how was it coalesced by CL and presented to clinicians? We also explored how this information was used subsequently and if translated into change of practice etc. i.e. impact. Any trends or themes?

About 40 literature reviews were conducted. 16 came out of board round directly while reaming were requested by email. Majority (24) were from consultants but ANPs and middle grades requested some (12 and 3 each). Each search took from somewhere as little as 5 minutes up to 4 hours with an average of 2.85 hr consuming over 85 hours just for running these searches. Mostly treatment options (medications and devices mainly) and diagnostics were in question (blood tests & scans) with age being the variable most commonly associated with them.

The information was crude to begin with but over time was filtered more accurately and tailored specific to the clinical dilemma.

Review of some existing guidelines was done while development of new policies was undertaken as direct outcome of the evidence gained through this pilot. Some of the valuable information was incorporated by trainees into their work as dissertation/CTR and also presented at local/regional and national level.

Conclusion:

Having a CL in ED and even at DGH has shown us to be a productive and valuable to our team materialising this work practically. Based at our experience, CL in-reach has been already extended at our department and we would like to recommend this positively.

#8147 : Evaluation of the learning process among emergency nurses for the placement of peripheral intravenous catheter using simulated ultrasound guidance with an ultra-portable device

Preferred format : ePoster

Authors:

BENJAMIN ohana (1), Anthony Chauvin (1), Maxime Gautier (1), jennifer truchot (2)

1. Urgences, Lariboisière, Paris, FRANCE
2. Emergency, Lariboisière, Paris, FRANCE

Keywords: Ultrasound, intravenous, learning

Abstract :

Introduction: patients with difficult venous access are frequent and can be a real emergency department (ED) problematic. The use of an ultrasound guidance puncture instrument for the peripheral veins can be an alternative to the placement of central veins catheter (VVC) or intraosseous catheter and can reduce the number of medical interventions. The objective of this study was to analyze the learning curve for the Emergency state-graduated nurses following a standard learning program. This analysis was conducted on simulation equipment

Equipment and Methodology: this study is descriptive, experimental and longitudinal and was conducted in 2015 among Emergency state-graduated nurses. After a first 1.30-hour theoretical and practical training session, nurses' skills were assessed according to 5 criteria on 2 vessels of different size (V1 and V2) with the use of a phantom-type simulation equipment. Sterile protection probe kits were available for the ultra-portable ultrasound instruments. The state-graduated nurses answered a satisfaction survey about the training session. The studied parameters were the success rate and the time needed for the placement of the catheter.

Results: Among the 26 state-graduated nurses trained, 14 (54%) followed the entire training session. The assessment analysis showed success saturation between attempt 8 and 9 for V1 and after attempt 14 for V2, with a success rate of 92.9%. We observed a significant success rate difference between V1 (p=0.04) and V2 (p=0.001). The difference in the correct placement of catheter time was significant for V1 (p=0.03) but not for V2 (p=0.99). The participants appreciated the 1.30-hour theory/practice combination teaching method (satisfaction rate: 73% (55; 90)).

Discussion: The assimilation of the ultra-portable ultrasound instrument among nurses was quick (4th training) and its use remained stable in time, suggesting that the use of this new instrument will have an impact on future research in our ED. It is probable that a more adapted and manageable sterile protection probe could help to improve this technique. The fact that vessel V2 was smaller and deeper explain why the diminution of the catheter placement time was not significant. The 41.7% success rate for V1 at the 1st attempt shows that the teaching method is effective

Conclusion: A 1.30-hour theoretical and practical training session followed by 9-to-15 attempts session on simulation equipment, with different level of difficulties in the vessels access, allows obtaining persistant technical skills. The assessment of the same state-graduated nurses on patients will allow the demonstration of a more pertinent analysis of the training-session's quality. This was the first step of a larger study protocol, which aims at generalizing the use of ultrasound guidance for difficult catheter placement

#8148 : Novel team approach in trauma patient management: a single center's experience

Preferred format : Oral presentation

Authors:

Ileana Lulic (1), Dinka Lulic (2), Mirjana Miric (1), Mihaela Mihovilcevic (1), Anita Lukic (3), Nina Cvjeticanin (1), Ivan Gornik (2)

1. Department of Anaesthesiology, Reanimatology and Intensive Care Medicine, University Hospital Centre Zagreb, Zagreb, CROATIA
2. Department of Emergency Medicine, University Hospital Centre Zagreb, Zagreb, CROATIA
3. Department of Anaesthesiology, Reanimatology and Intensive Care Medicine, General Hospital Varazdin, Varazdin, CROATIA

Keywords: Trauma; Resuscitation

Abstract :

Purpose of the study: Worldwide, trauma claims more productive life years than any other disease. It is well known that almost 90% of fatalities develop within the week after major trauma, but more alarming is the fact that many preventable causes of death occur within the first few hours. Today, the most common identified problems during trauma patient management are: underestimation of the seriousness of injuries, misinterpretation of performed investigations, technical failures, as well as lack of experience of the trauma teams. The World Health Organization estimates that the mortality of major trauma in Europe could be decreased up to 30% by improving the chain of care for major trauma patients. Trauma 'chain of survival' refers to a series of actions that, when put into motion, reduce the mortality associated with trauma. Like any chain, the trauma 'chain of survival', commencing at the scene of injury, all the way through to the place of definitive treatment, is only as strong as its weakest link. Therefore, trauma care represents a major challenge for all medical professionals, especially the ones working in the Emergency Department (ED). The aim of our study was to demonstrate University Hospital Center Zagreb Emergency Department's experience in trauma patient management after implementation of a novel model called 'horizontal team approach'. **Materials and methods:** During 2015 we have implemented an innovative model of 'the horizontal team approach' in our Department's trauma patient management. Senior instructors and educators of the European Trauma Course Organization trained all trauma teams dealing with trauma resuscitation on a daily basis. **Results:** Our concept of trauma teams installs physicians of different specialties, nurses and technicians, working seamlessly together in the acute care of major trauma patient. The essence of 'horizontal team approach' implementation is to provide trauma patient care where variable set of processes run simultaneously. These are adapted to the trauma patient's condition, which can change anytime. The response of critically injured patient to the trauma team's interventions is dynamic and therefore resuscitation is continuous cycle of assessment, intervention and reassessment. Each member of the team understands their responsibilities (A, B, C person) and role within the team, synchronously working within their competencies. We put strong focus on team member's leadership skills, cooperation between the team members, coupled with non-technical skills of teamwork and communication. **Conclusions:** Well-established ED trauma teams, offering state of the art trauma care, with a focus on the multi-specialty, multi-professional team approach, represent one of the paramount links in the trauma 'chain of survival', and should be implemented in every ED receiving traumatized patients.

#8149 : Could high sensitivity troponin (0 & 2 hrs.) avoid unnecessary admissions and save money?

Preferred format : Oral presentation

Authors:

M Azam Majeed (1), Imran Tahir (1)

1. University Hospitals Birmingham., NHS, Birmingham, UK

Keywords: HIGH SENSITIVITY TROP, ACS

Abstract :

Background:

Every four minutes someone is admitted to hospital suffering from a heart attack or a chest pain event in the UK, totalling over 150,000 hospitalisations a year. Chest pain is one of the most common presentations in the emergency department and quite a few of them get admitted as low risk ACS patients. With the developments in technology, we have increasingly sensitive troponin assays available. Previous-generation troponin assays have been used as diagnostic and prognostic markers in acute coronary syndrome patients and for risk stratification to guide triage decisions and aid in treatment selection. New, high-sensitivity troponin assays represent an important advance with added sensitivity for cardiac myocyte necrosis. High-sensitivity troponin assays detect concentrations of the same proteins that conventional sensitivity assays are aimed at detecting, just in much lower concentrations.

Objective:

Can high sensitivity troponin avoid unnecessary admission and save money.

Method:

We did the retrospective data analysis for 100 patients presenting in the emergency department of University hospitals Birmingham in the month of March 2016. All adult patients admitted with the diagnosis of ACS were included in the study.

Results:

We included 100 patients admitted with the diagnosis of ACS under the medical team in the month of March 2016. 86% patients had a serial troponin done during the admission. Rest of the 14% had a single troponin done. Only 8% patients had a raise in the serial troponin, rest of them were discharged home. The average length of stay was 33 hours.

Conclusion:

We have 5-10 patients every day presenting to the emergency department with chest pain. About 50% of them get admitted with the diagnosis of ACS. 86% of our patients could have been potentially discharged home by using high sensitivity troponin at 0 and 2 hours and hence could have avoided 86% admissions. This in turn could have saved quite some money and beds. With the growing pressure in the emergency departments due to ever increasing number of patients all these high sensitivity tests could potentially make some difference.

#8150 : QT interval prolongation due to domperidone: a case report.

Preferred format : ePoster

Authors:

Jannette van Soest (1), Alet Pfaff (1)

1. Emergency Department, Ziekenhuis Rivierenland, Tiel, THE NETHERLANDS

Keywords: Domperidone, QT prolongation, long QT syndrome

Abstract :

Domperidon is a well-known drug to treat nausea and vomiting. Although it is known to cause QT interval prolongation, and due to this ventricular arrhythmias and sudden cardiac death, it is still widely prescribed.

A 26-year old healthy woman presented at our emergency deparment (ED) with complaints of vomiting and diarrhoea since two weeks. One week prior to presentation she started using domperidone 10mg twice a day. After five days it was raised to 10mg four times a day. Since the start she had complaints of palpitations. The day before presentation she also experienced chestpain lasting 30 minutes. Physical examination didn't show any abnormalities. Blood results showed normal infection parameters and a slightly decreased potassium level of 3.3 mmol/L. Her ECG showed a sinusrhythm of 70 beats per minute with a QT interval of 502ms and a corrected QT interval of 538ms. Rhythm monitoring showed premature ventricular contractions, sometimes as bigeminies. She was admitted to the cardiac care unit and treated with intravenous potassium suppletion 3 gram per 24 hours. Domperidone was stopped immediately. At discharge the ECG was normalised.

Domperidone is blocking the human Ether-a-go-go-Related Gene (hERG) potassium channels leading to prolonging of the ventricular action potential and thereby prolongation of the QT interval causing a variety of cardiac arrhythmias and even sudden cardiac death. There is an increased risk with the simultaneous usage of other QT prolonging medication or cytochrome P-450 3A4 inhibitors. Electrolyte disturbances and a higher domperidone dose (more than 30mg a day) will increase the risk of QT interval prolongation.

Caution is needed when prescribing domperidone, especially when there are other risk factors for QT interval prolongation, but also in young and healthy people.

#8151 : Acute coronary syndrome with ST segment elevation admitted in emergency department. Risk factors of cardiac arrest.

Preferred format : Oral presentation

Authors:

GHEZALA CHAABENI (1), HANENE GHAZALI (1), AYMEN ZOUBLI (1), ANWARE YAHMADI (1), MOUNA GAMMOUDI (1), NEJLA HENI (1), MOEZ MOUGAIDA (1), SAMI SOUISSI (1)

1. EMERGENCY DEPARTMENT , REGIONAL HOSPITAL OF BEN AROUS, BEN AROUS, TUNISIA

Keywords: cardiac arrest, mortality, prognosis, acute coronary syndrome, thrombolysis, emergency

Abstract :

Background: Half of cardiac arrests (CA) complicating acute coronary syndromes with ST segment elevation (STEMI) occurred during the first two hours. During this initial phase, STEMI were supported in emergency department in the absence of direct orientation to the interventional cardiology structures. Prevalence, risk factors and prognosis of CA complicating STEMI admitted to the emergency department were not well assessed.

Aim of study: To study the risk factors and prognosis of cardiac arrest occurring during the initial management of STEMI in the emergency department.

Methods: Prospective observational study extended over a period of 81 months (January 2009-September 2015) in the emergency department of regional hospital in Ben Arous. Inclusion of patients admitted for STEMI lasting for less than 24 hours. The demographic, clinical, electrocardiographic and therapeutic data were collected. Analysis of patients group complicated of CA in emergency department. Identification of factors related to the occurrence of CA using a logistic regression model.

Results: Inclusion of 694 STEMI with a mean age of 60 ± 12 years and a sex ratio of 5. The cardiovascular risk factors were dominated by active smoking (71%) followed by hypertension (35%) and diabetes (32%). The median time of consultation was 150 min (5 min to 24 h). Fibrinolysis was administered in 72% of patients with a success rate of 59%.the most dreaded complications related to the SCA were the cardiogenic shock (10%) and the cardiac arrest (9%). Patients who experienced CA (n=62) had a mean age of 60 ± 12 years and a male predominance with a sex ratio of 6. Active smoking was the most common cardiovascular risk factor (73%). The median time of consultation was 120 min (30 min and 16 h). Analysis of the initial rhythm of CA objectified ventricular fibrillation (72%), asystole (18%) and ventricular tachycardia (10%). The STEMI was in the anterior territory in 70% of patients and in the lower area in 32% of patients. The treatment in emergency includes (n): External Defibrillation (55), intubation (28), catecholamines (22), anti-arrhythmic (16). Multivariate analysis identified three independent factors related to the occurrence of CA: cardiogenic shock (OR = 2.44 95% CI 1,31- 44,54), reaching the anterior territory (OR = 1 97 95% CI 1.12 to 3.43) and pulsed oxygen saturation less than 90% (OR = 1.05 95% CI 1.02 to 1.09). The mortality of CA in the emergency department was 29%.

Conclusion: Identifying and improving care of risk factors can prevent the occurrence of CA, reduce mortality and improve the short-term prognosis of STEMI.

#8152 : Factors affecting the time to admission to the emergency department in patients with acute stroke

Preferred format : Oral presentation

Authors:

syrine keskes (1), Hanen Ghazali (1), Ahmed Souyah (1), Anware yahmadi (1), farah Riahi (1), najla elheni (2), sawsen chiboub (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA
2. , regional hospital of ben arous, ben arous, TUNISIA

Keywords: stroke, delay, emergency depatment

Abstract :

Introduction:

Acute ischemic Stroke is a neurovascular emergency. We must act on all the factors influencing the different stages from recognition until the end of the treatment to improve the prognosis of this pathology.

Objective:

To analyse the factors influencing the time of admission of patients presenting an acute stroke in the emergency department (ED).

Methods:

Prospective, monocentric, observational study conducted over four years. Inclusion: patient (age ≥ 18 years) with neurological signs suggestive of acute stroke. Report of socio-demographic, epidemiological, clinical and scanner criteria. Stroke severity was evaluated with the National Institutes of Health Stroke Scale (NIHSS). Two groups were identified depending on the time between the appearance of functional signs and emergency department visit: Group (time < 3 hours), Group (time ≥ 3h). Univariate and multivariate analysis by multiple logistic regression to identify factors influencing the admission period.

Results:

Inclusion of 245 patients. Mean age = 66 ± 14 years. Sex ratio = 2.85. Group (time <3 hours): n = 139. Group (time ≥ 3h): n = 106. Cardiovascular risk factors (%): hypertension (64), diabetes (34), history of stroke (24), atrial fibrillation (12). Ischemic Stroke: 75% of cases. Average NIHSS = 8 ± 6. Average Glasgow coma scale (CGS) = 13 ± 2.

Univariate analysis identified the occurrence of the deficit at home and in the public areas , facial involvement , CGS ≤13, systolic blood pressure (SBP) ≥ 160 mmHg and diastolic blood pressure (DBP) ≥ 100mmHg , NIHSS ≥ 10 as significantly related to a time < 3 hours.

In multivariate analysis : facial involvement(adjusted OR = 1.25 , 95% CI [1,3-1.6] , p = 0.05) and CGS≤13 (adjusted OR = 1.13 , 95% CI [1.03 - 1.26] , p = 0.016) was independently associated with an admission period < 3h.

Conclusion:

The facial involvement and CGS ≤13 were independently associated with admission time < 3h.

#8153 : More time spent on the scene in trauma is associated with increased morbidity and mortality

Preferred format : Oral presentation

Authors:

Vittorio Decaro (1), Indervir Bharj (1), Azam Majeed (1), Peter Nightingale (1)

1. , University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK

Keywords: Trauma, On scene time, Morbidity, Mortality

Abstract :

Background: Despite compelling evidence for better outcome with a shorter pre-hospital time in trauma, there continues to be debate surrounding different approaches used on the scene. North America advocates the “scoop and run” principle comprising basic life support, minimal intervention and rapid transfer to definitive care. However Europe continues to employ a “stay and play” practice with advanced life support and multiple complex procedures being commonplace.

Objective: The purpose of this study was to assess the impact of on scene time on morbidity and mortality for major trauma patients.

Methods: A retrospective analysis of ambulance sheets and trauma proformas for patients presenting to Queen Elizabeth Hospital Birmingham (major trauma centre) was performed from June 2014 to June 2015 from a prospectively maintained database. A complete set of pre-hospital times was defined as call-time, time-on-scene, time-left-scene and time-at-destination. Basic demographics, injury severity score (ISS), length of stay (LoS) and mortality were recorded. Rapid sequence induction (RSI) and advanced life support (ALS) procedures were also documented.

Outcomes were assessed using SPSS software. Multiple linear regression was used to assess how on scene time impacts LoS in hospital with log LoS as the dependent variable. Multivariable binary logistic regression was performed to calculate the effect of on scene time on mortality. Both of these were corrected for age, ISS and remaining pre-hospital time defined as the sum of call-time to time-on-scene and time-left-scene to time-at-destination.

Results: A total of 494 patients presented to the Emergency Department. 363 patients (median age 52 [range 13-101] M275:F88) had a complete set of pre-hospital times. Median on scene time was 39 minutes (range 6 minutes-2 hours 13 minutes) and the median for remaining pre-hospital time was 28 minutes (range 2 minutes-2 hours 14 minutes).Median ISS was 16 (range 1-75) and there was a 14-day median LoS (range 2-128 days). 42 patients (12%) died. RSI was performed on 53 counts (15%) and 14 patients (4%) underwent pre-hospital ALS.

Multiple linear regression revealed that for every additional hour spent on the scene there was a 70% increase in LoS (95% confidence interval 31-123%) with a strong statistical significance after correcting for age, ISS and remaining pre-hospital time ($p < 0.001$).

Multivariable binary logistic regression similarly showed an odds ratio of 3.19 for mortality (95% confidence interval 1.17-8.68) with every additional hour spent on the scene. This was again statistically significant after correcting for age, ISS and remaining pre-hospital time ($p = 0.023$).

Conclusion: Trauma networks are established to provide rapid transfer to a tertiary centre for definitive treatment. Pre-hospital medics must be mindful that a longer on scene time negatively effects morbidity and mortality for polytrauma patients. The authors of this study therefore advocate the “scoop and run” approach.

#8154 : The burden of genetic diseases in a French pediatric emergency department.

Preferred format : Oral presentation

Authors:

François Angoulvant (1), Béatrice Simonnard (1), Agathe Aprahamian (1), Névine El Khatib (1), William Curtis (1), Rémy Choquet (2), Gérard Chéron (1)

1. pediatric emergency department, hôpital Necker-Enfants Malades, APHP, Paris, FRANCE
2. Banque Nationale de Données Maladies Rares, hôpital Necker-Enfants Malades, APHP, Paris, FRANCE

Keywords: medically complex, chronic conditions, pediatric, genetic diseases, rare diseases, emergency department.

Abstract :

Background:

The prevalence of children with complex chronic conditions in pediatrics is increasing and their management is an important part of hospitalizations, emergency room visits and pediatric healthcare costs. Some of them are suffering from genetically determined diseases. Both group of diseases share part of their problems. In the literature, the impact of genetically determined diseases on pediatric emergency services is unclear.

Objectives:

The objective of this study was to determine the prevalence of genetically determined diseases in a pediatric emergency department and describe the features of their management.

Methods:

This was a prospective observational study performed in the pediatric emergency department of a French university Hospital receiving over 60,000 children annually. All children under 18 years old, visiting our pediatric emergency department for a medical complaint were included during five consecutive days in September 2014. Chronic diseases or malformations were classified according to the classification proposed by McCandless et al. Am J Hum Genet. 2004;74:121-7. The study was reviewed and approved by the Ethics Committee of Necker-Enfants Malades Hospital. One family refuses to participate to the study.

Results:

Of the 454 children included, 39,5% of them had a disease or malformation genetically determined (categories I to IV, n = 179), of which 4.4% had a chromosomal or single-gene disorders such as sickle cell disease, hemophilia (IA), 6.4% had a multifactorial/polygenic disorder such as spina bifida, autism (IB), 7.1% had a disease or abnormality of heterogeneous cause, often genetic such as mastocytosis, migraine (IC) and 20.7% had an acquired chronic disease with genetic predisposition such as diabetes, asthma (III). Of these 179 patients, 83 (46%) visited the pediatric emergency department with a chief complaint related to their chronic condition. We observed more biology tests (40% versus 18%), more imaging test (32% versus 20%), longer length of stay (mediane 123 minutes versus 88 minutes), and higher hospitalization rate (32% versus 9%) in children with underlying conditions with strong genetic basis (IA + IB + IC). Similarly, the hospitalization rate was higher (37% versus 9%) in children with an acquired chronic disease with genetic predisposition.

Conclusions:

These results highlight the high frequency of patients suffering from complex chronic conditions, especially genetically determined diseases, in a pediatric emergencies department and the impact of such conditions on the care provided. These patients had particular characteristics that should lead to specifics treatments, and then a comprehensive and global approach of children with genetically determined diseases in pediatric emergencies is needed. This should be based on several axes of improving: training of professionals, scientific research, pharmacogenetics, support of families, the quality of care, and patient identification.

#8155 : Prolonged resuscitation in Traumatic cardiac arrest indicates probability of poor survival.

Preferred format : Oral presentation

Authors:

M Azam Majeed (1), Neil-Shastri Hurst (1)

1. University Hospitals Birmingham., NHS, Birmingham, UK

Keywords: Traumatic cardiac arrest, Prolonged resuscitation

Abstract :

Background:

Several studies recommend limiting the duration of resuscitation in traumatic cardiac arrest patients. There is no standardized approach in managing these patients. This study is aimed to analyze the survival of the traumatic cardiac arrest patients after prolonged resuscitation (>10 minutes).

HYPOTHESIS:

Prolonged resuscitation in traumatic cardiac arrest patients is futile.

DESIGN:

Retrospective data analysis of all traumatic cardiac arrest patients presented to our ED.

SETTING:

University hospital, level I trauma center.

PATIENTS:

Traumatic cardiac arrest patients, who had cardiopulmonary resuscitation at the scene, en route, or in the emergency department from March 2013 to March 2015 were included.

MAIN OUTCOME MEASURE:

Survival after prolonged resuscitation (> 10 minutes).

RESULTS:

Fifteen hundred and four patients were admitted. The study cohort comprised 22 victims of traumatic cardiopulmonary arrest. Only 15 were included due to lack of required information in 7 patients. Fifty percent patients were over 65years and 50% were under that age group. More than 60% patients were involved in RTC and rest of them had falls, burns and head injuries. 87% patients were had blunt trauma and 13% had penetrating injuries. The total downtime documented in the notes was 0-5 minutes with the mean time of 2.43 minutes. All patients had IV access and 87% patients had received PRCs and rest had crystalloids.

100% of the patients received CPR and 80% received adrenaline either in pre-hospitaly or in hospital. The time taken to resuscitate ranged from 19 minutes to 143 minutes with the mean of 44 minutes. None of the patients were taken to theater. The commonest rhythm was asystole 46% then PEA 33% and VF 0.6%. Out of 22 patients there was not a s ingle survivor.

CONCLUSION:

Trauma victims irrespective of the rhythm, amount of blood, CPR or no CPR, prolonged resuscitation own its own means poor survival probability. As most of the current guidelines suggest resuscitation for up to 10 minutes and if no change then resuscitation should be called off.

#8156 : A crucial case of surgical emergency in Aragon-Spain : idiopathic spontaneous hemoperitoneum.

Preferred format : ePoster

Authors:

felicidad Yañez rodriguez (1), Ana Perez Zapata (2), Rebeca Alonso (3), Elena Abril (4)

1. emergency department , Hospital de Calatayud., Salud Aragon, Spain., zaragoza, SPAIN
2. surgeon , Hospital Ernest Lluch, Calatayud, Spain., Salud, Aragon., zaragoza, SPAIN
3. anesthesist, Hospital Ernest Lluch, Calatayud , Spain, Salud, Aragon., zaragoza, SPAIN
4. radiologist, hospital Ernest Lluch, Calatayud, Spain., Salud, Aragon., zaragoza, SPAIN

Keywords: spontaneous hemoperitoneum , surgical emergency

Abstract :

Intraperitoneal bleeding is common in patients with abdominal trauma or in those with benign gynecologic diseases, but it is very rare to occur spontaneously. The purpose of this communication is to report a female patient with idiopathic spontaneous hemoperitoneum (ISH). Case presentation: A 28-year-old patient was admitted with 12-hour acute abdominal pain. Laboratory tests upon admission showed: Hb 9.0 g/dL, WBC 8.9 x 109/dL and negative immunologic pregnancy test. The ultrasound showed free intraperitoneal fl uid. She underwent exploratory laparoscopy with fi ndings of massive hemoperitoneum, which was resolved and, after a thorough exploration of the abdominal cavity, no evidence of the bleeding site was found. She was closely followed-up for 2 years without any recurrence or complications related to the ISH. An extensive review of the literature was performed. We conclude that ISH is a rare entity that usually presents as a surgical emergency and whose diagnosis is made in the absence of predispo-sing factors and excluding lesions in the abdominal blood vessels and organs. It warrants immediate intervention, which is crucial for patient survival.

#8157 : Prognostic value of bnp, ddım, mmp-9 and s100β levels of stroke patients in emergency department

Preferred format : Oral presentation

Authors:

Mustafa Uzkeser (1), Abdullah Osman Kocak (1), Lutfi Ozel (2), Mucahit Emet (1), Ilker Akbas (1), Sahin Aslan (1)

1. Department of Emergency Medicine , Faculty of Medicine, University of Ataturk, Erzurum, TURKEY
2. Department of Neurology, Faculty of Medicine, University of Ataturk, Erzurum, TURKEY

Keywords: ischemic stroke; BNP; DDIM; MMP-9; S100β

Abstract :

Background: Ischemic stroke is the leading cause of long term morbidity and mortality, which affects several hundred thousand people per year. Various biomarkers indicating neurologic damage have been developed. The biomarkers indicating neurologic damage will reduce the need for neurologist or radiologist consultation in emergencies, enabling to follow a more reliable way in order to set the true diagnosis and determine treatment options in patients at risk. In addition, neurologic examination is not objective and may differ depending on a person's experience. With determination of an objective marker, a more accurate and reliable way will be followed in the diagnosis and treatment of stroke. It is believed that, a fast, simple and low-cost biomarker which provides information about brain tissue damage would be extremely beneficial. For this purpose; S100 calcium-binding protein B (S-100β), d-dimer (DDIM), matrix metallopeptidase 9 (MMP-9) and brain natriuretic peptide (BNP) that show cerebral damage have been studied in early period stroke patients. The primary objective of this study is to measure the correlation between clinical severity and serum/plasma concentration of neuronal injury biomarkers in stroke patients.

Material & Methods: This prospective study was initiated with 63 patients having pre-diagnosis of stroke, but then 15 patients were excluded due to various reasons. All patients were undergone the necessary laboratory and radiological examinations and treated in accordance with guidelines. Blood samples were collected at the first admission and after 48 hours, and S-100β, DDIM, MMP-9 and BNP values were measured.

Results: Of patients, 45.8 (n=22) were female with median age 70 (min=25, max=85). There were previous SVO in 25% (n=12), DM in 12.5% (n=6) DM, atherosclerosis in 31.3% (n=15), hyperlipidemia in 25% (n=12), COPD in 16.7% (n=8), renal failure in 2.1% (n=1), smoking in 37.5% (n=18) and alcohol abuse in 8.3% (n=4). On ECG ordered, 30 (62.5%) patients have sinus rhythm and 18 (37.5%) atrial fibrillation. Patients were hospitalized in the neurology clinic between 1-60 days (median: 9 days). From the patients followed-up, 11 (22.9%) died and 37 were (77.1%) discharged from the neurology clinic. Impairment of consciousness was more common in the patients who died (72.7%; n=8 vs. 35.1%;n=13, p=0.04). GCS was significantly lower in patients who died (n=11; mean=11.2±2.7) compared to those discharged (n=37; mean=13.3±2.8) (p=0.01). BNP (died:783.3±778 vs. discharged:268.7±377; p=0.002) and DDIM (died:2565.4±1512 vs. discharged:1547.2±1341.7; p=0.036) studied at the hour 0 were found to be significant in determination in-hospital mortality. Whereas, no significant difference was found in the parameters studied at the hour 48. MMP-9 values at the hour 0 were positively correlated with the days of hospitalization (pearson correlation:0.291; p=0.045).

Conclusion: In this study, we demonstrate that BNP and DDIM as markers of prognosis at the time of first admission in patients with ischemic stroke. MMP-9 level was significantly correlated with hospitalization time, although no significant difference was found in terms of mortality.

#8159 : A bite which went a bit too deep! ; A case report

Preferred format : ePoster

Authors:

Ashid Kodumayil (1), Benseena Kunhimon (1), Lupe Del Rocio Coronel Chumbi (2)

1. Hamad General Hospital, Hamad Medical Corporation, Doha, QATAR
2. Accident and Emergency Service Virgen Del Castillo Hospital, Accident and Emergency Service Virgen Del Castillo Hospital, Murcia, SPAIN

Keywords: Animal bite, Necrotising Fascitis, Septicaemia

Abstract :

Introduction:

Animal bites are common presentations to the Emergency Department. Commonly anticipated complications of animal bites are infections; here we present patient with severe necrotising fascitis caused by a rat bite

Case Report:

A 25 year old man presented to Emergency department with pain, swelling and two distinct rashes on his forearm. He was previously healthy with no significant medical history. He gave history of being bitten by a rat couple of days prior to the presentation. He also complained of severe lethargy.

On examination he had an abrasion surrounded by erythema over lower end of his fore arm. There were two distinct vesicular rashes over the ante cubital fossa and over the right nipple. The whole arm was grossly swollen limiting movements at elbow and wrist joints. The patient was septic from the infection.

Labs showed acute neutrophilia. Ultrasound with doppler studies of the arm were performed . It showed two haematomas in relation to the Brachio-radialis muscle causing compression of the radial vein. An MRI of the fore arm proved necrotising fasciits deep to the interosseous membrane with muscle necrosis and ischaemia. The patient was treated with Intravenous antibiotics and surigical debridement. He later had a skin graft and recovered satisfactorily.

Necrotoisng fascitis is a uncommon but severe complication of bites. Clinical suspicion and early agressive management is the key to get good results.

#8161 : The predictive value of blood gas pH at admission to the emergency department, a cross-sectional retrospective study

Preferred format : Oral presentation

Authors:

Elde Hovland (1), Per Lindmarker (2)

1. Student in medicine, Karolinska Institute, STOCKHOLM, SWEDEN
2. Emergency department, Karolinska University Hospital, STOCKHOLM, SWEDEN

Keywords: pH, acidosis, blood gas, point-of-care, prognosis, mortality, acute, emergency department, emergency room.

Abstract :

Introduction: In patients with acute illness there is a need for quick and reliable diagnostics. Commonly used is a point-of-care blood gas analysis. A low pH has been associated with poor outcome in studies with a specific type of underlying cause. The relation between all-cause mortality and pH at admission to the emergency department has only been studied in two previous studies.

Aims: to investigate the prognostic value of pH using blood gas analysis performed at admission to the emergency department in patients with highest acuity, with outcome defined as mortality. Material and Methods: All 2776 admissions arriving by ambulance or helicopter to the emergency department of Karolinska University Hospital, Solna, Sweden, during 2015 were analysed. 1342 (48%) admissions were excluded, mainly due to missing blood gas results. Data gathered consisted of point-of-care blood gas laboratory values, vital signs and general admittance information. Primary outcome was mortality within 24 hours, 7 or 30 days. Odds ratios for each outcome were obtained using logistic regression.

Results: There were significant differences between included and excluded admissions, mainly in chief complaint and in age, as the included admissions were older. Admissions with pH <7.00 had significantly increased risk of mortality in all outcomes. A significant correlation, independent of other variables, between pH and death was demonstrated. Age and lactate also independently correlated to mortality. Odds ratios for mortality and pH below 7.00 were 11.40 (245 – 52.96, p=0.002) in 24 hours, 20.30 (5.69 – 72.44, p<0.001) in 7 days, and 9.55 (3.02 – 30.28, p<0.001) in 30 days.

Conclusions: blood gas pH <7.00 at admission to the ED is independent and highly significant in predicting mortality within 30 days. There were differences between included and excluded admissions, and the results can not be applied to all patients admitted to the emergency department. The limitations stem from the study design. Future prospective studies are needed to confirm the clinical relevance of the results.

#8162 : The Immportance Of Blood Transfusion In Trauma Patients

Preferred format : ePoster

Authors:

Rozeta Luci (1), Engjell Lazaj (2), Brunilda Subashi (3), Llambi Subashi (4), Fatmir Luci (5), Xhoana Gjohilaj (5), Gazment Koci (5)

1. Surgery, University of Vlora, Vlora, ALBANIA
2. Surgery, Hospital of Vlora, Vlore , ALBANIA
3. Surgery, University of Vlora, Vlore , ALBANIA
4. Surgery, Hospital of Vlora, Vlora, ALBANIA
5. , Regional Hospital of Vlora, vlore, ALBANIA

Keywords: trauma, emergency, patients injury care, plasma transfusion, blood transfusion.

Abstract :

Introduction While injuries are best prevented by education and by social and engineering controls, secondary prevention of injury-related death and disability through the provision of emergency medical care and physical and occupational rehabilitation is also cost-effective. Blood products play a major role in this secondary prevention of death and disability as an adjunct to surgical care.

Aim To evaluate the immportance of blood transfussion in trauma patients in the Emergency and Intensive Care Therapy of Vlora Regional Hospital in 2015.

Meterials and methods This is a descriptive study. We took a total of 810 individuals in the study, patients admitted to the Emergency ward and the Intensive Care Therapy, of Vlora Regional Hospital during 2015. Data collection was conducted by taking information from the medical records of hospitalized patients in this ward. Information was taken for gender, the conditions the patiens came to the hospital and the use of blood products.

Results Almost 82% of patients admitted directly from the scene of injury to the hospital do not require any blood products. Of 917 such patients admitted to the ICT in the calendar year 2015, 102 received a blood product. Other 33 were mostly elderly individuals who fell, sustaining head injuries with intracranial bleeding, and received plasma. Of the entire direct-admission group, 12% received blood, 3.5% received plasma.

The survival rate for these patients was 97%. For patients with fatal injuries, severe neurologic injury was the most frequent cause of death; uncontrolled hemorrhage was the second most frequent cause; and multiple organ failure was the third.

In more severely injured patients, 7% of them with profound shock and ongoing hemorrhage, the most important intervention was the rapid transfer to the operating room. These patients had multiple injuries, including lacerations of major vessels, fractures of solid organs or disruption of a major venous plexus. With blood were treated 13% of patients with liver and pelvic injuries, while 27% of the patient treated with blood products had multiple traumas with bone fractures and internal organs injuries.

Conclusions Patients with uncontrolled hemorrhage requiring immediate transfusion as part of their initial care are the major test of a trauma center transfusion service. Patients present can die within minutes. To survive, the most critically injured need red cells and plasma within a very short time and in adequate quantities.

#8163 : Can suPAR add prognostic value in the assessment of surgical patients by predicting mortality and postoperative complications?

Preferred format : ePoster

Authors:

Morten Alstrup (1), Jeppe Meyer (2), Line Jee Hartmann Rasmussen (3), Martin Schultz (4), Jesper Eugen-Olsen (5), Kasper Iversen (6)

1. Research student, Dept. of Cardiology, Copenhagen University Hospital Herlev, Copenhagen, DENMARK
2. Research student, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Copenhagen, DENMARK
3. PhD student, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Copenhagen, DENMARK
4. PhD student, Dept. of Cardiology, Copenhagen University Hospital Herlev, Herlev, DENMARK
5. Senior researcher, Clinical Research Centre, Copenhagen University Hospital Hvidovre, Hvidovre, DENMARK
6. MD, Dept. of Cardiology, Copenhagen University Hospital Herlev, Herlev, DENMARK

Keywords: Biomarker, Surgery, Acute care, Prognosis, Risk assessment, Pre-operative risk stratification

Abstract :

Background

Risk assessment of surgical patients is in Denmark based on the American Society of Anesthesiologists (ASA) Physical Status classification. Routinely, no biochemical component is used in the prediction of mortality and postoperative complications.

In acute medical patients, studies have found soluble urokinase plasminogen activator receptor (suPAR) to be an independent predictor of 30-day mortality and adverse outcomes, such as readmission, admission to ICU, and longer admissions. Whether suPAR adds prognostic value to the customary preoperative risk assessment by predicting post-operative outcome in unselected patients in need of acute surgery has not been investigated.

In this study, we aimed to determine whether preoperative suPAR levels were able to predict mortality, postoperative complications, and reoperation in surgical patients.

Methods

Between 5 September 2013 and 7 December 2013, suPAR was measured in all patients admitted to the emergency department (ED; n=6,383) at Hillerød hospital, Denmark. Among these, 714 patients underwent various surgical procedures within 90 days from admission to the ED, and follow-up was 90 days. Of these, patients with missing suPAR (n=45) or minor, insignificant, and endoscopic diagnostic procedures (n=145) were excluded.

Complications and reoperations were registered by reviewing medical records of included patients. Complications included various types of pulmonary, thromboembolic, cardiac, renal, infectious, and neurological genesis. Furthermore, death was registered.

suPAR values are presented as medians with interquartile range (IQR), and statistical analysis was performed using Kruskal-Wallis test and receiver operating characteristics (ROC) curve analysis, presented as area under the curve (AUC) values with 95% confidence intervals (CIs).

Results

A total of 524 included patients (283 women (54%); median age 63.4 years, IQR 43.5 – 76.4) underwent significant surgery within 90 days after admission to the ED. Median suPAR for the entire population was 4.5 ng/ml (IQR 3.5 – 6.2).

Median suPAR for the general surgical patients was 4.2 ng/ml (IQR 3.2 – 5.5, n=215), for orthopedic surgical patients 5.2 ng/ml (IQR 3.9 – 6.6, n=201), and for all other surgical patients 4.4 ng/ml (IQR 3.3 – 5.8, n=108).

Out of all included surgical patients, 147 (28.1%) developed one or more complications during follow-up. These patients had significantly higher suPAR compared with patients without complications (5.8 ng/ml (IQR 4.1 - 8.1) vs. 4.2 ng/ml (IQR 3.3 – 5.5), $p<0.0001$). 71 patients (13.5%) were reoperated, and these patients had significantly higher suPAR compared with patients not reoperated (5.7 ng/ml (IQR 4.0 – 7.7) vs. 4.4 ng/ml (IQR 3.5 – 6.0), $p<0.0001$).

ROC curve analyses of suPAR for predicting development of complications or reoperation yielded AUCs of 0.69 (95% CI 0.64-0.74) and 0.64 (95% CI 0.57-0.72), respectively.

Results regarding mortality will be presented at the EuSEM 2016.

Conclusion

Among surgical patients, those who developed one or more complications or were in need of reoperation during follow-up had significantly higher suPAR levels, than those with no complications. These results suggest that suPAR may have a preoperative predictive value for development of complications in acutely admitted surgical patients.

Morten Alstrup and Jeppe Meyer contributed equally to this work.

#8164 : A serial of kidney injury playing football in Calatayud- Spain.

Preferred format : ePoster

Authors:

felicidad Yañez rodriguez (1), jose manuel Aranda lassa (2), Miguel Suarez Broto (3), Roberto Martinez Delgado (3), Abid Reyes (3)

1. emergency department , Hospital de Calatayud., Salud Aragon, Spain., zaragoza, SPAIN
2. urology, Hospital de Calatayud, Spain, Salud, Aragon., calatayud, SPAIN
3. urology, Hospital de Calatayud, Spain, Salud, Aragon., zaragoza, SPAIN

Keywords: Renal trauma. Conservative management.

Abstract :

Introduction: Genitourinary trauma amount to an 8-10% of abdominal trauma with the kidney being the most affected organ in 50% of cases, especially the left one. The choice of treatment will depend on the kind of lesion found in the affected renal unit and on the patients clinical conditions.
Objective: The aim of this report is to determine the applicability of conservative treatment in major renal trauma and to assess the evaluation and emergence of possible complications.
Material and methods: We have analysed 3 cases of renal trauma detected in our emergency department, analyzing such variables as the etiology of the trauma, associated lesions in other organs, the therapeutic approach adopted as well as the presence of complications, both in the long and short run.
Results:the three cases were blunt renal trauma in Young men playing football in 2015. We have given a conservative approach in first case and the second was managed with partial nephrectomie,48-72 hours after the trauma.Third was carried out in the Emergency Room because of haemodynamic instability, being the total nephrectomy the definitive treatment.
Conclusions: According to our experience and in the light of the results obtained, we consider the conservative approach adequate for major renal trauma as long as the patient is haemodynamically stable.

#8165 : Pediatric pre-hospital care in Turkey; one year multicentric descriptive study

Preferred format : Oral presentation

Authors:

EYLEM ULAŞ SAZ (1), Caner Turan (1), Murat Anıl (2), alkan bal (2), gazme gokalp (2), hayri levent yılmaz (3), sinem sarı gokay (3), tuğçe çelik (3), nilden tuygun (4), halise akça (4), deniz tekin (5), sinan oğuz (5), tanju çelik (6), özlem tekşam (7), Ayşe Gültekingil Keser (7), gülser esen besli (8), Murat duman (9), ali yurtseven (1)

1. Pediatric Emergency Medicine, Ege University School of Medicine, Izmir, TURKEY
2. Pediatric Emergency Medicine, Tepecik Training and Research Hospital, Izmir, TURKEY
3. Pediatric Emergency Medicine, Çukurova University School of Medicine, Adana, TURKEY
4. Pediatric Emergency Medicine, Sami Ulus Children's Hospital, Ankara, TURKEY
5. Pediatric Emergency Medicine, Ankara University School of Medicine, Ankara, TURKEY
6. Pediatric Emergency Medicine, Dr.Behçet Uz Çocuk Hastalıkları Ve Cerrahisi Eğitim Ve Araştırma Hastanesi, Izmir, TURKEY
7. Pediatric Emergency Medicine, Hacettepe University School of Medicine, Ankara, TURKEY
8. Pediatric Emergency Medicine, Medeniyet Univeristy School of Medicine, Istanbul, TURKEY
9. Pediatric Emergency Medicine, Dokuz Eylul university School of Medicine, Izmir, TURKEY

Keywords: Emergency medical services, Prehospital emergency care, pediatrics

Abstract :

Background

Emergency medical services (EMS) systems in Turkey (also called 112) developed to care for adults. Pediatric patients comprise approximately 8-10 % of EMS requests for aid, but little is known about the clinical characteristics of pediatric EMS patients and the interventions they receive.

Objective

Our objective was to describe the pediatric prehospital or interhospital patient cohort in our country. We also tried to measure how often EMS providers give a call before deliver the patients, and how often they do/not interventions.

Methods

All children (age <19 years) who required EMS transportation from August 2013 to August 2014 were eligible for inclusion. This prospective study was conducted at 9 tertiary care hospitals where located in 4 city. Surveys were completed by the person on shift of emergency department at each institution. This survey was conducted after receiving approval from the ethics committee of Ege University Hospital. Survey was including all informations on transported patients such as; ambulance type, patient demographics, general appearing, clinical features with vital signs(before and after the transfer), the reason for transfer, received interventions/procedures and final outcome.

Results:

There were 2094 pediatric transports, 6.7% of the total call volume. Most patients used (96%) land ambulances. Only 16% ambulance staffed with physician and 2% with a nurse . Majority children (72.4%) delivered to the tertiary pediatric emergency departments (ED) without giving any information. The median age of the whole cohort was 5,5 years and 54,9% was male. The most common reasons used for transfer calls were trauma (20%), neurologic disease (19,5%), intoxication(13,5%) and respiratory tract infections(10%). Fourty percent of transported children had no venous acces. Upon admission to the ED the most common life saving interventions were endotracheal intubation and cardiopulmonary resuscitation(CPR), and they administered respectively for 25 and 9 patients. All patients who received CPR (n=9), died in the ED. Overall, 41% of transfers triaged as urgent resulted in a hospital admission(669 children to ward, 218 to PICU). Patients who tarnsported by ambulance staffed with paramedic were more likely to have lifesaving interventions and poor outcome ($p<0.001$).

Conclusions:

Children made up a small part of EMS providers' clinical practice, so that prehospital providers infrequently perform pediatric interventions. Our observational data showed that Turkish EMS is not well specialized in pediatrics. We believe that more physician staffed (pre-hospital emergency medicine specialists) ambulance is essential to provide a high quality of care to critically ill children out of the hospital. EMS teams should be better prepared to deal with sick children in the pre-hospital setting.

#8166 : The demographic data and risk factors for st-segment elevation myocardial infarction in romanian patients

Preferred format : ePoster

Authors:

Oana Andrada ALEXIU (1), Luisa Corina SIMION (1), Bogdan Mihai OPRITA (1), Paula Maria NECHITA (1), Amal Antonia ARNAOUTE (1), Alina Cristina STOIAN (1)

1. Medical Service, Emergency Clinic Hospital, Bucharest, ROMANIA

Keywords: Cardiovascular disease, ST-segment elevation, myocardial infarction, risk factors

Abstract :

Background.

Cardiovascular disease (CVD) includes: coronary heart disease and acute myocardial infarction (AMI), cerebrovascular disease (stroke), raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure. According to the World Health Organization (WHO), CVD is the main cause of death for women in all countries of Europe for which we have mortality data and it is the main cause of death for men in all but 6 of these countries (exceptions are France, Israel, the Netherlands, SanMarino, Slovenia and Spain). Also, CVD causes more than 50% of deaths in women in 29 countries, mostly in Central and Eastern Europe. In nine countries CVD causes more than 50% of deaths in men: Azerbaijan, Belarus, Bulgaria, Georgia, Montenegro, Romania, FYR Macedonia, Romania, Ukraine and Uzbekistan. The incidence of hospital admissions for AMI with ST-segment elevations (STEMI) varies among countries that belong to the European Society of Cardiology. For Romania between 1997 and 2009 the Romanian Registry for ST segment elevation myocardial infarction (RO-STEMI) included 19510 patients.

Aim of our study was to investigate the demographic data and risk factors for ST-segment elevation myocardial infarction in Romanian patients.

Participants and methods.

We included in this study, 100 patients presented to Emergency Clinic Hospital between January 2015 – January 2016, and we collected the demographic data (e.g. age, gender, region, etc.) and risk factors (e.g. hypertension, obesity, diabetes, etc.). The data were statistically processed by SPSS ver. 20.

Results.

From patient population pyramid can be seen preponderance of men for all age groups up to 75 years, male / women being much higher than one to 65 years. The average age of women included in this study was maintained around 68 years and for males around the age of 60 years. The most frequent risk factors were smoking, hypertension, dyslipidemia and diabetes.

Conclusion.

For our study we observed a trend increase in patients with hypertension, diabetes or dyslipidaemia. Also, the age of onset is decreasing year by year which should become an important signal for new prevention programs and studies.

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Acknowledgements.

No potential conflict of interest relevant to this study.

#8167 : The etiology of toxic encephalopathy in romanian patients in emergency department

Preferred format : ePoster

Authors:

Paula-maria NECHITA (1), Bogdan Mihai OPRITA (1), Luisa Corina SIMION (1), Oana Andrada ALEXIU (1), Amal Antonia ARNAOUTE (1), Alina Cristina STOIAN (1)

1. Medical Service, Emergency Clinic Hospital, Bucharest, ROMANIA

Keywords: toxic encephalopathy, risk factors, Emergency Department

Abstract :

Background.

Brain dysfunction caused by toxic exposure may be included in the term “toxic encephalopathy”, characterized by a spectrum of symptomatology ranging from subclinical deficits to overt clinical disorders. The clinical manifestations of toxic encephalopathy are related to the affected brain regions and cell types. The major clinical syndromes of toxic encephalopathy include diffuse acute or chronic toxic encephalopathy, cerebellar syndrome, Parkinsonism, and vascular encephalopathy. These relatively specific neurological syndromes may be determined by various neurotoxins, including heavy metals, organic solvents and other chemicals. Aim of our study was to investigate the etiology of toxic encephalopathy in Romanian patients in Floreasca Hospital Emergency Department.

Participants and methods.

We included in this study, 100 patients presented with toxic encephalopathy to Floreasca Hospital between March 2015 – March 2016, and we collected the demographic data (e.g. age, gender, region, etc.), risk factors (e.g. pathological personal history etc.), symptomatology at presentation and type of toxic. The data were statistically processed by SPSS ver.20.

Results.

We observed that the most frequent causes of toxic encephalopathy are alcohol consumption, medications, illicit drugs, or toxic chemicals. In the last years, the acute mental status alteration due to alcohol consumption and illicit drugs is increased.

Conclusion.

The symptoms and signs of toxic encephalopathy may be mimicked by many psychiatric, metabolic, inflammatory, neoplastic and degenerative diseases of the nervous system. A good collaboration between neurologists and occupational physicians are needed to determine whether neurological disorders are neurotoxin-related.

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Acknowledgements.

No potential conflict of interest relevant to this study.

#8169 : Can the incorporation of co-morbidity information improve risk estimation in older people with major trauma?

Preferred format : Oral presentation

Authors:

Marie Therese Cooney (1), John Cronin (2), Justine Jordan (3), Rachael Doyle (1), David Menzies (2)

1. Consultant Geriatrician, Saint Vincent's University Hospital, Dublin, IRELAND
2. Emergency Medicine Consultant, Saint Vincent's University Hospital, Dublin, IRELAND
3. Emergency Medicine Senior House Officer, Saint Vincent's University Hospital, Dublin, IRELAND

Keywords: Trauma, geriatrics, risk estimation

Abstract :

Can the incorporation of co-morbidity information improve risk estimation in older people with major trauma?

Background: Large datasets from registries such as the Trauma Audit and Research Network (TARN) facilitates the development of risk estimation systems for these patient populations. An initial analysis of the probability of survival (PS12) risk estimation system in trauma patients enrolled in TARN at our institution demonstrated excellent discrimination in younger individuals with an area under the receiver operating characteristic curve (AUROC) of 0.94 (95% CI: 0.83 to 1.00). However, the ability of the system to estimate risk of short term mortality in older trauma patients was considerably lower with an AUROC of 0.64 (95% CI: 0.39 to 0.88).

Hypothesis: Risk estimation in older people could be improved through the incorporation of co-morbidity information.

Objective: To assess the improvement in performance of the system with the addition of co-morbidity information.

Study population: 869 major trauma patients enrolled in TARN at Saint Vincent’s University Hospital (SVUH), a tertiary referral urban university hospital, between Sept 2013 and Aug 2015.

Methods: PS12 estimates the risk of inpatient or 30-day survival in trauma patients based on Injury Severity Score (ISS), age, gender and Glasgow Coma Scale (GCS). The newer PS14 additionally includes co-morbidities, as a categorical variable defined by the number of co-morbidities present. PS12 and PS14 were calculated for each individual. Discrimination of each system was compared using AUROC. This was done separately for those aged under 65 years and those aged 65 years and over.

Results: In the 419 individuals aged under 65 years, both systems showed excellent discrimination with AUROC of 0.97 (95%CI: 0.94 to 1.00) for PS14 versus 0.96 (95%CI: 0.93 to 1.00) for PS12, p for difference = 0.23. In the 450 individuals aged 65 years and over, discrimination was significantly better in PS14 (AUROC 0.79 (95% CI: 0.70 to 0.88)) compared to PS12 (AUROC 0.71 (95%CI: 0.61 to 0.82)), p for difference <0.001. These findings were consistent when examining older age groups including those aged 75 to 84 years and those aged over 85. However, due to lack of power in some age groups, the differences did not reach statistical significance.

Conclusions: These results suggest that the current PS systems discriminate extremely well in younger people. It is unlikely that further refinements will result in meaningful improvements in risk estimation but may add complexity. For older individuals the addition of comorbidity has resulted in significant improvements. Further refinements including the addition of specific comorbidities, alcohol use and initial vital signs may yield further improvements in discrimination in this age group. Simulated external validation, for example using 10-fold cross validation, may add further strength to these observations.

#8170 : Developing patient information leaflets in the emergency care setting

Preferred format : Oral presentation

Authors:

Elaine Morsman (1), Kush Joshi (2), Cara Lewis (3), Robin Chatterjee (2), Anu Mitra (1)

1. Royal College of Emergency Medicine, Imperial College Healthcare Trust, London, UK
2. Faculty of Sports and Exercise Medicine, Imperial College Healthcare Trust, London, UK
3. Royal College of Anaesthetists, Imperial College Healthcare Trust, London, UK

Keywords: education, patient empowerment, sustainability, training, PDSA

Abstract :

Attendance at Accident and Emergency departments (ED) in the United Kingdom has reached an all time high with 2 million/month for the first time on record(). Now, more than ever, it is key to ensure patients receive timely care. Patient information leaflets (PILs) for common presentations allow health care professionals to disseminate accurate information to patients regarding their diagnosis and aftercare in the fast-paced setting of emergency care.

Junior trainees rotating through emergency medicine training post at Imperial College Healthcare Trust are recruited to develop PILs. Key subjects pertaining to common reasons for attendance are selected and leaflets are developed through experience and by liaising with relevant specialties. The leaflets are initially reviewed by an Emergency Medicine consultant and the patient information management team for suitability.

A plan/do/study/act (PDSA) methodology is employed to trial the PILs on patients who present with relevant conditions. They undergo a questionnaire that includes questions on how useful they find the information, whether accessible language is used and any common questions that remain after reading the leaflet. Based on the results of these questionnaires the leaflets are amended and improved.

The project focuses on empowering patients with information about their reason for attendance and uses a PDSA cycle methodology to ensure continued relevance of the leaflets to patients from year to year. The continued allocation of trainees to this quality improvement project ensures its sustainability while promoting the education in common ED presentations to trainees and inclusion of training doctors in quality improvement projects.

#8171 : High resolution consultation tool for the optimization of hospital admissions and monitoring of patients from the emergency department

Preferred format : ePoster

Authors:

German jose Fermin Gamero (1), Sandra Guiu Marti (1), Bernardino Comas diaz (1), Pedro Rull Bertran (1), Julio Olsen (1)

1. Emergency department , Hospital universitario Son Espases , palma de mallorca , SPAIN

Keywords: high resolution consultation , tool for optimization , emergency department

Abstract :

Bakground :

A preferential consultation is proposed for the referal of patients from the emergency room (ER) , The purpose of this consultation is to avoid the hospital admission of patients with pathologies that need further studies , by streamlining the circuits for monitoring and study of patientes on an outpatient setting , as well as to improve patient satisfaction.

There is currently a preferential external consultation are for dermatology , interna medicine , digestive medicine an orthopaedics.

Objetive :

1-.Welfere activity generated by these consultations.

2-.impact on the percentage of hospital admissions from the ER .

3-.Final destination of the patiente and readmissions to the emergency room .

Methods:

A descriptive , cross-sectional , obervational study was performed by the collection of data contained in the medical history of patients initially seen in the emergency room during 2015.

Results:

130.650 patients attended the emergency department in 2015 , 925 of those were referred to high-resolution consultation.10,5 % were referred to dermatology , 40.8 % orthopaedics , 12.2% to digestive medicine and 30.3 % to internal medicine . The percentage of hospital admissions from the ER was 12.3 % lower tha the previous years figures. 58.6 % of referred patients werw asked for furthure examinations . 30 % of the patients eres referred to primary care and 60.4 % were followed-up in outpatiente care . Only 9.6 % of the patients were admitted to hospital .

Conclusions:

High -resolution consultations provide an alternative to conventional hospital admission from the emergency room . In addition to allowing monitoring of patients, it shortens time to diagnosis. As a result, it reduces patient attendance to the emergency services

#8172 : Patients Suffering Cardiac Arrest from Right Coronary Artery Occlusion can Benefit from Mobile Extracorporeal Circulation

Preferred format : ePoster

Authors:

Chou Tzung-Hsin (1), siu yiu (1)

1. Departments of Emergency Medicine and Surgery, National Taiwan University Hospital, taipei, TAIWAN

Keywords: CPR,ACS,ECMO

Abstract :

Background: Although extracorporeal cardiopulmonary resuscitation (ECPR) has been shown to be beneficial in several cardiopulmonary diseases, its effect on survival after acute myocardial infarction (AMI) complicated by cardiac arrest is unknown.

Methods: We evaluated outcomes in 42 patients who received ECPR and coronary intervention for the treatment of in-hospital cardiac arrest due to AMI between January 1, 2003 and July 1, 2010.

Result: The overall survival rate was 40.47% for patients with cardiac arrest due to MI who received ECPR. After adjustment for age and gender, right coronary occlusion (95% CI[A1] , 0.147–0.951; p = 0.039) and ST-elevation MI (95% CI, 0.097–0.494; p = 0.000) were associated with better survival results. Furthermore, prolonged delay before coronary intervention was associated with worse survival (95% CI, 1.010–1.029; p = 0.000).

Conclusion: In addition to ST-elevation MI and timely coronary intervention, patients with cardiac arrest due to right coronary artery occlusion can benefit from ECPR

#8173 : Effect of vertical location on survival outcomes for out-of-hospital cardiac arrest in Singapore.

Preferred format : Oral presentation

Authors:

Tracy Lian (1), John Allen (2), Swee Han Lim (3), Nur Shahidah (3), Yih Yng Ng (4), Nausheen Doctor (3), Benjamin Leong (5), Han Nee Gan (6), Desmond Mao (7), Michael Chia (8), Si Oon Cheah (9), Lai Peng Tham (10), Marcus Ong (3)

1. MD Student, Duke-NUS Graduate Medical School, Singapore, SINGAPORE
2. Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore, SINGAPORE
3. Department of Emergency Medicine, Singapore General Hospital, Singapore, SINGAPORE
4. Medical Department, Singapore Civil Defence Force, Singapore, SINGAPORE
5. Emergency Medicine Department, National University Hospital, Singapore, SINGAPORE
6. Accident & Emergency, Changi General Hospital, Singapore, SINGAPORE
7. Department of Acute and Emergency Care, Khoo Teck Puat Hospital, Singapore, SINGAPORE
8. Emergency Department, Tan Tock Seng Hospital, Singapore, SINGAPORE
9. Emergency Medicine Department, Ng Teng Fong General Hospital , Singapore, SINGAPORE
10. Childrens' Emergency, KK Womens' and Childrens' Hospital, Singapore, SINGAPORE

Keywords: Vertical, high-rise, OHCA, survival, witness, CPR, AED, first arrest rhythm, ROSC, response time

Abstract :

Background: A large proportion of out-of-hospital cardiac arrests in Singapore (OHCA) occur in high-rise residential buildings.[1] This study aims to investigate the effect of the vertical location (floor level of apartment building) at which patients collapse from cardiac arrest, on survival outcomes and response times.

Participants and methods: A retrospective study was done based on data obtained from the Singapore cohort of the Pan Asia Resuscitation Outcome Study (PAROS). OHCA data from January 2012 to December 2014 were used. All OHCA patients conveyed by Emergency Medical Services (EMS) and confirmed by the absence of pulse, unresponsiveness and apnea were included. All OHCA cases occurred in Singapore. OHCA cases with incomplete data on vertical location were excluded. Primary outcome was survival to hospital discharge or to 30 days post cardiac arrest. Statistical analysis was performed using SAS V9.3 (SAS Inc., Cary NC, USA) and expressed in terms of counts and percentages, odd ratio (OR) and the corresponding 95% confidence interval, mean and the standard deviation (SD) as well as p-value.

Results: A total of 5114 OHCA cases met the inclusion criteria for this study. 76 cases (1.5%) had missing vertical location data and were excluded. Out of the 5038 OHCA cases analyzed, 1482 (29.4%) cases occurred at ground level, 41 (0.8%) cases occurred at basement levels and 3515 (69.8%) cases occurred at $\geq 2^{nd}$ floor level. 3653 out of 5038 cases (72.5%) occurred in home residences. The response time (in minutes) from time of ambulance arrival on scene to patient contact by EMS for cases that occurred at basement levels (mean 3.32 [SD 4.24]) and cases that occurred at $\geq 2^{nd}$ floor level (mean 2.53 [SD 1.66]) are both significantly higher ($p<0.001$) than those that occurred at ground level (mean 1.67 [SD 1.99]). Survival outcomes for OHCA patients were poorer as the vertical location increases away from ground. For every 1 floor increase in vertical distance from ground, OHCA was 4% less likely to result in survival (OR 0.96 [0.92 – 0.99]). OHCA was also 3% less likely to be witnessed (OR 0.97 [0.96 – 0.98]), 1% less likely to have bystander CPR performed (OR 0.99 [0.98 – 1.00]), and 16% less likely to have bystander AED applied (OR 0.84 [0.79 – 0.89]) for every level increment in vertical distance from ground. First arrest rhythm was also 7% less likely to be shockable at every floor increment (OR 0.93 [0.92 – 0.95]. Return of spontaneous circulation (ROSC) on scene or enroute was 3% less likely to happen (OR 0.97 [0.94 – 0.99] and 3.5% less likely to be maintained at the ED [OR 0.97 [0.94 – 1.00] for every increase in vertical floor distance from ground.

Conclusion: There is significant effect of vertical location on survival outcomes for OHCA in Singapore. Interventions aimed at improving access to OHCA patients in high vertical floors need to be investigated.

[1] Goh, E.S., Liang, B., Fook-Chong, S. et al. Effect of location of out-of-hospital cardiac arrest on survival outcomes. Ann Acad Med Singapore. 2013;42:437–444.

#8174 : Factors associated with recurrent diabetic ketoacidosis in the emergency department

Preferred format : Oral presentation

Authors:

WIDED BAHRIA (1), HANENE GHAZALI (1), WIDED BOUSSELMI (1), ANWARE YAHMADI (1), FARAH RIAHI (1), MAHBOUBA CHKIR (1), MONIA NGACH (1), SAMI SOUISSI (1)

1. EMERGENCY DEPARTMENT , REGIONAL HOSPITAL OF BEN AROUS, BEN AROUS, TUNISIA

Keywords: Diabetic ketoacidosis, recurrence, emergency department, risk factors

Abstract :

Introduction:

Diabetic ketoacidosis (DKA) is one of the most commun diagnosis in the emergency department(ED). Many studies reported that DKA is the leading cause of mortality .In addition to the risk of fatality,recurrent DKA has a major impact on the quality of life of patients and many factors can be associated with it.

Objective:

The aim of this study was to identify the factors that influence recurrent DKA in the ED.

Methods:

We carried out a prospective observational cohort study in patients who were hospitalized in the ED for DKA during four years (2012-2015) .The epidemiological data ,clinical signs, etiology and treatment were studied. An univariate linear regression analysis was carried out to find out the variables associated with recurrent DKA.

Results :

Inclusion of 176 patients.136 with type 1 diabetes and 40 with type 2 diabetes. Mean age was 34 +/- 16 years. Sex ratio = 0,81. The major clinical signs were vomiting (69%) and dyspnea (53%). The leading precipitating causes of DKA were the poor compliance with insulin therapy (44%) and infection (42%). A total of 145 patients presented with the first time DKA and 31 with recurrent episodes. Compared with the first-time DKA patients, those with recurrent episodes were younger (27 ±13 years vs 35 ± 16, p=0,003),had type 1 diabetes (97 % vs 78 %,p=0,008), duration of diabetes less than 5 years (61% vs 54 %, p=0,02), had more hyperventilation (Paco2= 18 ± 5 mm hg vs 22 ± 7, p=0,004),and a short delay of visit to ED (39 ± 3 hours vs 66 ± 10 , p=0,008).

Conclusion:

The younger age , a short delay of visit ED , a low Paco2 and duration of type 1 Diabetes less than 5 years were associated with recurrent DKA **.** The recognition of such factors and the institution of specific programs might reduce DKA recurrence .

#8176 : Managing emergency ambulance calls in São Paulo, Brazil

Preferred format : ePoster

Authors:

Flavia Fernandes (1), Oswaldo Tanaka (1), Janette Turner (2)

1. , Universidade de São Paulo, São Paulo, BRAZIL
2. , University of Sheffield, Sheffield, UK

Keywords: emergency medical services, triage, pre hospital care

Abstract :

Background: In São Paulo lack of resources and high demand means it is not possible to dispatch an ambulance for all emergency calls. Calls are triaged using AMPDS then re-triaged by physicians who choose which cases are prioritized. This study aimed to identify which criteria other than AMPDS codes influence physician decision on ambulance dispatch.

Methods: We used one month call data for October 2012. For each emergency incident assigned an AMPDS response we calculated the number of incidents in each of the 34 chief complaints allocated to each response level (Delta through Alpha) and selected those with frequencies ≥ 10%. For this subgroup the proportion of calls allocated a response in less than 10 minutes was calculated and, chief complaint type compared for each level.

Results: Out of 202,186 telephone calls, 37,457 (18.5%) were eligible for ambulance service assessment. Of these 23,736 (63.4%) were allocated an ambulance, 13,339 (35.6%) within 10 minutes. 13,721 (36.6%) had no ambulance dispatched. Chief complaints with the highest proportion of calls allocated within 10 minutes were *Third party request* for Delta calls, (99%; p<0.0 01); *Unconscious/Fainting (Near)* for Charlie (44%; p=0.0142); and *Falls* for both Bravo and Alpha (43% and 37%; both p<0.001).

Conclusion: Allocation within 10 minutes was used to infer prioritization. In addition to the AMPDS the physicians prioritized patients who were unconscious or fell. Calls from other services (e.g police, fire, health professionals) are coded as Delta and are prioritized over other chief complaints.

#8177 : Mind the Syncope

Preferred format : ePoster

Authors:

German jose Fermin Gamero (1), Claudina Revol (1), Carmen Rodriguez ocejo (1), Pedro Rull Bertran (1), Sandra Guiu Marti (1), Bernardino Comas diaz (1), Alejandro Adrover (1), Julio Olsen (1)

1. Emergency department , Hospital universitario Son Espases , palma de mallorca , SPAIN

Keywords: syncope ,Acute Pericarditis , pericardial effusion

Abstract :

72 year old woman with a history of hypertension, COPD , no known drug allergies diagnosed in the emergency room 10 days before pericarditis acute days (box chest pain center retroesternal at rest progressive establishment, radiating to the neck and drop PR ECG. Discharged in treatment of NSAIDs and colchicine), go back to the emergency room episode of dyspnea woke him at night, and when going to the bathroom presents transfixing chest pain and syncope. In the last 48 hours it has presented another episode of similar characteristics.

On arrival at the emergency room the patient has dyspnea at rest with inability to speak, sinus tachycardia to 120x ', sweaty and general nervousness. Presents heart rate (HR) 125 bpm, TA within normal limits, eupneic with SatO2 96% and 37 Tª.

A physical examination is pale and sweaty, with tachycardia cardiac auscultation, no murmurs or pericardial rub. paradoxical radial pulse and light edemas in lower limbs. No jugular venous distension. Auscultation normal respiratory and abdominal exploration.

In additional tests to 100bpm sinus rhythm with narrow PR and decreased voltages, aortic elongation of the aortic button prominence in CXR is objective; in analytical leukocytosis are 13,700 (78.4% neutrophils) and D Dimer 2509, with troponin and normal hemoglobin. arterial blood gas analysis in p02 71mmHg, pCO2 29 mmHg and pH 7.53

CT angiography was requested by suspected pulmonary tromboembolisto, which is reported as Dilation of the pulmonary artery, pericardial effusion Severo study it seems restricted venous return, Moderate Mild hepatomegaly and pleural effusion.

interconsultation is done performing cardiology echocardiography moderate pericardial effusion without cardiac tamponade data so that guide clinical case as torpid pericarditis with pericardial effusion.

It is entered by putting in place internal medicine treatment with ibuprofen, colchicine and doxycycline. After slow clinical improvement is discharged with outpatient control by cardiology.

Acute Pericarditis represents 0.1 % of all hospital revenue and 5% of revenues from the emergency room with chest pain etiology of idiopathic 80-90 % , 5-10 % and 2-7 % neoplastic tuberculosis, the percentage of complications ages between 17-90 years is 16.8% . We conducted a literature search regarding the increase in D dimer pericarditis and found no conclusive studies on the subject .

#8178 : Lactic acidosis caused by Metformin

Preferred format : Oral presentation

Authors:

LUPE DEL ROCIO CORONEL CHUMBI (1), JUAN ANTONIO HIDALGO RAMOS (2), Ashid Kodumayil (3), MONICA ASUNCION ALEIXOS ZURIAGA (4), MARIA FERNANDA FALCON REIBAN (5), PAUL ESPINOZA MOSQUERA (6), JUAN ORLANDO LOPEZ OJEDA (7), MEULRY CAPELINI (8)

1. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, MURCIA, SPAIN
2. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, VALENCIA, SPAIN
3. ACCIDENT AND EMERGENCY SERVICE, HAMAD MEDICAL CORPORATION, DOHA, QATAR
4. INTERN MEDICINE, VIRGEN DEL CASTILLO HOSPITAL, VALENCIA, SPAIN
5. ACCIDENT AND EMERGENCY SERVICE, Clinico Universitario Hospital, ZARAGOZA, SPAIN
6. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, ZARAGOZA, SPAIN
7. PNEUMOLOGY, VIRGEN DEL ARRIXACA HOSPITAL, MURCIA, SPAIN
8. ACCIDENT AND EMERGENCY, VIRGEN DEL ARRIXACA HOSPITAL, MURCIA, SPAIN

Keywords: Metformin, Lactic acidosis, Kidney failure

Abstract :

Introduction: This case report include a brief review of the literature about the lactic acidosis, and specifically the lactic acidosis caused by Metformin. Case report: We describe a 83-year-old patient, with type 2 diabetes who was found unconsciousness by his neighbour. He was tachypnoeic. He also had hypertension, atrial fibrillation and Chronic kidney disease. His medications were Vildagliptin/ Metformin 50/1000 mg every 12 hours and Insulin Humulina NPH KwikPen 18 Units Once daily, Acenocoumarol 3 mg Once daily, Barnidipine 20 mg Once dailys, Carvedilol 6,25 mg Once daily and, Valsartán/Hydrochlorothiazide 80/12.5 mg Once daily.. Relatives of the patient reported that he has been unwell for 5 days prior to the event. He was hyporexia and repeated hypoglycemias. On arrival the patient was tachypneic, pale and clammy, and was unresponsive. He was oliguric. Tests on admission showed urea 165 mg/dl, creatinine 9.44 mg/dl, pH 6.645, bicarbonate 2.1 mmol/l, and lactate 24 mg/dl, Leukocytes 17400. A computed tomography of brain was done and it was normal. The patient was managed with aggressive fluid therapy and inotropic support and was admitted Intensive Care Unit. Metabolic acidosis are caused by various disturbances of acid-base balance. The causes may be due to loss of bicarbonate, alterations in renal excretion of acids, the exogenous contribution acid hydrogen or an increase in endogenous acid production., Lactic acidosis deserves special attention because of their frequency, morbidity and potential mortality. Lactic acidosis, usually the result of the accumulation of the isomer L-lactate, can be congenital or acquired, Acquired lactic acidosis may be secondary to tissue hypoxia (type A) or impairment of liver and or kidney, seizures or exposure to toxins (type B). A common adverse effect acute or chronic biguanide (Metformin) use in treating diabetes is lactic acidosis. The incidence of lactic acidosis is 5.1 cases per 100,000 patients years. A physician have to pay attention if a patient on Metformin presents with metabolic acidosis. The common triggers in such patients are dehydration, administration of iodinated contrast, surgery, treatment with NSAIDs and starting new medications like w diuretics or antihypertensives, acute infection or hepatic insufficiency Metformin is eliminated rapidly and actively by the kidney and any decrease in renal perfusion accumulates the drug in the body and cause lactic acidosis. References: 1. Boucaud-Maitre D et al. Lactic acidosis: relationship between metformin levels, lactate concentration and mortality. Diabetic Medicina (2016) 1:18 DOI: 10.1111/dme.13098 2. Doenyas-Barak et al. Lactic acidosis and severe septic shock in metformin users: a cohort study. Crit Care. 2016 Jan 15;20(1):10. doi: 10.1186/ s13054-015-1180-6. PMID: 26775158 3. Petersen C. D-lactic acidosis. Nutr Clin Pract. 2005;20: 634-45. 4. Herrero et al. Alteraciones del metabolismo ácido base: acidosis. Medicine. 2015;11(79):4748-58 5. Salpeter S, Greyber E, Pasternak G, Salpeter E. Risk of fatal and nonfatal lactic acidosis with metformin use in type 2 diabetes mellitus. Cochrane Database Syst Rev 2006.

#8179 : Apparent insect bite that ends in finger amputation.

Preferred format : Oral presentation

Authors:

LUPE DEL ROCIO CORONEL CHUMBI (1), JUAN ANTONIO HIDALGO RAMOS (2), Ashid Kodumayil (3), MONICA ASUNCION ALEIXOS ZURIAGA (4), MEULRY CAPELINI (5), MARGARITA GERTRUDIS FERRANDEZ ABELLAN (6), KISSY MARLENE RUIZ RIVERO (5), ELISA MENDAZA GOMEZ (5)

1. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, MURCIA, SPAIN
2. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, VALENCIA, SPAIN
3. ACCIDENT AND EMERGENCY SERVICE, HAMAD MEDICAL CORPORATION, DOHA, QATAR
4. INTERN MEDICINE, VIRGEN DEL CASTILLO HOSPITAL, VALENCIA, SPAIN
5. ACCIDENT AND EMERGENCY, VIRGEN DEL ARRIXACA HOSPITAL, MURCIA, SPAIN
6. ACCIDENT AND EMERGENCY, VIRGEN DEL CASTILLO HOSPITAL, ELDA, SPAIN

Keywords: Cellulitis, Necrotising cellulitis

Abstract :

Introduction: A patient presented with a suspected insect bite ends up having his finger amputated. This case report include a brief review of the literature about necrotising soft tissue infections. Case report: A 47 years-old male, presented to the Emergency department with mild itching and pain on his left index finger.He initially denied any trauma but observed a erythematous patch on the dorsal aspect of the finger. Two hours after the ED consultation re represented hours after patient consulted by increasing of pain and required opiates to relieve the pain Upon arrival she showed mild erythema and Oedema only in the finger. Labs showed leucocytes at 22 000. He was treated as a cellulitis by possible insect bite and empirical antibiotic therapy was initiated. Few hours later he presented with lymphangitis in the arm and signs of necrosis in the finger. A venous Doppler ultrasound of left upper limb done and was normal. He underwent surgical debridement but developed necrosis and later ended up having amputation of the finger. Blood culture showed Streptoccocus pyogenes. Two weeks later patient report he remembers injury the finger with a rose thorn the day before initial presentation. Necrotising cellulitis presents with pain and swelling, the onset is gradual, but the process may spread rapidly with systemic toxicity. Early surgical exploration and debridement are required to prevent spread of infection in the different planes of tissues References: 1. Demain JG. Papular urticaria and things that bite in the night. Curr Allergy Asthma Rep 2003; 3:291. 2. Siljander T, Karppelin M, Vähäkuopus S, et al. Acute bacterial, nonnecrotizing cellulitis in Finland: microbiological findings. Clin Infect Dis 2008; 46:855. 3. Leppard BJ, Seal DV, Colman G, Hallas G. The value of bacteriology and serology in the diagnosis of cellulitis and erysipelas. Br J Dermatol 1985; 112:559. 4. Woo PC, Lum PN, Wong SS, et al. Cellulitis complicating lymphoedema. Eur J Clin Microbiol Infect Dis 2000; 19:294.

#8180 : Renal colic versus appendicitis.

Preferred format : Oral presentation

Authors:

LUPE DEL ROCIO CORONEL CHUMBI (1), JUAN ANTONIO HIDALGO RAMOS (2), Ashid Kodumayil (3), JUAN ORLANDO LOPEZ OJEDA (4), KISSY MARLENE RUIZ RIVERO (5), ELISA MENDAZA GOMEZ (5), MARIA FERNANDA FALCON REIBAN (6), PAUL ESPINOZA MOSQUERA (7)

1. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, MURCIA, SPAIN
2. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, VALENCIA, SPAIN
3. ACCIDENT AND EMERGENCY SERVICE, HAMAD MEDICAL CORPORATION, DOHA, QATAR
4. PNEUMOLOGY, VIRGEN DEL ARRIXACA HOSPITAL, MURCIA, SPAIN
5. ACCIDENT AND EMERGENCY, VIRGEN DEL ARRIXACA HOSPITAL, MURCIA, SPAIN
6. ACCIDENT AND EMERGENCY SERVICE, Clinico Universitario Hospital, ZARAGOZA, SPAIN
7. ACCIDENT AND EMERGENCY SERVICE, VIRGEN DEL CASTILLO HOSPITAL, ZARAGOZA, SPAIN

Keywords: Appendicolith, appendicitis, renal colic.

Abstract :

Introduction: A patient presented with right sided colicky pain in the flank This case report include a brief review of the literature about appendicolith.

Case report:

Patient female, 23 years-old, cane with 20 hours of colicky pain in the right iliac fossa and right lower lumbar region. The pain was worse on walking. She was apyrexial not There was associated vomiting.

Initial test show Leucocyte count of 11000. Urine has ketones ++++ and blood +++. Though renal colic was the primary differential diagnosis, in the face of findings on physical examination being suggestive of appendicitis a simple abdominal radiography was performed and it two appendicoliths .

Surgeon reports the discovery of two appendicoliths > 1 cm in diameter, which were causing pressure on the right ureter. This was possibly causing blood in urine.

References:

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#8181 : Incresed appropriateness in laboratory requests in the ED through revision of software automated routine lists: our experience

Preferred format : Oral presentation

Authors:

Roberta Marino (1), Aldo Tua (1), Marianna Tagliabue (1), Francesco Saverio Moschella (1), Chiara Pizzorno (2)

1. Emergency Medicine Unit, S.Andrea Hospital, Vercelli, ITALY
2. Emergency Medicine Unit, SS Pietro e Paolo Hospital, Borgosesia, ITALY

Keywords: appropriateness, laboratory tests, cost-benefit

Abstract :

Background

Appropriateness in laboratory requests in the Emergency Department (ED) can lead to costs reduction and better use of the economic resources. In our ED, a level I in northern Italy with about 40.000 visits/year, the laboratory requests can be done through fixed routines or by choosing exams one by one. Fixed routines are easier and faster to request but still allow physicians to add single exams, not included in the routines.

Methods

In November 2015 we modified the fixed routines, removing some exams and adding others after an internal informal discussion among senior emergency physicians. We also reviewed the routines (Table 1)

Table : Full description of the new laboratory routines adopted in our ED

Mini-routine: Blood count and formula, creatinine, sodium, potassium, glycaemia, Alanine Aminotransferase (ALT)

Medical general: Mini-routine + calcium, prothrombin time (PT), lactic dehydrogenase (LDH), fibrinogen

Abdominal routine: Medical general + lipase, aPTT

Pre-surgery – trauma – bleeding: Mini-routine + PT, activated partial prothrombin time (aPTT), fibrinogen

Septic patient: Pre-surgery + C reactive protein (CRP), urine analysis

Cardiologic: Mini-routine + high sensitivity (HS) troponin I

We calculated the laboratory requests in the first 4 months of 2015 and 2016 and their costs, we also verified differences in the number of patients in our ED in the same period.

Results

In the first 4 months of 2015 12.324 patients were visited in our ED, compared to 12.490 of the same months of 2016 (+ 1,30%). The results of the requested exams in the same months are summarized in Table 2. Variations lower than 2% were not reported.

Table 2 : Detail of results

Test variation	Number in 2015	Number in 2016	% reduction/ increase	Unitary cost	Total cost
Alanine Aminotranferase (ALT)	5343	5225	-2.20%	1,00 €	-118,00 €
Aspartate Aminotranferase (AST)	5121	260	-95.00%	1,00 €	-4861 €
Bilirubin	4259	3861	-10.00%	1,40 €	-557 €
Glucose	5329	5191	-2.60%	1,20 €	-165 €
Lipase	1659	1351	-19.60%	2,60 €	-800 €
Potassium	5497	5391	-2.00%	1,00 €	-106 €
Sodium	5487	5382	-2.00%	1,00 €	-105 €

Urea	227	302	+25.00%	1,10 €	+82 €
Urine Analysis	459	667	+31.00%	2,20 €	+457 €
D-dimer	502	323	-26.00%	10,30 €	-1843 €
Fibrinogen	4162	3914	-6.00%	2,70 €	-248 €
CRP	3136	3319	+5.60%	3,90 €	+713 €
aPTT	4302	1355	-69.00%	2,90 €	-8546 €
PT	4347	4055	-6.70%	2,90 €	-846 €
LDH	4491	4046	-10.00%	1,10 €	-489 €
Creatine Phosphokinase (CPK)	4063	2852	-30.00%	1,40 €	-1695 €
Chloride	3154	235	-92.50%	1,00 €	-2919 €
Calcium	3206	3029	-5.50%	1,10 €	-194 €
Blood Colture	173	269	+35.00%	26,40 €	+2534 €
Total requests	**64917**	**51027**	**-21.40%**		**-19706 €**

Our data suggest that an enhanced appropriateness in laboratory requests in the ED lead to general cost reduction and allow to better utilization of the economic resources. The increased request of blood cultures is an example of better distribution of resources.

#8182 : How to Assess Chest Compression Quality In Emergency Medicine Team

Preferred format : ePoster

Authors:

Radmila Majhen Ujevic (1), Zoran Vidovic (2), Leo Luetic (1)

1. prehospital, Institute for emergency medicine split-dalmatian county, Split, CROATIA
2. prehospital, Institute for Emergency medicine Split-Dalmatian County, Split, CROATIA

Keywords: assess, compression,score, team

Abstract :

HOW TO ASSESS CHEST COMPRESSION QUALITY IN EMERGENCY MEDICINE TEAM

INTRODUCTION: Emergency medical service in Croatia is two-tier system – in Split it consists of three Team 1 (T1 - physician, emergency medicine technician -EMT, driver with no former medical education) and Team 2 (T2 - two EMT) in 24 hours, taking care of 178000 inhabitants. All team members working in Institute for Emergency Medicine Split-Dalmatian County have passed structured education in basic skills and procedures according to recent guidelines and competencies. We tried to make an objective assessment of their chest compression skills after more than one year of any training.

METHODS: We made a prospective investigation of chest compressions skills at our physicians, EMT and drivers working daily 12 hour shift in four consecutive days so that all teams in Split could participate. They were asked to make chest compressions on manikin Resusci Anne QCPR-D with sensor and software that provides real time feedback (Resusci Anne Wireless Skillreporter) . From data of rate, depth and recoil it calculates total cpr score (limited to chest- compression-only,2 minutes, depth 5-6cm, rate 100-120/min). No demonstration was provided formerly. There were 19 physicians (13 women, 6 men - daily shift in T1 as well as daily shift in Medical Dispatch Unit because they are also T1 members), 23 emergency medicine technician (T 1 and 2) and 12 drivers. 1 physician was excluded because of active rheumatologic illness as well as 1 driver who had intensive training less than 6 months ago.

RESULTS: Average CPR score for physicians was 79,16% (SD= 18,92). EMT had 92,57% (SD=8,74) and drivers had 96,27% (SD= 3,26) score of successful chest compressions. They were all in group „advanced CPR provider“. Physicians achieved in 72,32% (SD= 33,29), EMT 60,09% (SD= 30,1) and drivers in 80,45% (SD=14,97) successful chest recoil. Physicians achieved 45,53% (SD= 34,60) satisfying depth , EMT 77,26% (SD = 17,49)and drivers 77,27% (20,16). Adequate compression rate was achieved by physicians in 72,42% (SD=26,48), by EMT 78,39% (SD= 20,90) and by drivers in 83,82% (SD =17,87).

CONCLUSION: The physician group had most variable results concerning both total cpr-chest compression-score and all three components participating in total score - recoil, depth and rate. That is probably due to significant difference in working experience (from 1 till more than 20 years) which means less and more opportunity in performing CPR, taking into account participation of 13 women - only physicians. Drivers had the best score both total and in all three components. It is probably due to the fact that they most frequently perform chest compressions during CPR that enables them to preserve the skill. Short training after 3-6 month, as reccommended by guidelines, should be performed to see if this score would improve at all team members, not only observing chest compression, but ventilation and cpr combining both compression and ventilation since most studies show that CPR skills decay within three to six months after initial training.

#8183 : Something has bitten me.

Preferred format : ePoster

Authors:

Cyntia Anabella Sesam Méndez (1), Martha Urdaz Hernández (2), Maria Pilar Poveda Serrano (3), Felicidad Yañez Rodriguez (2), Carmen Torra Cuixart (4), Eduardo Romano Maqueda (5), Karen Contreras Delgado (5), Vanesa Girón Estrada (6)

1. Family medicine and emergency medicine resident, Hospital Ernest Lluch, Calatayud, Zaragoza, SPAIN
2. Family medicine and emergency medicine fellow, Hospital Ernest Lluch, Calatayud, Zaragoza, SPAIN
3. Family Medicine and Emergency medicine fellow, Hospital Ernest Lluch, Calatayud, Zaragoza, SPAIN
4. Family Medicine and Emergency medicine fellow, Centro de Salud Norte, Calatayud, Zaragoza, SPAIN
5. Family Medicine and Emergency Medicine resident, Hospital Ernest Lluch, Calatayud, Zaragoza, SPAIN
6. Family medicine and emergency medicine fellow, Centro de Salud de Tarazona, Zaragoza, SPAIN

Keywords: Tick bite, tick borne, deep vein thrombosis, thromboembolic complications, infection disease.

Abstract :

INTRODUCTION: Tick bite is a public health concern because ticks are among nature’s efficient transmitters of infectious bacteria, with a variety of clinical presentations and a complicated clinical course without taking early actions.It is important to remove a tick as soon as you find it.Removing the tick's body helps you avoid diseases the tick may pass on during feeding.Prevention is the best means of dealing with ticks and the diseases they can transmit to humans.

PERSONAL HISTORY: No known allergies.Hypercholesterol no treatment.Surgical Ant. Varices in 2007.

PRESENT ILLNESS:58 years old man who comes to the emergency room for pain in inner side of right calf. Indicates that a month ago had bug bite, that was treated with antibiotics by their primary care physician, but since then he has presented asthenia.Today again presents a bug bite in the internal base of the right thigh.He removed the insect and go to the emergency room presenting leg pain. No fever, no other associated symptoms.

EXPLORACION GENERAL: Hemodynamically stable, roams in antalgic position.Presents induration on the medial malleolus and indurated way up to the knee.At the level of the base of the thigh, objectifies wound insect bite, because it is possible to see traces of feet into the wound.Analytical studies: Leu 8620 (N59%, L27%, M11%).VENOUS DOPPLER: Dilated venous pathway in the territory of the saphenous vein with echogenic occupation and loss of flow in the Doppler suggestive of thrombosis, to the proximal segment. Borre. Burgdorferi IgG negative.

Clinical judgment, differential diagnosis, problem identification: Patient who initially presented pain in the right lower extremity, linear venous path induration, differential diagnosis arises: 1.phlebitis, 2.cellulitis, 3.lymphangitis; having made an exhaustive physical exam and valuing his personal/social context, it was determined that the patient has a thromboembolic complication secondary to a tick bite.

DIAGNOSIS: Deep vein thrombosis as a complication of tick bite

Treatment, action plans: Insect debris removal, antibiotic, enoxaparin and NSAIDs. Followed by Surgery, Dermatology and Family Physician to assess progress and check the correct intake of medication.

Discussion and Conclusions: There is a few bibliographic information about this new disease. The first time describe was in July 2009 a 77-year-old man from western Sweden. This patient was the first human to be infected with Candidatus Neoehrlichia mikurensis, which was first isolated in rats from Mikura Island, Japan in 2004. However, the bacteria have never before been detected in Sweden: not in ticks, rats, or humans. The bacteria have infected eleven patients thus far; three in Sweden, and the rest scattered throughout Germany, Switzerland and the Czech Republic. Its widespread range across Europe suggests that it could be an emerging pathogen and it is associated with thromboembolic complications. The importance of publishing this case is to show this new disease. "You can´t look for, which is not known", because of that it was not possible to isolate another causal agent since only Lyme serology was performed. Fortunately for the patient, Doxycycline was prescribed, medication described as effective in the treatment of this disease. A new disease, a new challenge.

#8184 : Analysis of the pain assessment practice by the medical team of Jeanne de Navarre Hospital Center

Preferred format : Oral presentation

Authors:

Imene Boukhalfa (1), louis Ouedraogo (2)

1. emergency department, CH Jeanne de Navarre , château thierry, FRANCE
2. geriatric, Centre Hospitalier de Château Thierry, Château Thierry, FRANCE

Keywords: pain, scale, practice

Abstract :

Title: Analysis of the pain assessment practice by the medical team of Jeanne de Navarre Hospital Center

Authors: Boukhalfa.I, Ouedraogo.L, Kodzin.MJ, Fiani.N

Hospital Center Jeanne de Navarre, Château-Thierry, France

Background

The proper management of patients' pain requires an efficient assessment. Mastering this practice by the medical team, based on protocols using validated and adapted rating scales, is the only guarantee.

Participants and Methods

To analyze the practice of pain assessment by the medical staff at the Jeanne De Navarre Hospital Center of Chateau-Thierry, we conducted a prospective and a cross-sectional study using a self-administered questionnaire to all of the staff members during the month of March 2016. The results were analyzed using Microsoft Excel software.

Results

We collected 149 questionnaires: 47% nurses, 26% care-assistants, 20% doctors and 5% obstetric nurses. 60% were aged between 30 and 50 years and 42% were under 10 years of experience. 80% took courses on the pain management and only half was entitled to ongoing training. 87% said they know about the different analgesic medicines for pain and 40% ranked them according to OMS levels and yet 15% have confused the auto and straight assessment scales. Despite the presence of a protocol in each service, 82% were aware and only 70% applied it. The VAS (visual analog scale for pain) was the most used scale in adults and children and ALGOPLUS for the elderly. 54% assessed the pain in less than one minute and 30% couldn’t do anything for against pain without prescription. 65% of physicians do early prescription for the pain treatment. 38% of staff recognized the difficulty of pain assessment especially in demented and non-communicative patients. In total 67% consider the pain assessment as good.

Conclusion

Although the majority of the staff in our hospital adheres to the pain management protocols, some of them remain not aware of this practice. It is essential to ensure continuous training and organizing awareness days to improve the current situation.

#8185 : Benzylglycinamide abuse: a new psychoactive substance analytically-confirmed case

Preferred format : ePoster

Authors:

Carlo Alessandro Locatelli (1), Antonella Valli (2), Eleonora Buscaglia (1), Pietro Papa (2), Loretta Rocchi (2), Laura Rolandi (2), Marcello Di Tuccio (2), Massimo Serra (3), Davide Lonati (1), Valeria Margherita Petrolini (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Laboratory of Analytical Toxicology, Clinical Chemistry Service, IRCCS Policlinico San Matteo Foundation, Pavia, Pavia, ITALY
3. Department of Drug Science, Medicinal Chemistry and Pharmaceutical Technology Section, University of Pavia, Pavia, ITALY

Keywords: benzylglicinamide, poisoning, intoxication, clinical toxicology, NPS

Abstract :

Objective: We present a case of analytically-confirmed consumption of benzylglycinamide, a phenyl derivative of glycinamide and an analogue of milacemide (1,2) in a patient with a suspected intoxication by New Psychoactive Substances (NPS).

Case report: A female patient, 21, with a history of addiction was admitted to the psychiatric ward with a suspected NPS intoxication. She showed reduced emotional expression, dysphoria, restlessness and denied any consumption of drugs of abuse. Her mother referred about some episodes of “absence” during the previous month. Standard toxicological screening in urine, neurological examinations, standard and sleep-deprived EEG and MRN tested negative. Urine sample and a powder found by the patient’s mother were sent to our laboratory for NPS screening. The analysis of the powder performed both in gascromatography-mass spectrometry (GC-MS), full scan mode and in ^{1}H-NMR proved it was benzylglycinamide. The benzylglycinamide transitions (precursor ion 165.05; quantifier transition 90.95, qualifier 120) used for the analysis in Liquid Cromatography-Tandem Mass Spectrometry, Multiple Reaction Monitoring mode, were obtained through the tuning of the powder, being a certified standard of benzylglycinamide difficult to purchase from our supplier companies. 1ml urine, additivated with dosulepin as internal standard, was extracted with a mixture of exane:ethylacetate (3:1) at pH14 and analysed by the LC-MS-MS system. The analysis resulted positive for benzylglycinamide (230 ng/ml). Urine was also submitted to the screening for NPS (3) that involves: a generic analysis for basic, non-volatile substances by GC-MS; a screening by LC-MS-MS for NPS belonging to the classes of cathinones, benzofurans, 2C-family drugs, other amphetamine-like substances, dissociative anaesthetic and two immunoassays for synthetic cannabinoids in urine. No positivity emerged. Buprenorphine, LSD, and ecstasy tested negative, too.

Conclusion: Benzylglycinamide was never commercialized and no data about its pharmacokinetic and pharmacodinamic in human is available. The evidence presented here is concerning with a warning of N-benzylglycinamide as a possible NPS whose effects are almost completely unknown.

References: 1. Sussan S, Dagan A, Blotnik et al. The structural requirements for the design of antiepileptic-glycine derivatives. Epilepsy Research 1999;34:207-220: 2. O’Brien E M, Dosterrt P, Pevarello P et al. Interactions of some analogues of the anticonvulsant milacemide with monoamine oxidase.1994 Biochem Pharmacol;48:905-914; 3. Papa P, Rocchi L, Rolandi L, Valli A et al. Research and identification of new psychoactive substances in cases of suspected intoxication in Italy. 2014 Italian Journal on Addiction;4:50-56

#8187 : Binge drinking and New Psychoactive Substances (NPS): a potentially dangerous health risk

Preferred format : Oral presentation

Authors:

Eleonora Buscaglia (1), Valeria Margherita Petrolini (1), Marta Crevani (1), Azzurra Schicchi (1), Emanuela Cortini (1), Francesca Chiara (1), Mara Garbi (1), Pietro Papa (2), Elisa Roda (1), Davide Lonati (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Laboratory of Analytical Toxicology, Clinical Chemistry Service, IRCCS Policlinico San Matteo Foundation, Pavia, Pavia, ITALY

Keywords: ethanol, NPS, poisoning, intoxication, clinical toxicology

Abstract :

Objective: Binge drinking is an increasing dangerous practice involving mainly children or adolescents and, in some circumstances (e.g. rave party, college drinking), is possibly associated with the co-assumption of substances of abuse [1]. We analyzed all cases of suspected assumption of New Psychoactive Substances (NPS) in binge drinkers referred to the Pavia Poison Control Centre.

Methods: Cases of binge drinking (<25 years) with Blood Alcohol Concentration (BAC)>0.5 g/L were retrospectively reviewed (January2010-July2015) and assessed for: age, history, substances of abuse declared, circumstances of assumption, clinical manifestations, outcome, BAC, NPS-identified, association with “old-substance of abuse” (cocaine, opiates, cannabis, amphetamine/methamphetamine), correspondence between history and the analytically identified-NPS. Cases with incomplete data were excluded.

Results: 105 patients met the inclusion criteria. The lowest age recorded was 13 years old (65% <18 years); 69% of cases were registered during week-end. Substances of abuse co-assumed were: ketamine (10 cases), MDMA (5), THC (4), amphetamine (5), cocaine (3), energy drink (2), LSD (2), GBL (1) and heroin (1). Co-assumption of more than one substance of abuse was registered in 38% of cases. Main clinical manifestations were: agitation (55%), tachycardia (38%), coma (34%), delirium/hallucinations (31%), drowsiness (28%), mental confusion (17%), seizures (10%); no fatal cases were registered. In 65% of patients BAC was higher than 1.5 g/L (highest BAC 3.26 g/L). Seventy-six cases resulted negative for NPS, while 36% of these resulted positive for “old drugs”. In twenty-nine patients (28%) at least one NPS was analytically confirmed. NPS-analytically detected in biological samples (urine/blood): MDMA (14), ketamine (7), methoxetamine (6), GHB/GBL (2), 2C-series (2), synthetic-cathinones, 4-MEC (1), synthetic-cannabinoids, JWH-073 (1), atropine (1), benzofurans, APB (1). Correspondence between substance declared and lab results was registered in 10% of cases and complete discrepancy in 45% of cases.

Conclusion: Nowadays binge drinking is a relevant and increasing social problem related to acute and late toxic effects (e.g. brain development) especially during adolescence. Association between binge drinking and NPS may be particularly insidious also for appropriate clinical management. In our experience 3 out of 10 binge drinker assumed at least one NPS. A specialist advanced lab support is essential to make correct diagnosis and to guide the treatment.

Reference: 1. Siqueira L, Smith VC. Binge Drinking. Pediatrics. 2015:31;2015-2337.

Acknowledgements: Study carried out with the support of Department for Antidrug Policies-Presidency of the Council of Ministers.

#8188 : Evaluation of high-fidelity simulation for effective teaching in emergency medicine

Preferred format : ePoster

Authors:

Sébastien Ladyga (1), Jennifer Truchot (2), Maxime Gautier (2), Ghanima Al Dandachi (2), Johana Malka (3), Patrick Plaisance (3)

1. Remplaçant non thésé SAU et médecine générale , Clinique Blanc-Mesnil et SOS médecins 77, Paris, FRANCE
2. SAU , Lariboisière , Paris, FRANCE
3. SAU , Lariboisière , Paris , FRANCE

Keywords: simulation, high fidelity, theorical, practical, teaching

Abstract :

Introduction: Simulation is a novel and effective teaching technique for medical education. It has been integrated in medical education for some years now. The literature suggests a clear benefit for initial learning for technical and non-technical skills. The objective of our work was to show the efficacy of high-fidelity simulation in effective teaching of technical and non technical skills in a specific population of already trained and working emergency physicians.

Material and Methods: We conducted an observational and analytical study on a cohort of emergency physicians participating in a university degree of high fidelity human simulator (METI) training, from January to May 2015. Surveys evaluated pre and post-test theoretical knowledge for each of the three weeks of the degree. We also analyzed the first and the last training session on the simulator for each participant using a validated score evaluating management skills: the NOTECH. A final survey of subjective satisfaction was submitted on the last day of training in order to gather more subjective parameters on the interest in this type of medical teaching. Results are expressed as mean, standard deviation and percentage; the Chi2 test was used for comparisons.

Results: 25 emergency physicians (40.9 years) were enrolled. The majority had worked in the public sector (84.6%) for at least 5 years (60%). Only 20% of them had used simulation before in their initial medical study. A statistically significant improvement was shown in the evolution of the average score between the pre-test and post-test of the first and second week of training (from 8.08 to 11.07 on 20 with $p < 0.001$ for the first and from 9.57 to 12.45 of 20 with $p < 0.01$ for the second). These results were confirmed by the analysis of management skills (NOTECH), which showed a significant improvement of 43.33% of the average score between the first and final training on the simulator (13.34 / 25 to 19.12 / 25 so a gain of 5.78 points with $p < 0.01$). All participants (100%) felt that the use of simulation improved their emergency medicine knowledge and skills.

Discussion: Our results show that simulation training is a useful teaching tool in the continuous emergency medicine education but also that it completes the initial medical education of already qualified doctors. The limits of our work are the low number of participants ($n = 25$) although we found statistically significant results and the lack of a control group which could have given more power to our study. Another limit is the use of NOTECH which is a non-specifically validated tool for emergency medicine.

Conclusion: This study confirms the need to integrate simulation in medical training for both initial but also continuous education. More research is needed in this field, among those, the creation of an evaluation tool for management skills in emergency medicine would be essential.

#8189 : Lethal poisonings: a five-year case series of the Pavia Poison Centre - National Toxicology Information Centre

Preferred format : Oral presentation

Authors:

Carlo Alessandro Locatelli (1), Valeria Margherita Petrolini (1), Davide Lonati (1), Azzurra Schicchi (1), Marta Crevani (1), Mara Garbi (1), Eleonora Buscaglia (1), Giulia Scaravaggi (1), Francesca Chiara (1), Emanuela Cortini (1), Sarah Vecchio (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: lethal poisonings, case series, intoxication, clinical toxicology

Abstract :

Objective: According to the WHO, 346,000 deaths due to accidental poisoning occurred worldwide in 2004. Moreover, almost a million people die every year as a result of suicide and, among these, the deliberate ingestion of pesticides causes about 370,000 deaths/year [1]. To describe the fatal intoxications in the case series of the Pavia Poison Centre (PPC).

Methods A retrospective review of fatal poisonings managed by the PCC form 2010 to 2014 were performed. The included cases were assessed for age, sex, modality and route of intoxication, PSS (Poisoning Severity Score) at the first consultation with the PPC and agents involved. Cases for which the cause-effect relationship between exposure and death was considered absent or unlikely by the specialist toxicologist were excluded.

Results In the study period, 239 fatal cases were included (50% males, 60±20 years), distributed all over Italy, with an average of 47 deaths/year. Five patients (5/239; 2%) were younger than 14 years, and fifty patients (50/239, 21%) were older than 78 years. The exposure was considered accidental in 46 cases (19%), voluntary in 103 cases (42%) with 34 cases of suicide, and related to an adverse drugs reaction in 59 cases (25%). In 31 cases (14%) this data is unknown. Among the cases of suicide, 41.5% of patients were aged between 36 and 56 years. Ingestion was the route of exposure in 80% of cases (191/239). Seventy-five percent of patients (179/239) presented a serious clinical picture at the first PPC consultation (PSS 3). Concerning the agents involved, drugs resulted the cause of death in 110 cases (46%). Among these, the death was related to the ingestion of only one molecule in 65 cases (59%), and metformin was involved in more than half of these (35/65). In 18% of cases (42/110) more than one molecule were ingested at the same time.

Other agents involved in more than 15 cases were caustics (7.5%), pesticides (7.5%), drugs of abuse (7%), gas/smoke fire inhalation (7%) and mushrooms (5%).

Conclusion Fatal poisoning are not related only to suicide, but also to adverse drug reactions and accidental ingestions. The role of Poison Centers is also crucial in identifying the main causes and modality of lethal intoxications, and in reporting alerts to the authorities in order to identify possible preventive interventions.

References [1] The global burden of disease: 2004 update. World Health Organization.

#8190 : Unpredictable outcome after peridural accidental administration of xenobiotics

Preferred format : ePoster

Authors:

Valeria Margherita Petrolini (1), Davide Lonati (1), Azzurra Schicchi (1), Marta Crevani (1), Mara Garbi (1), Giulia Scaravaggi (1), Eleonora Buscaglia (1), Sarah Vecchio (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: peridural administration, intoxication, clinical toxicology

Abstract :

Objective: Peridural or intrathecal administration of xenobiotic may be related with potentially severe adverse effects according to factors that may influence the toxic effects (e.g. dosage, osmolarity, lipophilicity, baricity). Particularly, overdose or erroneous administration of xenobiotic unintended for peridural administration may not follow predictable pharmacokinetic models (1). We describe two cases of peridural erroneous injection for which, regards this specific route of administration, data in medical literature are lacking.

Case series: Case 1: A 72-years-old female, underwent surgery hysterectomy, erroneously received via peridural catheter 100 ml of sodium chloride solution 0.9% with ketorolac 30 mg, esomeprazole 40 mg and cefotaxime 500 mg infused in 9 hours. The patient at the end of infusion experienced severe burning lumbar pain, hypertension and mild lower limb edema. Clinical manifestations resolved during the next 2 days: no specific treatment has been applied. No sequelae were reported after one months follow-up. Case 2: A 59-years-old male, underwent surgery gastrectomy, mistakenly received via peridural a parenteral nutrition mix (CLINIMIX N9®) (estimated amount: 50 ml) in 30 minutes: intravenous delivery was inadvertently connected to the peridural catheter. The patient manifested immediate abdominal pain and a liquor lavage with sodium chloride solution 0.9% at 5 ml/h for 48 hours was performed. No other clinical effects were reported until hospital discharge after two weeks.

Conclusion: Erroneous administration of xenobiotic not registered or routinely used in peridural route (and intrathecal) may require a prompt and urgent intervention aimed to immediate withdrawal of cerebrospinal fluid. Cases with uncertain outcome and not previously described should be considered and managed as potentially fatal evolution. Only, regarding beta-lactam antibiotics neuro-excitatory features (convulsion) due to their γ-aminobutyric acid antagonist properties have been reported (1). Our data, even if single experience, describe a favorable clinical evolution of cases. Medical error is possible despite of standardization of procedures: some specialized and exclusive dispositive are available for peridural/intrathecal injection. Because of several factors influence the clinical toxicity of xenobiotic peridural administration, a multidisciplinary approach is necessary in order to correct evaluation and management of cases.

References: 1. Rama BR. Intrathecal administration of xenobiotic. In: Hoffman RS, Howland MA, Lewin NA, Nelson LS, Goldfrank LR, eds. Goldfrank's Toxicologic Emergencies. 10th ed. McGraw-Hill Education, 2015: 703-710.

#8191 : Long-acting antipsychotics injection: adverse toxic effects related to two different formulations

Preferred format : ePoster

Authors:

Valeria Margherita Petrolini (1), Giulia Scaravaggi (1), Marta Crevani (1), Davide Lonati (1), Azzurra Schicchi (1), Mara Garbi (1), Eleonora Buscaglia (1), Sarah Vecchio (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: long-acting antipsychotics, intoxication, clinical toxicology

Abstract :

Objective: Long-acting injection (LAI) of antipsychotic drugs are used in psychiatric practice for treating patients with non-adherence/partial adherence to oral pharmacotherapy. Most of these drugs are conjugated to fatty acids or other components that confer slow release properties when administered by intramuscular (depot) injection. However, direct entry into the bloodstream can occur during administration. We describe a case series of adverse events during administration of LAI antipsychotics in order to identify differences in severity and risks with olanzapine and haloperidol LAI. Case series: Olanzapine-LAI: We describe four cases of PIDS (post-injection delirium/sedation syndrome) after intramuscular administration of olanzapine-LAI. These effects are probably due to entry of the drug into a blood vessel during injection. Case 1: Thirty minutes after injection of 300 mg a49-year-old man was lethargic (Glasgow Coma Scale 8-9) with sinus tachycardia (150-160 beats/min) requiring beta-blockade. He improved 12 hours later and was completely recovered after 24 hours. Case 2: A 50-year-old woman in therapy with OLA/LAI for one year, developed paresthesia, confusion, disorientation and mood swings (aggressiveness and depression) after the 13th dose, She recovered with symptomatic treatment. Case 3: During the first OLA-LAI dose (405 mg) a 38-year-old man developed drowsiness which persisted for 12 hours. Case 4: Ninety minutes after OLA-LAI 300 mg rapid intramuscular administration, a 63-year-old woman had agitation, akathisia and QT prolongation (492 ms) which resolved with symptomatic treatment. Haloperidol-LAI: Case 1:A 55-year-old man erroneously received a 50 mg vial of haloperidol decanoate in a 1 hour infusion. Serum haloperidol was undetectable 8 hours later. Patient was asymptomatic and returned to the psychiatric ward the day after. Case 2:A 89-year-old woman received 50 mg haloperidol decanoate by intravenous instead of intramuscular injection. Serum concentration was 1.1 ng/mL one hour after administration and was undetectable 24 hours later. She was monitored for two days but had no neurological impairment or rhythm disturbances were observed. Haloperidol serum concentrations were assayed using high performance liquid chromatography (limit of detection 0.5 ng/mL). Conclusion: PIDS is related to the rapid dissolution of the olanzapine pamoate salt in blood vessels, while haloperidol decanoate requires an esterase enzyme to act. Consistent with these findings, adverse events can occur even after correct administration of olanzapine LAI, but even if haloperidol decanoate is intravenously administered, neither clinical effects nor elevation in serum concentrations are expected.

#8192 : PMMA poisoning: clinical features in lethal and non-lethal cases

Preferred format : Oral presentation

Authors:

Carlo Alessandro Locatelli (1), Eleonora Buscaglia (1), Pietro Papa (2), Marta Crevani (1), Sarah Vecchio (1), Carolina Prevaldi (3), Giulia Scaravaggi (1), Davide Lonati (1), Teresa Coccini (1), Valeria Margherita Petrolini (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Laboratory of Analytical Toxicology, Clinical Chemistry Service, IRCCS Policlinico San Matteo Foundation, Pavia, Pavia, ITALY
3. Emergency Department , San Donà di Piave Hospital ULSS 10, San Donà di Piave, ITALY

Keywords: PMMA, PMA, intoxication, clinical toxicology

Abstract :

Objective: Paramethoxymethamphetamine (PMMA), and its metabolite PMA, cause central nervous system stimulation and hallucinogenic effects, like MDMA, and represented one of the recent relevant cause of death by new psychoactive substances of abuse (NPS). Outbreak of PMMA/PMA poisoning resulting in fatalities has been described (1). We report 5 cases of PMMA/PMA severe intoxication collected in 2 years. **Case series:** Five cases referred to Pavia Poison Control Centre (PPCC) were evaluated (age ranging from 16 to 32 years-old). PMMA/PMA consumption was never declared: 1 patient referred MDMA intake, 1 patients amphetamine and cannabis, 3 patients were unable to report the taken substance. Most common clinical manifestations were severe psychomotor agitation (100%), tachycardia (80%), mydriasis (60%), sweating (60%), hallucinations (40%) and hyperthermia (20%). Immunoenzymatic urinary tests resulted positive for amphetamine/methamphetamine, MDMA, cocaine and THC. Chromatographic second level laboratory investigations were performed in all cases: all patients were positive for PMMA/PMA but also to MDMA (4 cases), amphetamine (3), THC (3), cocaine (2), ketamine (1) and methoxetamine (1). Treatment consisted in benzodiazepines (5 cases), oro-tracheal intubation and respiratory support (2). Hospital stay ranged from 24 to 96 hours for the patients that need intensive care treatment. One fatal case was registered. Clinical picture worsened rapidly: metabolic acidosis, hypoglycemia, hyperkalemia, severe hyperthermia, multi-organ failure and severe disseminated intravascular coagulation. Although pharmacological treatments and intensive care support (including depurative techniques), patient died in 20 hours. The results of blood analysis were: PMMA 615 ng/ml, PMA 91 ng/ml, tramadol 88 ng/ml, MDMA 192 ng/ml, MDA<20 ng/ml, cocaine 28 ng/ml, benzoylecgonine 529 ng/ml. Analysis of a residual part of the tablet taken by the patient revealed PMMA 25 mg and MDMA 11 mg.

Conclusion: PMA/PMMA intoxication may be related to a rapid and fatal outcome. Among clinical manifestation, hyperthermia should be interpreted as potentially severe risk factor. Nevertheless, the national epidemiological data of abuse of PMA/PMMA cannot be quantified, as the PPCC (with advanced toxicological analysis facilities) and the National Early Warning System detect only patients with acute and severe intoxication. Urine positivity for ecstasy and amphetamines should be considered as cross-positivity to PMA/PMMA (not easily detectable in common laboratories). All the cases are reported to the National Early Warning System.

References: Lurie Y, Gopher A, Lavon O et al. Severe paramethoxymethamphetamine (PMMA) and paramethoxyamphetamine (PMA) outbreak in Israel. Clin Toxicol. 2012;50:39-43. **Acknowledgements**: Study carried out with the support of DPA-Presidency of the Council of Ministers.

#8194 : Human accidental poisoning in rural and fishing occupational setting in Italy: a 5 years case series

Preferred format : ePoster

Authors:

Carlo Alessandro Locatelli (1), Davide Lonati (1), Azzurra Schicchi (1), Marta Crevani (1), Giulia Scaravaggi (1), Eleonora Buscaglia (1), Sarah Vecchio (1), Valeria Margherita Petrolini (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: poisoning, rural, fishing, clinical toxicology

Abstract :

OBJECTIVES: To describe clinical aspects and medical management of human poisoning in rural and fishing occupational setting, in order to identify preventive measures.

METHODS: A five years (2010-2014) retrospective study concerning the Pavia Poison Centre (PPC) in poisoning data from all over Italy was performed. Cases were evaluated for: circumstances of poisoning, clinical manifestations, management, risks factors, outcome.

RESULTS: Farmers, veterinarians, herpetologists, fishers and aquarists were identified as professionals at risk for accidental poisoning in rural setting. In details, 581 occupational poisoning involved: (i) farmers (494;87%) [pesticides/herbicides/rodenticides (439; 89%), insect/spider bites (9; 1.6%), vipera envenomation (22; 4%) and lethal incident in confined spaces (8; 2%)]; (ii) veterinarians (64;11.3%) [accidental self-administration of drugs/vaccine/antibiotics/sedatives (63; 98%), wound management for potential rabies disease n=1 (2%); (iii) herpetologists (4; 0.7%), *Agkistrodon bilineatus, Crotalus atrox, Bitis parviocula, Botriechis schegeli* envenomation; (iv) Fishers/Aquarist (19;3.4%) [stings, algal toxins intoxications (ciguatoxin ingestion, palitoxin inhalation)]. The inappropriate and/or incorrect use of protective equipment is associate to toxic pesticide exposures. Envenomation by exotic snakes is rare and may regard particular risk categories (e.g. herpetologists/veterinarians) but may require antivenom administration not always promptly available: in these cases specific antidote has been supplied abroad after activation of extraordinary procedures. All cases fully recovered except one (*Crotalus* bite) that presented a mild permanent dysfunction at the hand. Among veterinarians, occupational exposure are mainly characterized by accidental self-injection of veterinary medicines (vaccines, antibiotics, anesthetics/sedatives): no cases of systemic toxic effects were registered. Veterinarian managed for potentially rabid fox bite required only active immunization. In PPC experience fishermen may be exposed to the risk of venomous marine organisms stings (*Trachinidae* 50%, *Dasyatidae* 25%, *Muray* 13%, *Sea Anemone/Sea Coral* 12%). Aquarists has been involved in palitoxin inhalation after boiling a pot of water containing a piece of rock polluted by the cnidarian zoanthids *Palythoa spp*, taken out of a 300-liter-aquarium. Patients (father 36 years-old and daughter 18 months) manifested gastrointestinal manifestations, fever (39°C), sore throat, cough and dyspnea. The clinical manifestation resolved after 48 hours and a 6 months follow-up was negative for late respiratory consequences. **CONLUSIONS**: Besides playing a fundamental role in the diagnosis of intoxication, PPC provides also a specialized advice to evaluate correct indications for antidote administration and to supply antidote in adequate amount. In occupational setting, a correct preventive information program may be essential and continuous training of physicians and workers is required.

#8196 : Myocarditis related to African scorpion envenomation: cardiac magnetic resonance findings

Preferred format : Oral presentation

Authors:

Carlo Alessandro Locatelli (1), Davide Lonati (1), Oronzo Catalano (2), Guido Moro (3), Francesca Chiara (1), Sarah Vecchio (1), Valeria Margherita Petrolini (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Division of Cardiology, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
3. Division of Radiology, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: scorpion, envenomation, myocarditis, clinical toxicology

Abstract :

Objective: Scorpion envenomation are worldwide reported, and it is considered a major public health problem in tropical, subtropical and sub-Saharan areas. Scorpion α-toxins inhibits the voltage-gated sodium channel inactivation resulting in prolonged depolarization and, finally, neuronal excitation with adrenergic and cholinergic excess. The main mechanisms of cardiac dysfunction and pulmonary edema related to scorpion envenomation are multifactorial: the vasoactive effect of catecholamine and biochemical mediators causes cardiac overload and contribute to acute cardiac failure or myocardial ischemia or myocarditis. We describe the evolution of a toxic myocarditis documented at four repeated cardiac magnetic resonance (CMR) during a 9 months follow-up.

Case report: A 25-year old woman was stung on a foot by *Leirus Quinquestratius* scorpion on a Red Sea beach (Egypt). At ED admission (2 hours later), the patient presented with normal blood pressure, local acute pain, fever (38°C), tachycardia (117 bpm) associated with dyspnea and diffuse pulmonary rales. Chest radiography evidenced severe pulmonary edema, and echocardiography assessment revealed significant deterioration of left ventricle (LV) systolic function, with global hypokinesia and left ventricle ejection fraction (LVEF) of 25%. Biochemistry showed an increase of troponin I (6.16 µg/L), CPK-MB (97 U/L), amylase (220 U/L) and LDH (558 IU/L) associated with leukocytosis and thrombocytopenia. Patient was treated with prazosin, dobutamine, furosemide, hydrocortisone, levofloxacin, PPI, acetaminophen, NSAIDS, clindamycin and enoxaparin. Purified Polyvalent Antiscorpion Serum was administered. Clinical condition progressively improved with normalization of myocardium necrosis indexes and LVEF (67%) within 9 days.

The patient was transferred to our hospital 11 days after the accident. Echocardiography was normal except for systolic pulmonary pressure at the upper limit level. Repeated CMR evaluations (11 days; 3, 9 and 16 months) were performed. ECG-gated cine images, assessed by a steady-state-free-precession sequences, showed normal LV volumes and LVEF at baseline, and mild worsening of LVEF during the follow-up (53 to 60%). Significant early uptake of gadolinium at T1-weighted-TSE sequence, suggesting myocardial inflammation, was revealed at base-line, and gradually reduced during the follow-up, particularly between the 6^{th} and 9^{th} months. Irreversible myocardial damage was assessed by late enhancement technique, which revealed mild intra-myocardial and sub-epicardial late enhancement that persisted in the follow-up. **Conclusion:** Our experience support the hypothesis that the excess of catecholamine is crucial in the pathophysiology of the cardiac dysfunction observed both in stress-induced cardiomyopathy and scorpion envenomation. CMR evaluations is useful in follow-up sub-clinical myocardial alterations also considering the possible evolution in dilated cardiomyopathy.

#8197 : Extraordinary mobilizations of antidotes from the National Stockpile to the hospital's emergency departments: an example of versatility and integration of national functions and systems

Preferred format : Oral presentation

Authors:

Eleonora Buscaglia (1), Valeria Margherita Petrolini (1), Virgilio Costanzo (2), Loredana Vellucci (2), Giulia Scaravaggi (1), Marta Crevani (1), Sarah Vecchio (1), Davide Lonati (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY
2. Prevention General Directorate, Ministry of Health, Rome, ITALY

Keywords: antidotes, stockpile, clinical toxicology

Abstract :

Objective: Since 2005, the Italian State has established an extraordinary endowment of antidotes for terrorists chemical and radio-nuclear events (Scorta Nazionale Antidoti-SNA). Charged by the Ministry of Health, the Pavia Poison Control Centre (PPCC) is the clinical unit responsible for (i) the diagnostic-therapeutic specialist consultation for non-conventional attacks, (ii) the SNA operational management (e.g. upgrade, distribution planning), and (iii) the continuous training of the Italian NHS. SNA is organized on national scale (regional and national stockpiles, located in hospitals and in State's deposits, respectively), and is an intangible stockpile whose integrity is essential to fulfill its functions. However, when an absolute shortage of an antidote occurs in the NHS hospitals and the antidotal treatment of intoxicated patients is necessary, a quote of the SNA stockpile can be extraordinarily mobilized. Operational procedure need a clinical evaluation by the PPCC first, and then an on-time authorization by the Ministry of Health. Rapid replacement of the mobilized amounts by the requiring hospital is a procedural obligation. To evaluate the SNA's extraordinary mobilizations (SNA-EM) in a seven-year period. **Methods**: We investigated all SNA-EM authorized/made in the period 2008-2014. For each mobilization (i) the cause of the extraordinary request (clinical indications, antidotes availability/shortage in neighboring hospital and Poison Centers), (ii) the time required for the antidotes arrival to the requiring hospital and (iii) the SNA stockpile involved were assessed. **Results**: Exceptional mobilizations from the SNA to the NHS hospitals were performed 25 times (for 28 patients), always linked to single/multiple poisoning from conventional causes/events. The mobilized antidotes were pralidoxime (n=17), DMSA (n=3), DMPS (n=2), hydroxocobalamin (n=1), methylene-blue (n=1) and Prussian-blue (n=1). In 21 cases, SNA-EM occurred to hospitals located in the same region of the SNA deposit and in 4 toward different regions. In some cases, the mobilized antidotes (DMPS, prussian-blue and DMSA) are rarely used and difficult to find in the NHS hospitals. **Conclusions**: SNA is an essential facility in each country in order to have the necessary antidotes in case of exceptional events. The Italian current organization of SNA, considered highly important in EU, combine clinical toxicological expertise and antidotes supply in order to obtain diagnostic and therapeutic appropriateness. Nevertheless, this organization has proven useful and able to overcome the hospital shortcomings of normal/rare antidotes in cases where toxic agents are unusual or the need for antidotes exceed the normal hospital availability.
Acknowledgements: Support of Ministry of Health (4393/2013-CCM).

#8198 : Antivenom treatment in viper envenomation in Italy: a 3 years experience

Preferred format : Oral presentation

Authors:

Valeria Margherita Petrolini (1), Davide Lonati (1), Azzurra Schicchi (1), Marta Crevani (1), Mara Garbi (1), Giulia Scaravaggi (1), Eleonora Buscaglia (1), Francesca Chiara (1), Sarah Vecchio (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: viper, envenomation, antivenom, clinical toxicology

Abstract :

Objective: EU marketed viper antivenoms differ for pharmaceutical characteristics (e.g. Fab/F(ab')$_2$, equine/ovine, viper *spp.* neutralizing activity), dosage and registered route of administration. A different availability in Italian hospitals offers the opportunity to preliminary evaluate the relative frequency of use and the clinical response to treatment with 4 different antivenom.

Methods: All viper bitten patients treated with antivenom referred to Pavia Poison Control Centre from 2013-Oct2015 were retrospectively assessed for sex, age, site of bite, time elapsed between bite and ED admission/antivenom administration, type of antivenom and number of vials, GSS and clinical response (improvement/worsening during 6 hours), need of adjunctive doses, adverse effects. Clinical manifestations were evaluated according to the Grading-Severity-Score (GSS).

Results: 50 patients (age 44,3±27,2 y-o; male 70%) were included; 13 were paediatric (1-13 y-o). Considering geographical distribution, *vipera aspis spp.* was mainly involved. Upper and lower limbs were involved in 88% and 12% of cases, respectively. Average time between bite and ED-admission was 4 hours (15min-23hours), and 9 hours (40min-26hours) between bite and antivenom administration, that occurred in patients with GSS 2 or 3 (76% and 24%, respectively). The 4 antivenom were administered intravenously: Viper Venom Antiserum-European® (VVAE) (30/50;60%) [7=1 vial, 23=2 vials], Viper Venom Antitoxin® (VVA) (16/50;32%) [11=1 vial, 5=2 vials], ViperaTab® (3/50;6%) [2 vials] and Viekvin® (1/50;2%) [1 vial]. Clinical improvement was observed after 1 and 2 vials of VVAE administration in 86% and 96% of cases, respectively, and after 1 and 2 vials of VVA in 55% and 80% of cases. ViperaTab treated patients (n=3) improved in 66.6%; 1 patient treated with Viekvin (9 years-old) promptly ameliorated. Adjunctive doses of antivenom were needed in 6 patients (12%) aging (except one, 49 y-o) from 2 to 6 years that received only 1 vial of VVAE (1/6;16%) and VVA (5/6;83%). Acute adverse reactions occurred after VVAE (2 cases; angioedema, pruritus) and VVA administration (1 case; mild hypotension). Serum sickness (3 weeks later) occurred in 1 case (VVA). Statistical evaluation requires a greater number of cases.

Conclusions: A different availability of 4 antivenoms is observed in Italian hospitals, with a prevalence of those that declare neutralizing activity against *vipera aspis spp*. Intravenous administration is usually safe, even if adverse reactions are observed. An initial dose of 2 vials of all formulation is suitable to reduce the probability of worsening and the need of adjunctive doses, especially in paediatric patients.

#8199 : Pesticides intoxications in professional setting

Preferred format : ePoster

Authors:

Sarah Vecchio (1), Azzurra Schicchi (1), Marta Crevani (1), Mara Garbi (1), Giulia Scaravaggi (1), Eleonora Buscaglia (1), Valeria Margherita Petrolini (1), Davide Lonati (1), Carlo Alessandro Locatelli (1)

1. Pavia Poison Control Centre, IRCCS Maugeri Foundation Pavia Hospital, Pavia, ITALY

Keywords: pesticides, poisoning, clinical toxicology

Abstract :

Introduction Pesticides and herbicide are professional products largely used by farmers and gardeners. The identification of risks and the modality of acute exposure may delineate a various range of clinical manifestations, from irritating symptoms to severe cases of systemic functional and lesional damages. **Objectives** To describe toxic professional acute exposures to pesticides and herbicides. **Methods** A five years (2010-2014) retrospective review of cases of professional acute exposures to pesticides and herbicides managed by the PPC was performed. Included cases were assessed for sex, age, agent involved, modality of exposure and PSS (Poisoning Severity Score) at first evaluation by specialist toxicologist. Attempted suicides were excluded. **Results** 439 cases were included (95% males; mean age 52.5 ± 16 years). Concerning the agents involved, insecticides account for the 42% of cases of intoxication (245/439) and, among these, organophosphates and pyrethroids are those more represented (45% and 30% of cases respectively). Also herbicides (19%; 110/439) are often involved (19%), with glyphosate that represent the 57% of these cases. Other agents involved are fungicides (18%), copper and sulphur (11%) and miscellaneous of other products in 4% of cases. In 6% of cases the agent involved is unknown. In general, only one product was involved in 74% of cases, 2 products simultaneously in 18%, 3 products in 6% and 4 products in 1% of cases. The exposure occurred during the use of the product in the 67% of cases, accidentally in 5%, during the preparation of the product in 3%. This data is unknown in the 26% of cases. Inhalation and dermal contact were the main routes of exposure (72% and 17% of cases respectively). Concerning the PSS at first evaluation by the PPC, patients were asymptomatic in the 10% of cases, presented mild symptoms in the 68% of cases, moderate symptoms in the 10% of cases and serious symptoms in the 1% of cases. This data was not evaluable in the remaining 10% of cases. Mortality resulted 0.1%.

Conclusions Main intoxication predisposing factors are the inappropriate use of pesticides, associated with the incorrect use of personal protective equipment. Besides playing a fundamental role in the diagnosis of intoxication, PPC provides also a specialized advice to evaluate correct indications for antidote administration and to supply antidote in adequate amount. To reduce potential risk of intoxication, especially in occupational setting, a correct preventive information program may be essential.

#8200 : Blood lactate as a predictor for in-hospital mortality in patients admitted in emergency department

Preferred format : Oral presentation

Authors:

wided bahria (1), Hanen Ghazali (1), Ahmed Souyah (1), imen boukhalfa (1), Anware yahmadi (1), moez mougaida (1), Mohamed Mguidich (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA

Keywords: lactate, mortality, emergency department

Abstract :

Introduction:

Using blood lactate monitoring for risk assessment in the critically ill patient remains controversial. Some of the discrepancy is due to uncertainty regarding the appropriate reference interval, and whether to perform a single lactate measurement as a screening method at admission to the hospital, or serial lactate measurements.

Objective:

To examine whether blood lactate levels are predictive for in-hospital mortality in patients admitted to the emergency department.

Methods:

We carried out a prospective observational cohort study in consecutive patients whose arterial lactate concentration was measured in the ED over six months. The initial arterial lactate level was categorized as low (<2 mmol/L), intermediate (2-3.9 mmol/L), or high (≥4 mmo/L). The main outcome measure was 7-day mortality.

Results:

Inclusion of 146 patients. Mean age was 58 +/- 21 years. Sex ratio = 1.75. The overall mortality at 7 days was 17.8%. The median admission lactate (25^{th}, 75^{th} percentile) was 2.8 (1.97, 4.90) mmol/L. Thirty six patients (25%) had low lactate, 66 patients (45%) had intermediate lactate and 44 patients (30%) had high lactate.

Multivariate logistic regression revealed lower lactate levels were associated with 7-day survival: ORs for 7-day death compared with lactate ≥4 were: 0.34 (95% CI 1.01 to 1.33) for lactate <2 and 0.585 (95% CI 1.04 to 1.27) for lactate 2-3.9. Admission lactate >4mmol/L was a significant independent predictor of mortality in adult patients admitted to ED (adjusted OR=3.36, 95%IC 1.52 to 8.8, p= 0.04).

Conclusion: All patients with a lactate at admission above 4 mmol/L should be closely monitored for signs of deterioration, and patients with even lower lactate levels should be considered for serial lactate monitoring.

#8201 : Factors associated with the development of chronic pain in trauma patients

Preferred format : Oral presentation

Authors:

Raoul Daoust (1), Jean Paquet (2), Lynne Moore (3), Jean-Marc Chauny (4), Sophie Gosselin (5), Jean-Marc Mac-Thiong (6), Marcel Emond (7), Manon Choinière (8), Gilles Lavigne (9)

1. Emergency department, Université de Montréal, Montréal, CANADA
2. Emergency department research center, Hôpital Sacré-Coeur de Montréal, Montréal, CANADA
3. Epidemiologist, Hopital de l'Enfant-Jésus (Québec), Québec, CANADA
4. Emergency department, Hôpital Sacré-Coeur de Montréal, Montréal, CANADA
5. Emergency department research center, McGill University Health centre, Montreal, CANADA
6. Orthopedist, Hôpital Sacré-Coeur de Montréal, Montreal, CANADA
7. Emergency department, Centre hospitalier universitaire de Québec, Québec, CANADA
8. anesthesiologist, CHUM, Montreal, CANADA
9. Faculté de médecine dentaire, Université de Montréal, Montreal, CANADA

Keywords: Pain, Chronic Pain, Trauma, Acute Pain

Abstract :

Introduction: In Canada, trauma injuries represent almost 200,000 hospital admissions per year. Depending on the type of trauma and other risk factors, a good proportion of patients will eventually develop mild to severe chronic pain. Fortunately, the early use of some treatments appears promising to prevent chronicity of post-traumatic acute pain. However, the research allowing the early identification of the subpopulation of trauma patients that may develop chronic pain is scarce and limits our capacity to test these preventive approaches.

Objective: To identify factors available at hospital admission associated with the development of chronic pain in a population of trauma patients.

Methods: In a cohort study performed on a registry of prospectively acquired data, we have included all patients 18 years and older admitted for injury in any of the 57 adult trauma centers in the province of Quebec (Canada) between 2004 and 2014. Patients who were either evaluated in specialized chronic pain clinics, diagnosed with chronic pain, and/or received at least 2 prescriptions of chronic pain medication 3 to 12 months post trauma were compared to patients who did not meet those criteria. Patients with a follow-up period lesser than 1-year and those with multiple trauma episodes were excluded.

Results: A total of 90 479 patients were retained. Mean age was 59.3 (±21.7), 53% were men, and the mean follow-up was 4.8 years (±2.4). The major causes of trauma were: falls (63%), motor vehicle accident (22%), as well as penetrating and blunt injuries (9%). We have identified 6172 patients (6.8%; 95CI:6.6%-7.0%) who were either evaluated in specialized chronic pain clinics, diagnosed with chronic pain, and/or received at least 2 prescriptions of chronic pain medication 3 to 12 months post trauma. After controlling for confounding factors, the variables that were associated with the development of chronic pain were: spine injury (OR=2.3; 95CI: 2.1-2.4), loss of consciousness (OR=1.7; 95CI: 1.5-2.0), nerves damage (OR=1.7; 95CI: 1.5-2.0), history of depression (OR=1.5; 95CI: 1.3-1.6), history of alcoholism (OR=1.4; 95CI: 1.2-1.7), head injury (OR=0.62; 95CI: 0.56-0.68), multiple trauma (OR=1.4; 95CI: 1.3-1.5), and being a female (OR=1.2; 95CI: 1.1-1.3). Receiving operating characteristic curves derives from the model was evaluated at 0.70.

Conclusions: Despite low incidence of chronic pain development found in our trauma cohort registry, several significant risk factors were identified. Hospital admission screening of the trauma population at risk of developing chronic pain will allow the early testing of preventive approaches.

#8202 : Acute aortic dissection: unusual presentation in the emergency department

Preferred format : ePoster

Authors:

Aymen Zoubli (1), Hanen Ghazali (1), Rania Jebri (1), farah Riahi (1), Ahmed Souyah (1), Anware yahmadi (1), wided Bousselmi (1), moez mougaida (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA

Keywords: aortic disection, unusual presentation, emergency department

Abstract :

Introduction:

Acute aortic dissection (AAD) is a critical disease state requiring immediate diagnosis and optimal treatment. We describe a case of acute type A Stanford aortic dissection with an unusual presentation.

Case report:

A 70-year-old man with no medical history presented to the emergency department with agitation that occurred one hour before admission. There were no history of chest pain or dyspnea, no recent trauma and no toxic use. On physical examination, the patient was afebrile, his blood pressure was 100/60 mmHg in the left arm, and not detectable in the right arm without signs of acute ischemia. The pulse was 47 beats per min. Respiratory rate 20 times per min with an oxygen saturation of 98% on air room. He was agitated, but there was no neurological impairment. His pupils were round, equal, and reactive to light and accommodation. Moreover, a swinging right cervical mass was found. There were no signs of acute heart failure. The abdomen was soft, non-distended, and mildly tender without rebound or guarding. Electrocardiogram, chest x-ray and blood gas analysis were normals.

An ultrasound of the supra aortic arteries was performed and showed a dissection of right brachio-cephalic arterial trunck with floating membrane image and an obstruction of right sub-claviar artery.

Computed tomography (CT) scan confirmed a Stanford type A dissection with anevrysmal ascending aorta. The patient underwent urgent surgery and experienced a successful outcome. He was discharged from the intensive care unit a week after his surgery.

Conclusion:

Emergency physicians are especially challenged by diseases that require urgent treatment like aortic dissection. Misdiagnosis leads to delay of diagnosis, and exposure to inappropriate treatment. Emergency physicians should consider this diagnosis even in the absence of a typical presentation.

#8203 : The prognostic value of intrahospital hemorrhagic complications for acute coronary syndrome without ST elevation patients in the Emergency Department

Preferred format : Oral presentation

Authors:

Rania Jebri (1), Hanen Ghazali (1), Manel Bayar (1), Anware yahmadi (1), jihen essid (1), mahbouba chkir (1), ahlem azouzi (1), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA

Keywords: acute coronary syndrome, hemorrhagic complication, mortality

Abstract :

Introduction:

Hemorrhagic complications were associated with short-term mortality in patients with acute coronary syndrome without ST elevation (NSTEMI). The CRUSADE score (Circulation 2009) was used to assess the short-term mortality. But its predictive value for the midterm mortality has been poorly studied.

Objective: We propose to determine the predictive value of the 6 month mortality CRUSADE score for NSTEMI patients seen in the emergency department (ED).

Materials and methods:

A prospective observational study was conducted over two years. Patients with NSTEMI diagnosis was made. Anamnestic, clinical, electrocardiographic, biological and therapeutic criteria were collected. The CRUSADE score was calculated. The prognosis was based on the 6-month mortality. Multivariate analysis by multiple logistic regression was performed.

Results:

Three hundred and ninety patients were included. Mean age 61 + -11 years. Sex ratio to 1.34. Comorbidities N (%): HTA 235 (60), Diabetes 208 (53), dyslipidemia 112 (29), tobacco 101 (26), Coronary Artery Disease 112 (31). Overall mortality at 6 months was 5%. The mean CRUSADE score was higher in the non survivors patients comparing to the survivors: 45± 11 vs 27 ±11 respectively, P <0.001. The CRUSADE score was predictive of 6 months mortality with a cut-off at 45 with an area under the curve at 0.82, 95% CI [0.74 to 0.90]. Sensitivity = 53%, specificity = 86%, Liklehood ratio (LR) += 3.78, LR- = 0.54.

Conclusion:

Hemorrhagic complications have a major impact on the short and midterm mortality prognosis of NSTEMI patients. Including the CRUSADE score in the management and risk stratification of NSTEMI patients could reduce the midterm mortality.

#8204 : Not just a sport injury

Preferred format : ePoster

Authors:

Cristiu Octav (1), Ahmad Mr Jamal (2)

1. emergency medicine, HSE, Drogheda, IRELAND
2. emergency medicine, hse, drogheda, IRELAND

Keywords: sport injury seizures bleed

Abstract :

Introduction:

We present the case of a 29 years old male who was transferred by ambulance to the Emergency Department(ED) post tonico-clonic seizures and a bruise over right leg.

Methods and matherials: CASE REPORT

29 years old male transferred by ambulance to the ED post tonico-clonic seizures and a bruise over right leg. Bruise over right leg got worse for the last 4 days after an injury suffered while playing football. patients was unwell with vomitings and mild headache 1day prior to arrival. On inital assesment GCS(glasgow coma scale) 3 Blood pressure (BP) 120/67) HR 100 Oxigen saturation of 89%. Was intubated and ventilated iv access was obtained bleeding profunsly from venopucture site. On examination : bruise noticed over the body different stages from yellow colour to purble and green right calf swollen and sevrely brusie compare to left, Chest: normal exam, Abdomen : normal exam, Central Nervous System : GCS3 pupils size 6 reactive to light reflexes normal. Laboratory Results: white cell count of 37.000, Platlets : 7, Hb 9, Urea and creatinine where normal, c reactive proteine was normal, INR 1.8, , Fibrinogen 0.7 DD high >20 normal 0.5, gass performed showed hypoxia and mild metabolic acidosis with a lactete of 5. Working diagnoses was : severe sepsis with diseminated intravascular coagulation and seizures or massive pulmonary embolus with intracerebral extension. Patient was stabilized and transfered to Computer Tomgraphy (CT) of the brain.

Results:

CT results: acute left parieto-occipital haemorrage with intraventricular extension, diffuse axonic brain injury with tonsilar, sub uncal and subfalcine herniation skull vault unremarkable

CT Pulmonary Angiogram Negative for pulmonary embolus.

Blod Film results : promyelocytes , atypical mononuclear cells with blasts presents neutrofil count normal, promyelocits contains auer rods, image conistent with acute promyecocytic leukemia

After stabilisation patient was transfered to the neurosurgical national refference centre in Beaumont Hospital Dublin where he died after 3 days of intensive care unit stabilisation.

Conclusions :

Most patients with acute promyelocytic leukemia present with pancytopenia and coagulopaty our case is particular that was taken as a minor sport injury and did not attented medical advice until late with catastrofic consequences .

#8205 : tetraparesia express

Preferred format : ePoster

Authors:

Francisco Manuel Mateos Chaparro (1), Maria González Ruiz (2), Luis Prieto Lastra (3), María Andrés Gómez (2), Enrique Peraita Fernández (2), Hector Alonso Valle (1), Luis Gerardo García-Castrillo Riesgo (4)

1. Internal Medicine, Emergency department. Marques de Valdecilla University Hospital, Santander, SPAIN
2. MFyC, Emergency department. Marques de Valdecilla University Hospital, Santander, SPAIN
3. Alergology, Emergency department. Marques de Valdecilla University Hospital, Santander, SPAIN
4. Intensive Medicine, Emergency department. Marques de Valdecilla University Hospital, Santander, SPAIN

Keywords: acute tetraparesia, hypokalemia, renal failure

Abstract :

59 year old woman without history of interest when getting to the bathroom at night presents sudden loss of strength in the 4 limbs, keeping the sensitivity and awareness. She´s carried to bed and remained for 10 hours before transfer to hospital. No fever or infection data.

On arrival at emergency department presents: NIBP: 140/70 mm Hg, BF: 22 breaths / min. Sat O2: 100% (FiO2 21%) HR: 120 beats / min. Tª 35,2ºC.She presents strength loss inl 4 limbs (0-1 / 6).She collaborates although tends to sleep. No language deficit neither cranial nerves.

General examination: only highlight dry skin and mucous membranes, loss of strength in limbs and large mass in lower abdomen.

Lab tests: severe acidosis (pH 6.1, HCO3 6.920 mmol / L), creatinine 5.32 mg / dL (previously normal), urea 287 mg / dL, Ca 6,2 mg / dL, Mg 1.4 mg / dL, P 12 , 6 mg / dL, K 1.6 mEq / L. 27000 leukocytes (Metamyelocytes 1%, 4% bands, 87% segmented hockey sticks). Toxic urine: negative. Lactate 5 mg / dL, PCT 0.51 ng / mL CRP 7.2 mg / dL.

CXR: Normal . Urine culture: negative.

Abdominal CT: Absence of cortico-medullary differentiation in both kidneys with cortical thickening and great multiblobulated mass with multiple calcifications occupying pelvis and lower abdomen compatible with large fibroid uterus (16 cm diameter)

RMN cervical: no masses in vertebral bodies.

After correction of acidosis through hemodialysis and intravenous electrolyte replacement patient recovers muscle strength. Remains admitted to study with normal tumor markers , suspecting glomerulonephritis / interstitial nephritis or acute tubular necrosis, but without improvement renal function yet. Potassium deficit is attributed to use of laxatives patient in recent weeks by constipation.

Conclusions:

Potassium, cation essential, facilitates nerve conduction and contraction of smooth and skeletal muscle. It also facilitates the cell membrane performance and various enzyme systems. Low levels of potassium can cause, among others, neuromuscular symptoms: weakness, fatigue, paralysis and even respiratory arrest hiporreflexia by affecting the respiratory muscles, rhabdomyolysis with acute renal failure (severe hypokalemia) and muscle atrophy (chronic hypokalemia) .Although there are several causes of acute tetraparesia: trauma, multiple sclerosis, transverse myelitis, tumors ... the initial examination in our patient with the mass in the abdomen oriented, in absence of other causes, metastatic or paraneoplastic origin, and were the analytical data that helped the early diagnostic.

#8206 : Iatrogenic insulin intoxication

Preferred format : ePoster

Authors:

Ertan Cömertpay (1), Figen Coşkun (1), Aşkın Güngüneş (2), Şenay Arıkan Durmaz (2)

1. Department of Emergency Medicine, Kırıkkale University, Kırıkkale, TURKEY
2. Department of Endocrinology, Kırıkkale University, Kırıkkale, TURKEY

Keywords: Iatrogenic, insulin, intoxication, glucose, emergency department

Abstract :

A 75-year-old woman was admitted to the hospital because of dog bite. She didn't have a significant medical history other than metformin use for diabetes mellitus. The physical examination revealed teeth marks on dorsal side of her right wrist. Wound care was performed. The patient was consulted with Infectious diseases for rabies post-exposure prophylaxis (PEP). Because of lack of a 10-day observation and confinement period of the straggler dog without any known vaccination, the rabies PEP regimen (administration of immune globulin (Ig), given only once, and a series of five dose rabies vaccinations) was planned. Ig (calculated totally as 3000 UI; 40 IU/kg, body weight:75 kg) and the first vaccine were given on the first day of treatment (designated day 0). Half of the dose was injected into and around the wound and the remaining half dose was administered intramuscularly in deltoid muscle by a truly hardworking intern and a junior resident doctor who had taken out the Ig vials from the vaccine refrigerator. It was noticed during the standard control procedure of matching vial labels to the patients file that planned Ig injection had been performed with crystallized insulin (Humulin R) instead of rabies Ig accidentally.

A lightning strike must be something like that!

The patient was monitored closely and taken to the resuscitation room immediately. Her finger stick blood glucose was 116 mg/dl. A central venous catheter was placed and 10% dextrose infusion with a rate of 250 cc/h was started. Baseline blood samples and ECG were obtained. All tests were in normal range. First measured blood glucose and potassium in blood samples were 207 mg/dl and 4.2 mEq/L respectively. Her GCS was 15.

The patient was consulted with Endocrine Department for hospitalization and admitted to ICU. Close monitoring of blood glucose and potassium was started. A special oral diet programme was planned hourly containing high levels of glucose, potassium, magnesium and phosphate.

Figure 1: The patient's blood glocose levels by time

During the follow-up, 10-30% dextrose infusion rate was set due to blood glucose checks and replacement of potassium was administrated due to potassium levels (max. 40 mEq/h required). Because of the drop of blood glucose to 79 mg/dl after 4 hours and 20 minutes later from the accidental injection of crystallized insülin instead of rabies Ig, 1 mg glucagon was applied subcutaneously and 30% dextrose infusion rate was increased. During the 7. minute of glucagon injection, the patient vomited but her blood glucose started to increase within 15 minutes. No pathology was detected in her cardiac monitoring. No recurrent glucagon administration was needed until blood glucose was measured as 70 mg/dl at the 7. hour after the first injection of glucagon. This second 1 mg dose of subcutaneous glucagon was supported by 30% dextrose again without any following side effects. Following fluid therapy was arranged due to instant blood glucose levels of the patient.

The patient was hospitalized 2 days in ICU and 3 days in the ward. She was discharged with healing at the end of 5. day with normal range cardiac and renal function levels. All along the first three days of the hospital stay of the patient; the attending specialist of the emergency department, concerning junior resident and intern doctor accompanied the patient with care, monitored her therapy with endocrine department and assisted the treatment.

Our literature search showed examples of the publications regarding the management of high-dose insülin cases however none of them couldn't state such a high dose circumstance. We aimed multiple purposes with presenting this case; firstly to discuss the potential new errors due to the control of critical drugs, the stress management (among relatives of patients and emergency personnel) and also drug name similarity problems in emergency departments. Secondly our case is an extreme example of its similars. And lastly this case is significant that it includes peak hours of insulin effects and extensions of glucagon administrations with explained conductions.

#8207 : MAD COW DISEASE

Preferred format : Oral presentation

Authors:

Cristiu Octav (1), Kelly Mr Conor (1)

1. emergency medicine, HSE, Drogheda, IRELAND

Keywords: trauma, cows, agriculture

Abstract :

Introduction :

Over the period of 2 weeks in july 2015 we receved a number of 10 patients severly injured after getting in contact with cows or bulls.

Matherial and Methods :

We retrospectively studied the charts of 10 patients who arrived in our Emergency Department (ED) after farming injuries over a period of 2 weeks. We looked at mechanism of injury, age distribution, injury severity scores (ISS) and injury sustained and outcomes. The trauma team was acitvated in all cases and massive blood loss protocol was also in place.

Results :

6 males and 4 females, 2 deaths, age distribution group was between 23-82 with a dominant over 55, ISS was between 19-62 with most comon injuryr identifined rib fractures and pneumothorax. Animals involved where cows and bulls

Conclusions :

Farming injuries in Ireland has become a major ED presentation during the acting growing season or planting season because of the growing age of population and migration of farming youngest members. The position of our hospital is near an area of large farming zones with no fast access to medical attention. Department of Agriculture and Health in ireland is involved closely to education and injury prevention in this comunities.

#8208 : Misdiagnosis : Aortic dissection. A case report

Preferred format : ePoster

Authors:

Figen Coşkun (1), Barış Yılmaz (1), Sevilay Vural (2), Oğuz Eroğlu (1), Turgut Deniz (1)

1. Department of Emergency Medicine, Kırıkkale University, Kırıkkale, TURKEY
2. Department of Emergency Medicine, Bartin State Hospital, Bartın, TURKEY

Keywords: Incidental diagnosis, aortic dissection, pulmonary embolism, emergency department

Abstract :

A 35-year-old female patient was admitted to our clinic due to a suddenly emerged mild characteristic chest pain simultaneously causing accompanying a near-syncope episode during travelling by car. When the pain was questioned, the patient decribed it as stabbing, radiating to her back and lasting only a few minutes. Her medical history showed no significant feature except oral contraceptive use but family history revealed that her mother's unknown sudden death at a young age. On her physical examination, no pathology detected with normal vital signs (BP:105/37mmHg, pulse:59/min, RR:22 ve $satO_2$: %95). Her ECGs (at the admission and the second one at 15. Min) were normal. She was taken to cardiac follow-up due to the sudden death of her mother. D-dimer level was added to standard blood tests to rule out of the possibility of pulmoner thrombo-embolism due to risk factors of the patient like travelling and oral contraceptive use. No symptom was occurred during her follow-up. Her cardiac markers and standard tests were normal but D-dimer level was measured as 4190. Torax angio CT imaging was planned with a prediagnosis of pulmoner thrombo-embolism. PACS images showed normal pulmoner vascularity with normal main pulmonary vessels but a flap noted in the normal diameter ascending aorta. Blood pressure was checked again, but bilaterally this time. The difference between two extremities was found to be more than 20 mmHg (right upper extremity BP:84/34 mmHg and on left upper extremity BP:117/46 mmHg). Interpreted CT reported that a dissection flap involving the arch-ascending-descending aorta, and extending through brachiocephalic trunk, left common carotid artery and the left renal artery was observed. The patient was firstly taken to the operation for supracoronary graft interposition by cardiovascular surgery immediately and then to ICU for post-operative care for 2 days. She was discharged a week later with medical treatment. During her post-operative period, she was investigated for rheumatic connective tissue and auto-immune diseases but no pathology was detected.

Consequently, an aortic dissection was determined incidentally while investigating pulmoner thrombo-embolism in a young woman with a normal aortic diameter on a contrast chest CT. This case reminds us that bilateral blood pressure measurement should be an absolute part of physical examination and aort dissection cannot be rule out with a normal aortic diameter. even mild and not prolonged pain presentations in emergency departments should be considered in differential diagnosis of aortic dissection.

#8209 : Point of care Ultrasound for the approach to respiratory distress in pediatric age: a feasibility study

Preferred format : Oral presentation

Authors:

Niccolò Parri (1), Martina Giacalone (2), Elisa Guerrini (3), Francesca Bronzini (1)

1. Department of Emergency Medicine and Trauma Center , Meyer University Children's Hospital, Florence, Italy, Florence, ITALY
2. Science of Health Department, University of Florence and Meyer University Children's Hospital, Italy, florence, ITALY
3. 118 , Emergency Medical Service, Italy, Florence, ITALY

Keywords: Point-of-care ultrasound, respiratory distress, pediatric age

Abstract :

Objectives

Point of Care Ultrasound (POCUS) in emergency medicine (EM) is a goal directed analysis integrated with the clinical examination of the critically ill patient presenting to the Emergency Department (ED). Its overall scope is to provide rapid dichotomous answers to questions that arise during the assessment to rule-in or rule-out the diagnosis. In adult the integration of chest US with a bedside ecocardiography (ECHO) improves diagnostic accuracy of acute dyspnea allowing an appropriate management of the patient. There are no data available for its impact on pediatric patient management in the ED.

Methods

This is a prospective, single center, observational study with the aim to verify the diagnostic performance and reproducibility of POCUS evaluation including chest, heart, and IVC in the differential diagnosis of respiratory distress in children admitted to a pediatric ED, comparing this procedure with the standard approach in use. Moreover we want to estimate the time needed to complete POCUS assessment compared to the standard approach.

The study was leaded on a sample of patients aged 29 days to 18 years with respiratory distress, for whom two clinicians performed independent evaluations. We compared the diagnosis of the first clinician assessor with the diagnosis resulted by the POCUS approach performed by the researchers. The following outcome measures were used: 1) time to the diagnosis, 2) diagnostic accuracy of the two assessments, 3) concordance of diagnosis set with the two approaches with the gold standard. We considered as gold standard the discharge diagnosis from the ED, Observation Unit or ward.

Results

During the enrollment period 579 patients with respiratory distress were evaluated in our ED. We enrolled 68 patients so this resulted in 511 (88%) missed eligible. The sample of the patients enrolled was similar to the missed eligible by age, gender and for the presence of risk factors. There were not significant differences between the average time needed for the standard clinical evaluation and for the POCUS examination ($p=0.22$). The average time for POCUS examination was significantly lower than the time needed to make a diagnosis in the subset of patients that underwent chest XR ($p=0.02$) and significantly lower than the time needed to obtain the discharge diagnosis from the ED or Observation Unit ($p<0.05$). The overall agreement of the diagnostic hypotheses compared to the gold standard was moderate for both POCUS ($k =0.60$) and the standard assessment ($k=0.54$). Finally for the patients who were admitted, we calculated the agreement between the diagnosis based on the standard approach and POCUS assessment with the discharge diagnosis that resulted respectively moderate ($k=0.45$) and perfect ($k=0.85$).

In patients who presented for wheezing, POCUS assessment showed a significantly higher specificity than the clinical evaluation alone (respectively 87% 95%CI 69.2-96.2 and 43% 95% CI 25.5-62.6, $p <0.05$).

Conclusions

Our study showed that POCUS evaluation is useful to address a more accurate and faster diagnosis of respiratory distress in children compared to the sole standard clinical approach. In the context of pediatric emergency medicine awareness is required to apply POCUS in clinical practice

#8210 : First experiences of the Finnish resident Emergency Physicians

Preferred format : ePoster

Authors:

Iiro Heikkilä (1), Ari Palomäki (1)

1. , Kanta-Häme Central Hospital, Hämeenlinna, FINLAND

Keywords: emergency medicine, education, residency, work conditions

Abstract :

Background

Emergency Medicine became its own specialty in Finland in January 2013. From its early beginning it has been a popular choice for junior doctors graduating from Med School. The number of residents has reach 140.

While developing the new specialty there has been a quite wide discussion about the role of Emergency Physicians in the Emergency Departments in forthcoming years? Will they work 24 hour shifts till the retirement? What will they learn during residency and who will teach them? Pros and cons of the new situation has been presented across the national professional journals, mainly by the senior doctors while juniors are wondering how to struggle in the developing field of EM.

The aim of this survey is to find out what residents really think about their specialty. Here we present selected results.

Methods

First annual national conference of resident EPs was held in May 2015. We organized a survey which was supposed to reflect the actual feelings of the residents after a few years working as a resident EP. The participants were asked for example about the working preferences in near future and about the current working conditions, about the supervision of the economic interests and about the actual collaboration between different specialties across the EDs. The questions were presented as claims and the answers were asked to present at the modified Likert scale 1 (perfectly false) to 7 (absolutely true). The link of the survey was send to all participants via email about two weeks before the meeting. There was seven-day deadline to answer the survey.

Results

Forty-three out of sixty-one participants (70%) answered to the survey. Of them 30 were residents in EM. The rest represented internists, GPs, surgeons and anaesthetists. There were 22 females and 21 males. Of them, 74 % were satisfied to their choice when claimed “right now I’m satisfied with my choice of specialty”. The same percentage said YES (answers at the scale 5-7) when asked “Right now I’m doing suitable job for me”. Only 65 % answered YES to this same question regarding period 5-10 years to the future. 58 % said that the collaboration between different specialties in their ED is working properly; 21 % said that is not working and the rest 21 % could not answer how it was. 88 % thought that it is necessary to have a public debate of the new specialty but only 53 % said that the discussion has been truthful. 77 % said that they will work both office-hours and out-of-office hours as a specialist. 91 % thought that the maximum length of the busy shift in the ED is 16 hours.

Conclusions

Preliminary findings indicate that residents view positively their specialty. Some work has to be done to get all sides work together for a common goal.

#8211 : New onset atrial fibrillation in men: epidemiology, clinical features and management

Preferred format : Oral presentation

Authors:

farah Riahi (1), Hanen Ghazali (1), jihen essid (1), Anware yahmadi (1), Ghezela Chaabeni (1), mouna gammoudi (1), najla elheni (2), Sami Souissi (1)

1. emergency department, regional hospital of ben arous, ben arous, TUNISIA
2. , regional hospital of ben arous, ben arous, TUNISIA

Keywords: Atrial fibrillation, epidemiology, men

Abstract :

Background

Atrial fibrillation (AF) is the most frequently arrhythmia represented in emergency department (ED). It affects more than 2.2 million persons in the United States. AF is strongly age-dependent, affecting 4% of individuals older than 60 years and 8% of persons older than 80 years. The incidence of AF is significantly higher in men than in women in all age groups.

Purpose:

The aim of the study was to provide an overview on the epidemiological features of new-onset atrial fibrillation at the ED in men.

Methods

A single-center, prospective, observational study was conducted in an ED during five years (January 2011 to December 2015). We enrolled men over 18 years of age with a diagnostic of a new onset AF. Collection of epidemiological and clinical parameters, classification of AF, calculation of ischemic risk (the Congestive heart failure, Hypertension, Age75 years, Diabetes mellitus, Stroke, Vascular disease, Age 65 -74 years, Sex category (CHA_2DS_2-VAS score) and bleeding risk (Hypertension, Abnormal renal and liver function, Stroke, Bleeding, Labile INR, Elderly, Drugs or alcohol (HASBLED)). Therapeutic intervention and outcome were collected.

Results

During the study, 92 patients were enrolled. Mean age was 59±17 years, 39 % were aged more than 70 years. Comorbidities (%): hypertension (38), diabetes (17), heart failure (13), dyslipidemia (6) and previous stroke (4). AF classification: paroxysmal n=47, persistent n=26 and permanent n=9. The most frequent presenting symptom was palpitations (n=46, 50%) followed by dyspnea (28.3%). The median CHA_2DS_2VASc score (25^{th}, 75^{th} percentile) was 2 (0.75-3) and the median HASBLED score (25^{th}, 75^{th} percentile) was 1 (0-1.75). CHA_2DS_2VASc score≥1 was found in 73% of cases. Anticoagulation (VKA) was prescribed in 23% of cases. Pharmacologic cardioversion was performed in 29% of patients using amiodarone. Eleven patients (39%) were converted to sinus rhythm. Rate control was performed in 29% of patients using respectively. Diltiazem, Digoxine, and Atenolo in 10, 6 and 3%. At three months, the mortality rate was about 8%.

Conclusion :

Atrial fibrillation in men is associated with increased morbidity and mortality, in part due to the high risk of thromboembolic events and in part due to its associated risk factors.

#8212 : CMV infection in a non-immunocompromised patient : case report

Preferred format : ePoster

Authors:

houcem ouni (1), Mohamed ali Cherif (2), ons andolsi (1), khaled saidi (1), Mohamed Mezgheni (3), youssef zied El hechmi (2), Ines Sedghyeni (4), Zouhaier Jerbi (2)

1. emergency department , hospital habib thameur, tunis, TUNISIA
2. Urgences Médico-chirurgicales Adultes , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA
3. service des urgences, hôpital habib thameur, tunis,
4. Urgences médico-chirurgicales , hôpital Habib Thameur, Tunis,Tunisia ., tunis, TUNISIA

Keywords: infection,emergency,CMV

Abstract :

Introduction :

Viral infections have usually good outcome for non-immunocompromised patient. Especially CMV infection. We report a case of a patient with CMV infection

Case report :

A 57-year-old male patient with hypertension and type 2 diabetes presented to the emergency department (ER) for asthenia, arthralgia associated to fever. He experienced 2 weeks ago headache, myalgia and diarrhea.

On physical examination, he had fever. He had GCS of 13, no signs ofmeningism no neurological impairement. He was hemodynamically stable. The abdomen was soft, non-distended, and mildly tender.he had a gangrene in his right pinky toe.On the fourth day after admission, the patient developed bullous lesions in both legs. The laboratory tests revealed elevated values of transaminase and bilirubine values, lymphocytopenia, thrombocytopenia and an elevation of inflammatory marker. Cerebral computed tomography (CT) was normal. Abdominal CT showed peritoneal effusion and a hepathomegaly. The cardiac ultrasounds revealed no signs of endocarditis. The test results were negative for antinuclear antibodies, perinuclear antineutrophil cytoplasmic antibodies, and cytoplasmic antineutrophil cytoplasmic antibodies. Serological testing showed that CMV IgM and IgG levels were elevated.

The patient did not receive Ganciclovir because of thrombocytopenia (27000 controlled to 12000). He presented dyspnea then a cardiac arrest. He died.

Conclusion:

The CMV infection is a rare but potentially significant cause of arterial and venous thrombosis in otherwise healthy individuals as well as in immunocompromised hosts. Which represent a challenge to diagnose for emergency physicians.

#8213 : Descriptive population-based study of emergency medical services-attended out-of-hospital cardiac arrests in children in Belgium.

Preferred format : ePoster

Authors:

Sophie Vandeplassche (1), Patrick Van de Voorde (1)

1. Emergency Department, University Hospital Ghent, Ghent, BELGIUM

Keywords: out-of-hospital cardiac arrests, paediatric, children, short-term outcome paediatric OHCA, circumstances paediatric OHCA

Abstract :

OBJECTIVES: Analysis of real-life clinical data to obtain more information about the circumstances and outcome of paediatric out-of-hospital cardiac arrests (OHCA) in Belgium.

METHODS: Retrospective study of a prospective population-based registration of all physician-attended (MUG) emergency medical services (EMS) interventions concerning paediatric OHCA in Belgium between 2010 and 2012.

RESULTS: During a 3-year period we noted 365 OHCA in 18295 paediatric MUG interventions (2%). In 260 cases (71.2%) CPR was performed. The initial rhythm was shockable (ventricular fibrillation) in only 13 cases (5%), all other presented with an initial non-shockable rhythm. Overall, defibrillation with one or more shocks was performed in 37 cases (14.2%).

In the majority of cases (59.2%) a medical problem was presumed to be the underlying aetiology, of which respiratory failure was the most registered (n = 69). In 106 cases (40.7%), an 'external' cause was reason for the OHCA: traffic accidents in 30 cases, followed by drowning (n = 22), strangulation (n = 16) and falls from height (n = 11).

Eventually 133 children were transported to the emergency department (ED), with return-of-spontaneous-circulation (ROSC) obtained in 42 cases. Only 79 children reached the ED 'alive', either after ROSC or with ongoing CPR. Of those 79 children, 70 had an non-shockable and 9 a shockable rhythm on arrival of the EMS team. The percentage of ROSC in those children with an initial shockable rhythm was 69.2% (9 out of 13).

DISCUSSION: Paediatric OHCA luckily remains a relatively rare event. It is estimated that each Belgian medical EMS team (MUG) will encounter less than 2 paediatric cardiac arrests yearly. There is therefore a clear risk for team members of being insufficiently prepared if not regularly retrained.

In about 30% of paediatric OHCA the child is considered beyond rescue and no CPR is started. In children where CPR was started, only a small group had an initial shockable rhythm. This resulted in an excellent short-term prognosis with sustained ROSC in 69.2%.

However for the larger group with initial non-shockable rhythm prognosis is much more reserved (13.4% sustained ROSC). This number is in contrast to the number of children that are transported from scene to the ED (51.2%). Importantly 40.6% of the latter were proclaimed dead during transport. In another 27.8% CPR was ongoing at ED arrival. We presume these numbers partially can be explained by 'slow code' (*Bossaert et al., Resuscitation 95 (2015) 306).*

The principal underlying identified aetiology is a medical problem, more specifically respiratory failure. Presumably this also includes cases of sudden unexplained death of infancy (SUDI). Importantly, external causes make up more than 40% of all OHCA (with CPR). Initiatives focussed on prevention might therefore save more lives than any CPR ever will.

This study gives insight into the circumstances and short-term outcome of paediatric OHCA in Belgium. It is however based on an administrative database and lacks important information on long-term outcome or more concrete information of individual cases. Large population-based registries are needed to guide our efforts and decision making.

#8214 : Benefit of NTproBNP in the etiological diagnosis of acute dyspnea in the emergency department

Preferred format : Oral presentation

Authors:

olfa Djebbi (1), rania jebri (2), mounir Haggui (1), mehdi Ben lassoued (1)

1. emergency department , military hospital of tunisia, tunis, TUNISIA
2. emergency department , military hospital of tunisia, Ben Arous, TUNISIA

Keywords: dyspnea, NTproBNP, emergency department

Abstract :

Introduction:

Dyspnea is a common pattern to seek care in the emergency department (ED). Distinguish cardiac or respiratory origin is a diagnostic challenge for the emergency physicians especially with patients with several comorbidities and intricate clinical presentation.

NT-proBNP is a specific marker of acute heart failure, however, its usefulness in the diagnostic approach of acute dyspnea remains controversial which may lead us to resort to a echocardigraphy.

Material and methods

Descriptive prospective observational study. Were included all patients who presented to the ED with acute dyspnea and whose etiology remains unclear. Patients with renal impairment have not been included (false positives of NT-pro BNP).

The diagnosis of heart failure was excluded if the NT-proBNP rate was inferior than 300 pg per ml, made if the NT-proBNP was superior than 1800 pg per ml and doubtful if the NT-proBNP rate was between 300 and 1800pg per ml. the rate of NT-pro BNP was adjusted to the patient's age by the standards of the laboratory.

Results:

During one year, 126 patients were included. The mean age was 62 ± 20 years. The sex ratio was 2.33.

The dosage of NT proBNP has laid the diagnosis of acute heart failure in 70% of cases, revealed the respiratory origin of dyspnea in 18% of cases (negative NT-proBNP). In 12% of the remaining cases, we used the transthoracic echocardiography to seek the etiological diagnosis of acute dyspnea.

Conclusion:

The dosage of NT-proBNP has laid the etiological diagnosis of dyspnea in 88% of cases. Through this study we find that the determination of NT-proBNP for any acute dyspnea of uncertain etiology may be useful. The recourse to echocardiography occurred only in 12% of cases

#8215 : De Winters ST-T syndrome : an early sign of ST segment elevation myocardial infarction

Preferred format : ePoster

Authors:

ahmed souyeh (1), anware yahmadi (2), rania jebri (1), hanane ghazali (1), cyrine keskes (3), mohamed mguidich (1), bouthaina louhichi (3), sami souissi (1)

1. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , tunis, TUNISIA

Keywords: De Winters ST-T syndrome, ST segment elevation myocardial infarction, emergency department

Abstract :

INTRODUCTION :

An ST-segment elevation is usually predictive of myocardial infarction. Several other electrocardiogram abnormalities, referred to as ST segment elevation myocaridal infarction (STEMI)equivalents", should also alert the clinician to early identification and aggressive intervention.

CASE REPORT:

A 52 year old female patient presented to the emergency department (ED) with chest pain occured 1 hour before ED admission. She had a past history of hypertension. She had no other cardiovascular risk factors. On physical examination : the patient was alert, the blood pressure was 110/66 mm hg, the heart rate was 98 bpm and respiratory rate was 22 breaths per minute, the oxygene saturation was 97% on air room. The Admission electrocardiogram (ECG) showed an ST segment depression of 1 mm in the lateral leads. Within 40 minutes the patient presented recurrence of a typical constrictive chest pain with nausea and vomiting . The concomittant ECG showed an ST elevation in DI and AVL leads and in the AVR lead of 1 mm, an ST depression in inferior leads and an up sloping ST depression at J point with peaked T waves in the anterior precordial leads. The diagnosis of De winter complex, a STEMI equivalent, was made. She received 250 mg of aspirine, low weight subcutaneous heparine and 300 mg of clopidogrel. Monitoring of ECG showed an ST elevation of 4mm in V1-V6 leads confirming an obvious STEMI diagnosis. The patient successfully underwent pharmacological reperfusion. Coronary angiography showed a 95% subocclusive lesion in the Proximal left anterior descending (LAD) artery.

CONCLUSION :

De winters syndrome on ECG is a specific pattern of STEMI equivalent. Approximately 2% of similar cases have proximal LAD occlusion. Identifing this specific ecg pattern is challenging for the emergency physician. Thus, recognizing De winter syndrome is important, and adequate treatment should not be delayed or missed.

#8216 : Waiting for no doctor - The impact of Physician Assistants in the interdisciplinary emergency departments of the Leopoldina Hospital Schweinfurt. An economic, organisational and medical trias

Preferred format : Oral presentation

Authors:

Manuel Geuen (1), Zelihic Edin (2), Michael Wessels (3)

1. Research Fellow, praxisHochschule Rheine, Rheine, GERMANY
2. Head of emergency department, Leopoldina Krankenhaus, Schweinfurt, GERMANY
3. Professor, Hochschule für Gesundheit, Bochum, Münster, GERMANY

Keywords: Interdisciplinary emergency department, Physician Assistant, Economic Effects, Health professionals, SOP, ESI - Triage

Abstract :

Background

The emergency departments in Germany had to cope an increase of emergency patients between 5-9% in recent years [1]. It is assumed that annual over 20 million emergency patients get treatment in German emergency departments [2]. In addition, the demographic change, multi-morbidity and the structural underfunding of the emergency units lead to an economic, organizational and medical dilemma.

According to the German Hospital Federation, the structural underfunding of emergency departments amounts up to 1 billion euros [2]. The hospital requirement plan demands for all medical units the “specialist standard” to ensure quality of treatment [3]. In about 30% of treatment cases of emergency is no specialist available [4]. So far no uniform requirement profiles for employees in emergency departments exist in Germany [5]. The Physician Assistant is internationally established and recognized. He is now developing also in Germany and could be a good addition in emergency care.

Aim

To show the effects of physician assistants in interdisciplinary emergency departments from an economic, organisational und medical point of view.

Methods

Based on a structured literature research by PubMed in Medline and EMbase SOPs have been adapted for PAs and put into practice in the emergency department in Schweinfurt. This example could be the basis for a best practice model.

Results

First results of practical implementation has shown that the use of PAs in economic terms resulting in minimizing funding shortfalls. From a medical perspective, the use of PAs resulted in faster identification of urgent patients. Moreover, unnecessary duplicate examinations can be avoided. The assessment of patient history and physical examination by PAs has proved to be a good physician relieving structure. This leads to greater satisfaction of both the patient and the staff.

From an organizational perspective, various measures are mandatory. In addition to the expansion of the interdisciplinary team with Physician Assistants also structural changes need to be made. By optimizing room management, patient flow can be adequately organised.

Discussion

Positive economic effects arise not automatically. In order to achieve this investment in personnel and building infrastructure are initially required. Even if the use of PAs does not directly generate profit, he will at least contribute in minimizing deficits.

However, the different organizational and personnel structures in German hospitals require an individual adaptation of Triage-systems [6]. European guidelines serve as a basis for national guidelines [3]. Adapted Standard measures do not require repeated Delegation for specified situations [7]. The implementation of standard is usually not a problem of the system, but of responsibility [8].

Conclusion

It was possible to show that the use of PA in an emergency department allows positive economic, organizational and medical effects. Therefore organizational changes are needed, such as building changes, staff restructuring and the introduction / adaptation of a triage system with SOPs for PAs.

The bibliography are available on request from the authors.

#8217 : Life threatening arrhythmia in the emergency department

Preferred format : ePoster

Authors:

rania jebri (1), Hana Hedhli (1), syrine Keskes (1), Mouna Gammoudi (1), Faten Amira (1), Bechir Bouhajja (1)

1. emergency department , emergency department of Charles Nicolle, tunis, TUNISIA

Keywords: arrhythmia, torsade de pointe, emergency department

Abstract :

Introduction: Severe hypokalemia (SH) can cause a variety of tachyarrhythmias, including ventricular tachycardia/fibrillation and rarely atrioventricular block. It can be a diagnostic dilemma for the practicing emergency physician. We report a case of a patient with severe hypokaliemia and life threatening arrhythmia.

Case report: A 65-year-old woman with hypertension and type II insulin treated diabetes experienced a sudden loss of consciousness followed by generalized body stiffening and violent jerking, revulsion of the eyeballs, with gradual awakening after 10 minutes, which prompted her family to bring her to the emergency department. She reported having dizziness and vomiting for a month. Physical examination revealed a poor general condition. Her blood pressure was 240/10 mmHg with a pulse of 43 beats/min. She was breathing 26 times/min with an oxygen saturation of 95% on air room. Physical examination revealed no signs of acute heart failure or neurological deficiency. The electrocardiogram (ECG) showed sinus rhythm of 42 beats/ min with complete right bundle branch block (RBBB), complete atrio-ventricular block and giant, asymmetrical T waves. The QT interval was markedly prolonged at 602 ms.

Based on the medical history and the electrical signs, severe hypokalemia (SH) was suspected. The blood gas analysis showed: K+ at 2.9 meq/L, than confirmed by the laboratory tests. The patient received the conventional medical treatment for SH.

The ECG monitoring showed polymorphic ventricular tachycardia (VT) with a change in the amplitude and twisting of the QRS complexes around the isoelectric line. It was Preceded by an R-on-T phenomenon. The diagnosis of Torsade de pointe was made based on these electrical finding. An infusion of magnesium sulfate was given, with the supply of potassium deficiency. The patient was transferred to the cardiology department where further investigations were made.

Conclusion:

Torsade de pointe is a specific type of arrhythmia that can lead to sudden cardiac death. The etiology and management of torsade de pointe are, in general, quite different from those of garden-variety VT. Differentiating between these entities, therefore, is critically important. It remains a diagnostic challenge for the practicing emergency physician and holds important implication.

#8218 : Cardiac arrest team or medical emergency team?

Preferred format : ePoster

Authors:

Monica Puticiu (1)

1. Emergency Department, Arad County Hospital, "Vasile Goldis" Western University of Arad , Arad, ROMANIA

Keywords: cardiac arrest team, survival, patients at risk of cardiac arrest

Abstract :

In Arad County Hospital, resuscitation team is a cardiac arrest team from Emergency Department which is called only when a cardiac arrest is recognised. We evaluated this intervention during 2015 on neurology, internal medicine, haematology, gastroenterology, surgical, orthopaedic and paediatric fields.

Resuscitation team was called for 123 cardiac arrest situation, from which 111 were cardiac arrest while the other 12 were not.

46 patients were resuscitated (41,44%) whereas 65 (58,55%) didn't respond to the resuscitation measures. The initial cardiac rhythm was ventricular fibrillation in 28 cases (25,23%) and asystole and pulseless electrical activity in 83 cases (74,77%). Patients' rate of survival to hospital discharge after in hospital cardiac arrest was only 1,8% (2 patients).

Referring to those who were not in cardiac arrest (12 patients), the rate was higher: 6 of them (50%) survived and left the hospital. The number of discharged patients (alive) from the 123 interventions was 8 (6,5%).

Conclusion:

1. Emergency medical team must be called not only for cardiac arrest situation, but also for deteriorating patients who are evaluated within early warning score.
2. A strategy of recognising patients at risk of cardiac arrest may prevent some of these arrest.
3. In order to prevent futile resuscitation attempt for those who are unlikely to benefit from Cardiopulmonary Resuscitation, a do-not-attempt-resuscitation (DNAR) policy should be implemented.

#8219 : Elongation the time for trombolysis in emergency neurological deficits - widespread occurance of intracranial vessel occlusion in awakening stroke patients

Preferred format : ePoster

Authors:

nargiza eshankulova (1), gulnora Rakhimbaeva (1), Nodira Tuychibaeva (2)

1. , taskent medical academy, Tashkent, UZBEKISTAN
2. neurolog, taskent medical academy, Tashkent, UZBEKISTAN

Keywords: stroke,trombolytic therapy

Abstract :

Background: Elongation is an investigator-initiated, randomised, double-blind and placebo-controlled Phase III trial of intravenous alteplase vs placebo in patients with ischemic stroke 4.5-9 hours from stroke onset or awakening stroke (AS). The prevalence of intra-cranial vessel occlusion in AS patients remains to be determined and can guide the development of optimal therapy for this unique group of stroke patients.

Objective: To study the prevalence and characteristics of intra-cranial vessel occlusion in this AS cohort.

Methods: Ischemic stroke patients within 4.5-9 hours from stroke onset or with AS (time of AS onset defined as the midpoint between time to sleep and awakening with the stroke symptoms) are eligible for enrollment. Criteria for entry into the trial include perfusion-diffusion mismatch using a perfusion threshold of Tmax>6sec and a perfusion:diffusion lesion volume ratio of >1.2. Diffusion lesion volume must be <70mL based on assessment by automated RAPID software. Intra-cranial vessel occlusion was assessed on MSCT angiogram performed at randomisation and 24 later. Three expert readers assessed these images independently.

Results: 67 patients had images with adequate quality, including 53 (65%) in the AS group with median age of 77.0 yrs (IQR 67.0, 81.0) and NIHSS of 14.0 (9.0, 19.0). 62 of 63 patients (98%) had vessel occlusion with 44.4% involving M1 of the middle cerebral artery, 17.5% M2, 4.8% M3, 25.4% both internal carotid artery (ICA) and M1, 4.8% ICA alone and 3.1% the posterior cerebral artery. The median ischemic core volume was 15.0 ml (6.5, 31.5), Tmax>6 volume 88.5ml (58.0, 122.0), mismatch volume 65.5ml (42.8, 92.0), and ratio of 4.8 (2.5, 8.7). 19 patients (30%) demonstrated recanalization on follow-up imaging.

Conclusion: In AS patients there is a very high rate of intracranial vessel occlusion with relatively large volumes of salvageable penumbral tissue. Intravenous thrombolytic therapy followed by thrombectomy in selected cases may be an appropriate therapeutic option with safety and efficacy remaining to be established in randomized controlled trials.

#8220 : Unusual presentation of Infective endocarditis

Preferred format : ePoster

Authors:

wided bousslimi (1), anware yahmadi (2), rania jebri (3), hanane ghazali (3), cyrine keskes (4), noura naguech (5), mohamed mguidich (3), sami souissi (3)

1. service d'acceuil des urgences, Hôpital Régional de Ben Arous, Tunis, TUNISIA
2. service d'acceuil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
3. Service accueil des urgences, Hôpital Régional de Ben Arous, tunis, TUNISIA
4. emergendy department of ben arous hospital , regional hospital of ben arous tunisia , tunis, TUNISIA
5. emergency department of ben arous tunisia, ben arous tunisia, tunis, TUNISIA

Keywords: Infective endocarditis, emergency department, antibiotic

Abstract :

Introduction:

Infective endocarditis (IE) is a challenging diagnosis for the emergency physician. It has many presentations ranging from an indolent infection to septicemia with life-threatening systemic embolization. Herby, a case of an unsual presentation of IE.

Case report

A 86-years-old male with no past medical history presented to the ED after a sudden loss of consciousness that recovered spontaneously. The patient had a shortness of breath for the last two weeks. On admission, patient was conscious. His temperature was 37 celsus degrees and his blood pressure was 85/40 mmhg. Heart rate was 100 Bpm, respiratory rate 38 breaths per minute and oxygen saturation 82% on room air. The serum white blood cell count was 12,000/mm3 and CRP was 172 mg/l. The diagnosis of severe sepsis was made and an infusion of serum saline was started. Chest radiography and a computed tomographic head scan were normal. A urine stream test was negative. A transthoracic echocardiography showed large vegetation on the sigmoid valve. An IE was the etiologic diagnosis retained and an antibiotic treatment based on gentamicin and vancomycin was delivered. After 48 hours of antibiotherapy, the patient was still febrile with poor general condition. All the patient's blood cultures were negative. Tomographic chest scan showed a proximal embolism and the transesophageal echocardiography showed mobile echodensity on the sigmoid valve with 2 thromboses in the left atrium. Heparin therapy was adjunct. The patient’s general condition improved after 7 days. He was than referred to the cardiology department.

Conclusion

The latency of the cardiac symptoms for IE and close simulation of other disorders may lead to misdiagnose. Clinicians should be aware of variety of cerebral presentations in patients with IE, since these may constitute the first symptoms of the disease.

#8221 : Is there a level of NT-proBNP from which we can predict the clinical scenario of acute heart failure syndromes?

Preferred format : Oral presentation

Authors:

rania jebri (1), olfa Djebbi (2), mehdi Ben lassoued (2), mounir Haggui (2), Khaled Lamine (2)

1. emergency department , military hospital of tunisia, Ben Arous, TUNISIA
2. emergency department , military hospital of tunisia, tunis, TUNISIA

Keywords: heart failure, emergency, natriuretic peptides, echocardiography

Abstract :

Introduction :

The acute heart failure is a common pattern to seek care in the emergency department (ED). The objective of our study was to investigate the relationship between the rate of NT pro BNP and the acute heart failure (AHF) syndromes in the emergency department.

Methods :

A descriptive prospective study was conducted over eight months. Were included all patients who presented to the ED with dyspnea and in whom the diagnosis of acute heart failure was made.

All patients had a NTproBNP laboratory test and underwent echocardiography by the same operator within 24 hours. Were noted the demographics, clinical, biological, echocardiography and evolutionary criteria.

Results :

Inclusion: 107 patients. Mean age 65 ± 12 years. Sex ratio: 2.34.

A clinical scenario CS1 was noted in 28% of cases, CS2 in 36% of cases, CS4 in 16% of cases, CS3 in 12% of cases and CS5 in 8% of cases.

The mean rates of NTproBNP were 7109 ± 6896 pg / ml for CS1, 4422 ± 5816 pg / ml for CS2, 2802 ± 3999 pg / ml for CS3, 4516 ± 6189 pg / ml for CS4 and 2215 ± 824 pg / ml for CS5.

Regarding the results of the echocardiography, 30% of patients had preserved left ventricular ejection fraction (LVEF) with diastolic dysfunction and 70% had a reduced LVEF.

Elevated LV filling pressures were found in 95% of patients. Disorders of wall motion in 14% of cases and isolated right heart failure in 12% of cases.

The mean NTproBNP was higher when LVEF was preserved: 6607 ± 6801 pg / ml vs 4015 ± 5353 pg / ml (p=0,043).

The NTproBNP could predict the clinical scenario CS1 with a cut-off at 5513 pg / ml but did not predict the other clinical scenarios.

Conclusion :

The mean NTproBNP was higher when LVEF was preserved. The NTproBNP could predict the clinical scenario CS1 from a threshold of 5513 pg / ml but did not predict the other clinical scenarios.

#8223 : HOSPITAL WASTE MANAGEMENT AND IMPACT OF PROFESSIONAL RISKS IN WELFARE

Preferred format : ePoster

Authors:

Denada Selfo (1), Majlinda Zahaj (1)

1. Lecturer, University of Vlora, Vlore, ALBANIA

Keywords: biological risk, drilling with age, biosecurity measures, hospital infections, nursing staff, administration, hospital waste

Abstract :

Bacground:

Health institution frequented by many people, regardless their age, religion, gender or nationality.. Wastes produced in such institution have a higher potential for causing significant damage to human health and the environment around us, compared to waste, produced at other institutions. The knowledge that nursing staff has for the appropriately management of hospital waste and the use of protective measures have an important role in administation of these residues.
Purpose: Inspection of management of hospital waste and the use of bio-safety measures e, in order to establish and implement adequate health education programs, for nursing staff to optimize the management of hospital waste and prevent the accidents at work .
Material and methods: This study is transversal, descriptive-analytic, quantitative and applied. The data were processed by means of SPSS v 17.0 .
Results: In general the nursing staff had knowledge about hospital waste management and the protection to the risks at work. Even though they had knowledge, the protection measures were not applied by all of them and that because there were not enough necessary materials. I emphasize that the study lasts in fact till 2014-2015, that enables me to make a comparison between the years. There was also noticed that the bio-security measures during work were used more, as a result of the different trainings made in 2014-2015. There were less accidents than in 2013 because there was much more security at hospital wastes separation, making the risk of accidents during work decrease
Recommendations: Nursing staff of Vlora Regional Hospital need continuous training on the way of management of hospital waste. Also this health care institution must provide nursing personnel the necessary conditions and means that during the realization of nursing procedures, nurses must be protected against infections .
Key words:biological risk, drilling with age, biosecurity measures, hospital infections, nursing staff, administration, hospital waste

#8224 : POSTPARTUM RENAL INFARCTS

Preferred format : ePoster

Authors:

ferkant gökhan kaya (1), volkan celebi (1), adeviye karaca (1)

1. emergency services, antalya training and research company, antalya, TURKEY

Keywords: infarcts

Abstract :

POSTPARTUM RENAL INFARCTS

Karaca, A KayaG, Celebi, V

Acute renovascular obstruction is a elusive and clinical condition that can be detected by investigation with only a high rate of clinical suspicion. As acute renal infarction can be asymptomatic, the patient may also be presented with sudden, severe abdominal or lumbar pain, nausea, vomiting.

22 years old female patient was presented to our clinic with sudden right flank pain. It is learned that the patient had made cesarean birt three days ago and no similar pain on her history. On physical examination; there was only costovertebral tenderness at right. The patient was admited as renal colic and whole blood and urine samples were taken. There was 25 lococyte and 6 eritrocyte on urine test., WBC: 13.500. after analgesic. the symptoms of the patient was still exist so that renal USG was planned. parancyme of right kidney was seen heterogen and hiperecoic areas. Therefore, doppler renal usg was taken and there was hyperecogenite at superior and inferior side of right kidney and compare to left, vascularity of kidney was decreased. these findings support renal infarct. The patient was consulted by interventional radiology and urology departments and under renal artery angiography, stent had been performed. The patient was hospitalised to urology service.

The second reason mentioned for acute renal artery occlusion: thrombosis and thromboembolism. Acute thrombosis is the obstruction of trombus caused by the renovascular system.Consequently varying hormonal status during pregnancy and these cases is itself a risk factor for thrombus formation. In addition, depending on the cesarean immobilization, right renovascular posed by the growth of the uterus during pregnancy is located in the etiology of the bass made structures. Early invasive angioplasty is the treatment option less risky.

#8225 : Fracture of cervical spine from minor trauma leading to diagnosis of multiple myeloma

Preferred format : ePoster

Authors:

Eva Kersna (1), Sounder Perumal (1)

1. , none, Swansea, UK

Keywords: Pathological fracture, cervical spine fracture, minor trauma, multiple myeloma, young patient

Abstract :

Introduction

Multiple myeloma (MM) is a neoplastic condition characterised by proliferation of plasma cells in the bone marrow. Approximately 60% of patients have bone pain at the time of presentation and focal lytic lesions are found in nearly 60% of those undergoing skeletal surveys[1].

We discuss a case of a 46-year-old male who obtained a pathological fracture of the C2-vertebra following minor trauma as an initial presentation of MM.

Case report

A 46 year old gentleman presented to our Emergency Department with neck pain after having reversed his car into a lamppost at a low speed. He had had neck pain in the previous 3 weeks, however this accident severely exacerbated the symptoms. On initial assessment lower cervical spine (c-spine) tenderness, prominent over the paraspinal muscles, was elicited. He remained neurologically intact.

The patient had a plain x-ray of the c-spine which revealed a lucent lesion on C2-vertebra. He was subsequently triple immobilised, and a CT and MRI scans confirmed the presence of a lytic lesion through the base of the odontoid peg with a pathological fracture but no spinal cord compression.

Further CT imaging revealed no signs of any primary malignancy or metastatic disease within the chest, abdomen or pelvis. Subsequent bone marrow investigations confirmed the presence of monoclonal gammopathy and features consistent with the diagnosis of MM with plasmacytoma affecting the C2-vertebra.

The fracture was managed with external stabilisation, which resolved the neck pain. In view of his age and good performance status, combination chemotherapy was commenced with planned autologous stem cell transplantation.

Discussion

C-spine fractures occurring in the elderly following minor trauma is a common presentation, owing to higher prevalence of chronic rheumatologic and malignant conditions making them more susceptible to neck injury[2,3]. It often means clinicians have a low threshold for imaging of the c-spine in this group of patients.

Applying the NEXUS (National Emergency X-Radiography Utilisation Study) guidelines for imaging of the c-spine following trauma, our patient did not fulfil the criteria for any radiological imaging.

This case highlights the importance of considering imaging also in the younger population with atypical presentations, in this case neck pain out of proportion to the injury, despite clinical guidelines. The clinical judgement in managing our patient lead to an earlier diagnosis and treatment of MM, potentially extending the patient's life expectancy.

Conclusion

Trivial trauma to the neck should be taken seriously as it can lead to fractures of the c-spine that is already compromised by underlying pathology. We discuss a case of a middle aged male who presented with severe neck pain following a low impact injury, and obtained a pathological fracture.

References

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3. Chan L *et al.* Cervical fracture as the initial presentation of multiple myeloma. Ann Emerg Med. 1994;24:1192-1194.

#8226 : Hyponatremia Treatment Et Emergency Service

Preferred format : ePoster

Authors:

havva şahin kavaklı (1), pınar koptur (2), hıdır yılmaz (2)

1. emeregency department, educational resarch hospital, ankara, TURKEY
2. emergency department, educational resarch hospital, ankara, TURKEY

Keywords: Hyponatremia, Acute, Chronic, Treatment

Abstract :

OBJECTİVE: Hyponatremia is the electrolyte abnormality that is encauntered mostly. İt can happen in variable clinic symptoms in accordance with the reason and inception shape. Hyponatremia in acute inception can cause brain oedema; that's why it needs treatment urgently. İf chronic hyponatremia is treated hardly, it can cause a very serious neurologic chart called 'osmotik demilition'.Here is the presentation about treatment of patients with hyponatremia.

material-methods: The records of february, march, april in 2016 are observed. The age ,gender, additional health problems and biochemical analysis results in accordance with study retrospectivly.

RESULTS: Twentythree patie nts are found with hyponatremia in study that is completed retrospectivly. They are treated at emergency. Eighteen patients are female,8 ones are male. The age average of patients is 74,43. Twenty patients have hypertension, diabetes, and coroner heart problem; 3 patients have renal insufficiency but they don't get hemodiafiltration. The ure average rate of patients is 58,96 mmol/l, sodium 116,8 mmol/l, creatinin 1,42 mmol/l, control sodium 123,47 mmol/l is confirmed. Fifteen patiants % 3 nacl infusion is treated, 8 patients is treated with %0,9 nacl.

DİSCUSS: When sodium levels decrease 135 mmol/l, it is called hyponatremia. The precaution is to give sodium or limited water to repair the serum sodium level of patient with hyponatremia. The two factors are very important in the determination of tretament: the existence of symptoms and teh development of hyponatremia . While nausea whitout vomiting, confusion and headache are accepted as serious symptoms moderately, vomiting, respiration circulatory disorder, convulsions and coma are considered as seriously symptoms. İf a patiant comes with these serious symptoms in 20 minutes, 150 ml %3 nacl intraveneous infusion is advised; at the end of 20 minutes, taken blood for sodium level; moreover it is advised that the same treatment can be doing again.The process must be continued till serum sodium level increases 5 mmol/l. İf hyponatremia happens more than 48-72 hours, it is described as chronic hyponatremia. Till the symptoms disappear, serum sodium level process is continued, not more 12 mmol/l in a day. The treatment of the main reason is important for patients with cheonic hyponatremia. We organized our patients to evaluate treatment in this way

#8228 : POST-TRAUMATIC RENAL ARTERY AND VEIN THROMBOSIS

Preferred format : Oral presentation

Authors:

adeviye karaca (1), ferkant gökhan kaya (1), volkan celebi (1)

1. emergency services, antalya training and research company, antalya, TURKEY

Keywords: thrombosis

Abstract :

POST-TRAUMATIC RENAL ARTERY AND VEIN THROMBOSIS

Karaca, A KayaG, Celebi, V

Renovascular injury occured post abdominal trauma is classified as avulsion, occlusion and laceration. While the pathophisyology of post-traumatic renal artery oclusion that is a rare condition has not been clarified entirely, there is no report of cases as post-traumatic renal artery and vein occlusion.

39 years old female patient was presented to emergency service with the complaint of right side pain. When the history was deepen, it is noticed that the pain was started one hour after car accident. The general condition of the patient and her vital signs were stabil. There was no any problems on past medical history and her blood samples. According to report of abdominal USG; there was 5 mm free fluid on perinephritic area nearby the inferior of right kidney and then in order to investigate the origin of free fluid, contrast enhanced abdominal CT was requested. Abdominal CT was evaluated by radiologist as there was hypodens appearance over hepatic subcapsular area (hemathoma), right renal artery was not observed after 1 cm proximal segment (total laceration or rupture), right renal parenchym could not contrasted, there was free fluid on pelvic area and fractures were found out at right transvers proccess of L3-L4-L5 vertebras. The patient was consulted by Urology, Cardiovascular surgery, general surgery and interventional radiology department. Renal artery and vein angiography was planned by interventional radiology and total occlusion of right renal artery and vein was observed on angiography. Although revascularization attempt at the same session could not be successful. Trombolitic treatment and surgical revascularization were not recommende due to the patient was evaluated as multitrauma. It is not observed that decrease of hemoglobin or increas of BUN/creatinin during emergency service follows. The patient was hospitalized and followed by Urology service.

Despite of renal artery trombosis is well known, the combination of the renal artery and vein thrombosis is a rare complication of abdominal trauma. In the treatment, observation, thrombolytic therapy, nephrectomy, surgical thrombolectomy, or more commonly used PTA are taken part.

#8229 : POSTPARTUM CAVERNOUS SINUS THROMBOSIS

Preferred format : ePoster

Authors:

adeviye karaca (1), volkan celebi (1), ferkant gökhan kaya (1)

1. emergency services, antalya training and research company, antalya, TURKEY

Keywords: postpartum

Abstract :

POSTPARTUM CAVERNOUS SINUS THROMBOSIS

Karaca, A KayaG, Celebi, V

Cerebral venous thrombosis is an interesting and elusive disorder. It could be seen at any age. The most frequently affected sinuses, sinus superiorsagittal (70-80%), transverse and sigmoid sinuses (70%) are ranked as the cavernous sinus and sinus rectus.

33 years old female patient was admitted with complaints of numbness on the left side of the body to ED. The complaints began one day ago had increased and along with headache and the fatigue. She had made cesarean birth four days ago. There had been no abnormalities during pregnancy. Arrival vital stable. Neurological examination revealed no pathological reflexes, no loss of muscle strength, normal cranial nerve examination. Cranial CT taken to the patient who complaint about the loss of feeling sense in the left arm and leg evaluated as normal. The patient was taken on cranial MRI revealed a cavernous sinus thrombosis. The patient was admitted to the neurology service to start thrombolytic and anticoagulation therapy.

The most common cause of cerebral venous thrombosis in women; pregnancy, puerperium and periods of hormonal changes into the use of OKS. Besides the some reasons of etiology are inflammatory diseases, cancer, anemia and some hypercoagulable state . The cause can not be detected in approximately 30% of cases. Most incidence information is based on autopsy studies and cerebrovascular 12500 autopsy rates ranging from 0.1% to 9% of the deaths due to the disease have been reported. CVT compared to ischemic stroke due to arterial occlusive disease occurs rarely. Clinical spectrum ranges with papillary edema, headache, fokaldefisit, seizures and coma. The most common symptom is headache. While non-contrast CT is the first choice imaging method, the most reliable method in the diagnosis and follow-up is MRI and MR-Venogram. Cranial CT may be normal in 20% of cases. The treatment of Serebral venous thrombosis is tripod as etiological factors, symptomatically and antithrombotic therapy. Symptomatic treatment includes antiepileptic treatment in the presence of epileptic seizures, lumbar puncture precedure, acetazolamide and corticosteroid to reduce the increased intracranial pressure, antibiotic therapy in the presence of infection.

Cavernous sinus thrombosis patients may present with different neurological complaints and it should be kept in mind that very common in women with especially during pregnancy and the postpartum period.

#8230 : Tissue adhesives in adult emergency : A systematic review.

Preferred format : ePoster

Authors:

Alison HORN (1), Richard CHOCRON (2), Natacha ALAVI (1), Anais GUINCESTRE (1), Thomas TAMISIER (2), Philippe JUVIN (2)

1. Service d'Accueil des Urgences Hôpital Européen Georges Pompidou, AP-HP, Paris, FRANCE
2. Service d'Accueil des Urgences, Hôpital Européen Georges Pompidou, AP-HP, Paris, FRANCE

Keywords: Wound, Tissue adhesive, traumatic laceration

Abstract :

Background :

Wound represent until 13% of the consultations to the emergency ward. To close simple laceration, tissue adhesive (TA) is an alternative to standard wound closure (suture, staples, adhesives strips). TA has been approved for use in surgery and children. It represents potential advantages includes easy-of-use, decrease in pain, time to apply and not requiring a follow-up visit for removal.

Objectives:

To summarize the available evidence for the effect of TA on the healing of traumatic laceration in adults

Search methods:

We performed systematic review based on the Cochrane Library (1979 to august 2015), the MEDLINE (1950 to august 2015) and Web-of-Science Citation Index (1975 to august 2015).The first outcome is the occurrence of complications (infection, dehiscence, delay in healing) and secondary are pain, procedure time, cosmetic and cost consequence.

Results:

Eighteen studies were included in this review. Seven studies reported on complications. Fourteen studies compared standard wound closure to TA. Four studies compared TA to either an association between TA and standard wound closure or two different TA. No significant difference was found for occurence of complications (RR=0.86, 95% IC [0.36 ; 2.06]). Overall, studies favoured TA for procedure time, cosmesis, pain, and cost consequence.

Conclusion:

Tissue adhesives are an acceptable alternative to standard wound closure for repairing simple traumatic lacerations in adults. They offer the benefit of decreased procedure time and less pain, when compared to standard wound closure. They don’t increase significantly rate of complications.

#8231 : Are scoring systems sufficient for predicting mortality due to sepsis in the emergency department?

Preferred format : Oral presentation

Authors:

Merve Gunes (1)

1. Emergency Medicine, Mrs, Istanbul, TURKEY

Keywords: sepsis, SOFA, SAPSII, MEDS, Septic Shock, Emergency Medicine

Abstract :

Are scoring systems sufficient for predicting mortality due to sepsis in the emergency department?

Objectives

Scoring systems are used to show risk stratification in intensive care units (ICU), but they are not routinely used in emergency departments. The aim of this study is to determine accuracy for predicting mortality in emergency medicine with scoring systems: Sequential Organ Failure Assessment (SOFA), Mortality in ED Sepsis (MEDS), and Simplified Acute Physiology Score (SAPSII).

Methods

This is a prospective observational study. Patients presenting with evidence of sepsis are included, while SAPSII, MEDS, and SOFA scores are also calculated. Analysis compares areas under the receiver operator characteristic (ROC) curves for 28-day mortality.

Results

Two hundred patients are included in the study: thirty-one (14.3%) with septic shock, 138 (69%) with severe sepsis without shock, and 31 (15.5%) with infection without organ dysfunction. Fifty-three (26.5%) patients died within 28 days of presentation.

Areas under the ROC curve for mortality involve 0.76 for MEDS (95% CI = 0.69 to 0.82), 0.70 for SAPSII (95% CI = 0.62 to 0.78), and 0.68 for SOFA (95% CI = 0.60 to 0.76) scores. Pairwise comparison of AUC between MEDS, SAPSII, SOFA, and Lactate are not significant. (p > 0, 05).

Conclusion

According to our results, SOFA, SAPSII, and MEDS are not sufficient to predict mortality. MEDS also has better results than other scoring systems.

#8232 : Do we follow the recommendations of the INFURG-SEMES when treating community-acquired pneumonia?

Preferred format : ePoster

Authors:

MANUEL ANTONIO TAZON-VARELA (1), HECTOR ALONSO-VALLE (2), PEDRO MUÑOZ-CACHO (3), JAIME GALLO-TERAN (4), LUIS ANGEL PEREZ-MIER (1), MARIA ANDRES-GOMEZ (2)

1. EMERGENCY DEPARTMENT, LAREDO HOSPITAL, LAREDO, SPAIN
2. EMERGENCY DEPARTMENT, MARQUES DE VALDECILLA HOSPITAL, SANTANDER, SPAIN
3. PREVENTIVE MEDICINE, PRIMARY CARE , SANTANDER, SPAIN
4. RADIOLOGY, BIERZO HOSPITAL, SANTANDER, SPAIN

Keywords: pneumonia,guidelines,outcome

Abstract :

Title Do we follow the recommendations of the INFURG-SEMES when treating community-acquired pneumonia?

Introduction The working group on infectious diseases of the Spanish Society of Emergency (INFURG-SEMES) recommends an empiric approach in pneumonia acquired in the community (CAP) based on the score Pneumonia Severity Index (PSI), embodied in the consensus document SEMES-SEPAR "management of community-acquired pneumonia in the emergency" and the monograph "INFURG-SEMES Recommendations for the management of respiratory infection in the ER."

Objective To evaluate the empirical treatment administered to patients with CAP compared with the recommendations proposed by the INFURG-SEMES group.

Patients and methods

descriptive prospective observational study. 383 days subject for 14 or more years with clinical and radiographic diagnosis of CAP and evidence of antibiotic treatment were included in the emergency room. Sociodemographic variables, prognostic scales of gravity, evolution and the antibiotic treatment were collected. Categorical variables as absolute value and percentage were described. Pearson chi square test was used for trend assessment.

Results

They were included in the study 273 patients. 66.7% (48/72) of patients PSI risk group I were treated following the indications of INFURG-SEMES group while they were not followed in 33.3% (24/72). 67.5% (27/40) PSI II were treated following the indications, and 32.5% (13/40) no. 56.9% (33/58) III PSI were treated following the indications, while 43.1% (25/58) no. 50% (34/68) PSI IV were treated following the indications, and 50% (34/68) no. 22.9% (8/35) of patients were treated PSI V following the indications, but 77.1% (27/35) no. A significant linear trend was observed in analysis ($p < 0.001$).

Conclusion

The higher score PSI has the NAC and therefore manifests itself most severe form, the lesser adaptation to INFURG-SEMES indications was observed, with significant linear trend. It may be because clinicians do not follow these guidelines. It could also be related to not having assessed the adequacy of treatment in special situations such as suspected anaerobic infection, aspiration pneumonia, lung abscess or suspected Pseudomonas infection.

#8234 : EVALUATION OF CHEST PAIN

Preferred format : ePoster

Authors:

pınar koptur (1), hıdır yılmaz (1), havva şahin kavaklı (2)

1. emergency department, educational resarch hospital, ankara, TURKEY
2. emeregency department, educational resarch hospital, ankara, TURKEY

Keywords: TİMİ, Chast Pain, Troponin, Diagnosis

Abstract :

University of Yıldırım Beyazıt Yenimahalle Educational Research Hospital Emergency Department

Sahin Havva K, Koptur P, Yılmaz H, Sezer Ahmet A, Akman C, Karakuş M

OBJECTİVE: Uncertainties in the measurement of troponin is a nuisance. Final diagnostic level of troponin is still unknown. Troponin in many cases can be positive. The aim of this study is to be a short presentation about the monitoring and evaluation of troponin-positive patients arriving with chest pain.

MATERİAL-METHODS: The records of mergency department in February, March, and April 2016 were retrospectively reviewed. The 92 patients presenting with chest pain and cardiac troponin-positive detection of the 92 patients were examined. Patient's age, sex, cardiac troponin, biochemistry and complete blood count test results, whether electrocardiographic changes, additional diseases were recorded. The records were classified by using the Thrombolysis In Myocardial Infarction scoring(TIMI).

RESULTS: 29 women 63 male patient was admitted because of chest pain. verage age was calculated to be 70. Average systolic blood pressure of 145 mm / hg diastolic blood pressure 93mm / kg, 93% O2 saturation, pulse rate 88 / min were measured. The average value of urea in the blood values of 58 mg / dL, creatinine of 1.93 mg / dL, AST 60 U / L, ALT 56 U / L, white blood cell 10.53, first viewed cardiac troponin 0.894 , after 1 hour troponin value 1.93, third hour of troponin value was 2.44. Twenty-one patients had elevated levels of creatinine. It was TIMI scoring,8 patients 4 , 44 patients 5. 2 patients6, 8 patients 4, 20 patients 3, 2 patients had 2 points. Eight patients were referred to as ST elevation myocardial infarction, four patients was not considered an acute coronary syndrome. Eighty patients were followed as acute coronary syndrome.

CONCLUSSİON: Troponin can be positive in many diseases and conditions. The acute and chronic kidney failure, chronic heart failure, pulmonary embolism, acute myocarditis, pericarditis,, blunt chest trauma, sepsis-septic shock, hirertansif crisis, tachyarrhythmia, bradycardia, hypothyroidism, infiltrative diseases (hemochromatosis, amyloidosis) drug toxicity, snakes bites, respiratory insufficiency, carbon monoxide poisoning are some of these conditions. Due to all these factors, the increase in troponin levels should be evaluated . Etiologic diagnosis can be detected correctly by the other laboratory tests. In addition, the patient's age, additional diseases, changes in cardiac troponin follow-up, electrocardiographic findings, including risk classification and type of chest pain that certain factors should be used. Nevertheless, whatever the underlying pathology,the elevatin of troponin usually carries prognostic value of myocardial damage is shown. Primarily in the presence of a disease in the acute phase with high morbidity and mortality, to diagnosis of ACS and guide treatment by elevated cardiac troponins may not be an appropriate clinical approach. İt is more accurate to be guided by the patient's primary disease or monitoring in the existing clinic in such conditios. Regulation of cardiac treatment should be compared with the cardiology department.

#8235 : Increasing unusual microorganisms in community-acquired pneumonia

Preferred format : ePoster

Authors:

MANUEL ANTONIO TAZON-VARELA (1), HECTOR ALONSO-VALLE (2), PEDRO MUÑOZ-CACHO (3), JAIME GALLO-TERAN (4), LUIS ANGEL PEREZ-MIER (1), MARIA ANDRES-GOMEZ (2)

1. EMERGENCY DEPARTMENT, LAREDO HOSPITAL, LAREDO, SPAIN
2. EMERGENCY DEPARTMENT, MARQUES DE VALDECILLA HOSPITAL, SANTANDER, SPAIN
3. PREVENTIVE MEDICINE, PRIMARY CARE , SANTANDER, SPAIN
4. RADIOLOGY, BIERZO HOSPITAL, SANTANDER, SPAIN

Keywords: pneumonia, microorganisms, outcome

Abstract :

Introduction To determine the etiologic agent of community-acquired pneumonia (CAP) is not always possible at the initial moment. Knowing the most common organisms in our environment can help us in making empirical treatment decisions.

Objective To evaluate the microbiological etiology of CAP diagnosed in the emergency department for a year.

Patients and methods

descriptive prospective observational study. subjects of 14 or more years with clinical and radiographic diagnosis of CAP were included during a period of 383 consecutive days.

Sociodemographic variables, personal history, prognostic scales of gravity, evolution and pathogens were collected. In order to obtain an etiologic diagnosis detection of bacteria was made in blood by fluorescence, detection of urinary antigens was obtained for Streptococcus pneumoniae and Legionella pneumophila by immunochromatography, sputum culture was seeded in agar plate, influenza viruses were determined by immunochromatography analysis and PCR and detection of Streptococcus pyogenes was obtained by immunochromatographic test. Categorical variables as absolute value and percentage and continuous variables by their means and standard deviations were described.

Results

338 patients were studied. They were included in the study 287 patients (42% women; mean age 66 ± 22 years). They died 10.45% 70% entering. etiologic diagnosis was achieved in 43 patients (14.98%), determined 16 microorganisms in 59 positive samples. The most frequently isolated pathogens was Streptococcus pneumoniae (24/59, 41%) followed by gram negative enteric bacilli, Klebsiella pneumoniae, Escherichia coli, Serratia marcescens and Enterobacter cloacae isolated in 20% of the samples (12/59), virus influenza (5/59, 9%), Staphylococcus aureus methicillin-resistant all (3/59, 5%), Pseudomonas aeruginosa (2/59, 3%), Moraxella catarrhalis (2/59, 3%), Legionella pneumophila (2/59, 3%), Haemophilus influenzae (2/59, 3%), beta-hemolytic Streptococcus group A (2/59, 3%), Clostridium perfringens (2/59, 3%), Corynebacterium pseudodiphtheriticum (1 / 59, 2%), Gemella spp (1/59, 2%) and Stenotrophomona maltophilia (1/59, 2%). Polymicrobial infections accounted for 14% (8/59).

Conclusion

In our sample we found a high percentage of unusual microorganisms in NAC. We think that in the coming years we will face a scenario in which the aging population and the growing need for health care acrecentarán the unusual microorganisms that generate the NAC.

#8236 : Profesional practices concerning care limitations and end-of-life situation in an emergency department

Preferred format : Oral presentation

Authors:

Guillaume Fons (1), Marie Ballester (1), Florence Atger (1), Richard Chocron (1), Anne-Laure Feral-Pierssens (1), Philippe Juvin (1)

1. Emergency Department, European Georges Pompidou Hospital, Paris, FRANCE

Keywords: end-of-life, profesional practices, care limitations

Abstract :

Introduction: Emergency Departments (ED) are the front line of public health care system and are often confronted to end-of-life care. These situations are difficult and uncomfortable for patients, families as for medical staff. Leonetti law (2005) strengthened by Clayes Leonetti law (2016) forbids “unreasonable obstinacy” and frames decisions concerning means limitation or ending active therapeutic means. In this recent context, we wanted to assess professional practices concerning the decision making and medical management of end-of-life situations.

Material: We conducted a retrospective monocentric study from october 2015 to april 2016 in an ED of an academic hospital. Through medical charts, we included all patients that died in the ED or in the emergency hospitalization unit through the period and for whom a means' limitation decision had been taken.

Results: n=53 patients presented the inclusion criteria (0,1% of all visits). For 57% of these patients, the limitation decision wasn’t clearly written in the chart. 30% of these decisions were taken by a sole practitioner. In the first moments of their arrival in the ED, 28% of these patients had invasive yet inappropriate care. 55% of these patients were visiting the ED for the first time. 21% died in the first 4 hours after being admitted to the ED. We noticed wide heterogeneous pratices while managing dyspnea, pain, consciousness and sedation.

Conclusion: End-of-life situations are part of ED care. However care limitations are difficult decisions and are not easily and efficiently managed. Education is necessary for medical and paramedical staff in order to help those patients through these moments.

#8237 : The effect of complete blood count parameters and ultrasound in the management of acute cholecystitis and surgery decision

Preferred format : Oral presentation

Authors:

Mehmet Oguzhan Ay (1), Alper Celikdemir (2)

1. Department of Emergency Medicine, Hitit University, Corum Education and Research Hospital, Corum, TURKEY
2. Department of Emergency Medicine, Adana Numune Education and Research Hospital, Adana, TURKEY

Keywords: acute cholecystitis, surgery, complete blood count, ultrasound

Abstract :

Introduction: We aimed to determine the effect of complete blood count (CBC) parameters and ultrasound (USG) in the management of acute cholecystitis (AC) and surgery decision.

Methods: In a two-year period, adult patients (>18 years) in both gender who admitted to emergency department (ED) and diagnosed as AC with ultrasound (USG) were investigated from the hospital records and ED patient files retrospectively. The results of ultrasound performed in ED, complete blood count parameters, surgical or medical treatment decision and pathology reports were reviewed. Those who were under 18 years, whose study data could not be reached were excluded. Patients were divided into 2 groups according to surgical or medical treatment decisions and their data were compared statistically.

Results: Total 236 patients were included. Of the patients, 153 (64.8%) were female, mean age was 54.62±18.76 years. All patients' gallbladder wall thickness were increased, 226 (95.8%) had stones in the gallbladder and 176 of these were multiple, 61 (25.8%) had biliary sludge and 3 (1.3%) had polyp according to USG reports. Patients were evaluated by general surgeons, and 156 (66.1%) patients with AC had surgical treatment decision and surgery was performed. Of these, 112 (71.8%) had laparoscopic cholecystectomy. Mean hospitalisation time was 3.27±2.28 days. Due to pathology reports, 3 patients had gangrenous cholecystitis, 2 had malignancy, 2 had ulceration and perforation. All patients were discharged. When surgical patient group (G1) was compared to medical treatment group (G2), there were statistically significant differences between the two groups in terms of age (G1=49.67±14.38, G2=54.69±18.65, p=0.023), the neutrophil-to-lymphocyte ratio (NLR) (G1= 3.32±3.6, G2=4.75±4.39, p=0.008), RBC (G1=4.68±0.50, G2=4.50±0.65, p=0.022), HGB (G1=13.44±1.66, G2=12.68±2.09, p=0.003), LYM (G1=2.28±0.90, G2=1.94±0.76, p=0.005) and EOS (G1=0.16±0.13, G2=0.22±0.28, p=0.003). The ratio of gender, the presence of stones in the gallbladder, stone size, WBC, MCV, MCH, RDW, PLT, MPV, MONO, NEU, BAS were not different between the two groups.

Conclusions: NLR, RBC, LYM and EOS was significantly associated with surgical treatment decision. After a good physical examination, ultrasound is useful for diagnosis of acute cholecystitis. But contrary to popular belief, ultrasound and WBC are not associated with surgical treatment decision according to our findings.

#8238 : The Evaluation Of Antimicrobial Therapy In Patients With Cholecystitis

Preferred format : Oral presentation

Authors:

Majlinda Zahaj (1), Rozeta Luci (2), Brunilda Subashi (3), Glodiana Sinanaj (4), Denada Selfo (3), Erilda Ruci (1)

1. Lecturer, University Ismail Qemali of Vlora, vlore, ALBANIA
2. Surgery, University of Vlora, Vlora, ALBANIA
3. Surgery, University of Vlora, Vlore , ALBANIA
4. Lecturer, University of Vlora, Vlore , ALBANIA

Keywords: Acute cholecystitis, Infection, antibiotics.

Abstract :

Introduction 95% of cholecystitis cases are caused by gallstones which are formed by cholesterol and bilirubin (pigment) in bile, also referred to as biliary sludge. The other cases are generally caused by trauma, treatment in hospital, or treatment for illnesses related to bile or the liver. Gallstones blocking the CBD are the leading cause of cholecystitis. This blockage causes bile to build up in the gallbladder, and that buildup causes the gallbladder to become inflamed. This is a serious condition. The gallbladder could rupture if it’s not treated properly, and this is considered a medical emergency. Treatment usually involves antibiotics, pain medications, and removal of the gallbladder.

Aim To evaluate the antimicrobial therapy in patients with cholecystitis in the Emergency and Intensive Care Unit of Vlora Regional Hospital in August-December 2015.

Meterials and methods This is a descriptive study. We took a total of 39 individuals in the study, patients which were diagnosed with cholecystitis in the Emergency Unit, of Vlora Regional Hospital during August-December 2015. Data collection was conducted by taking information from medical records of hospitalized patients in this ward. Information was taken for gender, the conditions patients came to the hospital and the use of antimicrobial drugs.

Results There were 39 patients diagnosed with cholecystitis, 22 females and 17 males. 33% of the patients were found with acute cholecystitis and 67% had chronic one. In 7 patients with acute pain and symtoms were found gallbladder stones as the main cause of acute cholecystitis, in 2 patients acute nonchalculous cholecystitis was developed after an abdominal trauma.

The recommended treatment was with wide-spectrum antibiotics for moderate to severe acute cholecystitis. The patient with chronic cholecystitis were found with gallbladder stones as the main reason of the development of the infection and they were treated with intravenous fluids, analgesics, anti-microbial drugs such as intra venous ampicillin-sulbactam before the surgical intervention.

In 2 patients the dose of antimicrobial agents was reduced because of the reduced renal function. Piperacillin, ampicillin and an aminoglycoside were also used in 11patients.

Conclusions Antibiotics are included in the treatment regimen. Infection is treated with broad spectrum antibiotics such as piperacillin-tazobactam, ampicillin-sulbactam, ticarcillin-clavulanate or cephalosporin. It is recommended that those who are prone to allergies to take aztreonam or clindamycin. Make sure that when patient is undergoing an antibiotic therapy, strict compliance is to avoid drug resistance. Acute cholecystitis consists of various morbid conditions, ranging from mild cases that are relieved by the oral administration of antimicrobial drugs or that resolve even without antimicrobials to severe cases complicated by biliary peritonitis.

#8239 : Point of care ultrasound for the diagnosis of congenital lung malformation in newborns: a case series

Preferred format : Oral presentation

Authors:

Niccolò Parri (1), Martina Giacalone (2), Iuri Corsini (3)

1. Department of Emergency Medicine and Trauma Center , Meyer University Children's Hospital, Florence, Italy, Florence, ITALY
2. Science of Health Department, University of Florence and Meyer University Children's Hospital, Italy, florence, ITALY
3. Division of Neonatology, Careggi, University Hospital of Florence, Florence, ITALY

Keywords: point of care ultrasound, newborn, lung malformation

Abstract :

Objectives

Respiratory distress in newborns often presents diagnostic and management challenges to the attending paediatrician. Many of these babies will require little or no intervention, but it is known that early intervention in babies with acute respiratory distress often prevents further complications. Point of Care Ultrasound (POCUS) is a goal directed analysis integrated with the clinical examination of the critically ill patient. Its overall scope is to provide rapid dichotomous answers to questions that arise during the assessment to rule-in or rule-out the diagnosis. Between causes of respiratory distress in newborns, congenital diaphragmatic hernia (CDH) and congenital cystic adenomatous malformation (CCAM) are usually obvious on x-ray. We present the results of a consecutive case series of CCAM and CDH diagnosed with POCUS.

Methods

This is a subanalysis of a prospective, single center, observational study with the aim to verify the diagnostic performance and reproducibility of chest ultrasound in the differential diagnosis of respiratory distress in newborn comparing this procedure with the standard approach in use (x-ray) in term of diagnostic accuracy. Moreover we want to estimate the time needed to complete POCUS assessment compared to the x-ray assessment.

The study was conducted on a consecutive sample of patients aged 0 - 29 days with respiratory distress for whom a chest x-ray was required because of respiratory distress. We compared the diagnosis of the chest x-ray with the diagnosis resulted by the POCUS performed by the researchers. The following outcome measures were used: 1) time to the diagnosis, 2) diagnostic accuracy of the two assessments.

Results

During the enrollment period of the parent study, a total of 8 patients with respiratory distress and final diagnosis of CCAM or CDH were evaluated (3 CCAM, 5 CDH). The average time for ultrasound examination 14’15” (range 7’-17’) was significantly lower than the time needed to make a diagnosis with chest x-ray 50’25” (range 27’-80’) (p=0.0001).

We couldn’t calculate sensibility and positive predictive values due to the low number of patients available. We found one false negative in the group of patient with CCAM and one false negative in the group of CDH. In the latter case the diagnosis was lung consolidation.

Conclusions

Although many pediatric thoracic conditions are adequately evaluated with plain radiographs, further imaging is sometimes required. US provides a more accurate and faster diagnosis and the clinically necessary information without radiation exposure. As with most US studies, US of the pediatric chest requires more physician involvement than other modalities to yield optimal results. Understanding proper US techniques and characteristic US imaging appearance of various thoracic diseases in pediatric patients have great potential for early and accurate diagnosis, which in turn, lead to optimal patient care.

#8240 : A perforation history: still radiography

Preferred format : ePoster

Authors:

Mehmet Unaldi (1), Didem Ay (1), Cihan Buyuksutcu (1), Ersen Gunduz (1), Umit Olmez (1), Onur Incealtın (1), Hatice Eryigit (2)

1. Department of Emergency Medicine, Istanbul Medeniyet University Goztepe Training and Research Hospital, Istanbul, TURKEY
2. Department of Thorax Surgery, Kartal Training and Research Hospital, Istanbul, TURKEY

Keywords: gastrointestinal, perforation, radiography

Abstract :

Perforation of the gastrointestinal tract occurs for reasons such as peptic ulcer, trauma, iatrogenic, foreign bodies, appendicitis, inflammation and requires early diagnosis and timely surgical intervention. The main treatment is surgery. Today endoscopic and laparoscopic techniques instead of conventional laparotomy are used increasingly in the treatment stage. We report to case of perforation diagnosed after previous abdominal hernia operation.
A 47-year-old female admitted to the ED complaints of abdominal pain, nausea and vomiting and diarrhea. In physical examination defense there was defense and rebound. X-Ray showed free air under the diaphragm.Laboratory findings revealed Hb:6,9, Hct:21, WBC:9400, CRP:24,2. She was interned to general surgery clinic.
Despite advanced scanning methods , conventional radiography is still important for diagnose of perforation due to cheap and easy method.

#8241 : Polytrauma in the elderly : Predictors of the cause and time of death

Preferred format : ePoster

Authors:

NEILA MAAROUFI (1), mahassen dhaouadi (2)

1. Service accueil des urgences, hopital Régional de Jendouba, jendouna, TUNISIA
2. service des urgences, hopital Régional de Jendouba, jendouna, TUNISIA

Keywords: trauma-emergency-elderly-mortality

Abstract :

The aim of this study was to determine the epidemiology and clinical features of the trauma in elderly patients, to investigate the factors influencing mortality and to make a contribution to the national trauma data, METHODS We retrospectively investigated the medical records of three hundred nine trauma patients (143 males (46%); 166 females (54%); mean age 74,7 years +/- 8 aged 65 and older presenting to our hospital. Patients' census data, diagnosis, dispositions, prognosis, trauma scores (GCS (Glasgow Coma Score), ISS (Injury Severity Score)), sites of injury were analyzed. RESULTS During the study period 103 000 patients were admitted to our emergency department (ED). A total of 40170 patients were trauma patients. There were 309 patients 65 years and older. Mean GCS, mean RTS and mean ISS were 13,64 +/-3,02, 6,97 +/-1,79 and 27,34 +/-29,48 respectively. A total of 18 patients were hospitalized in emergency room . Mean length of stay was 5h+/- 2H. Mortality rate was 14% (43/309). The mechanism of injury, injury severity, increasing age were predictors of mortality ($p<0.001$). Major injuries included head trauma (53%), extremity trauma ,and thoracic trauma (21%). Head trauma and abdominal trauma were significantly more frequent in the non survivors ($p<0.001$ and $p=0.02$ respectively). CONCLUSION Injury severity and increasing age were the predictors of mortality. Also pedestrian- vehicle collision patients were high mortality rate than the other trauma mechanisms. The most common injured organs were head and extremities.

#8243 : Activities of Croatian Nurses Society of Emergency Medicine

Preferred format : ePoster

Authors:

Damir Vazanic (1), Furdek Davorka (2)

1. , CROATIAN NURSES SOCIETY OF EMERGENCY MEDICINE, ZAGREB, CROATIA
2. , CROATIAN NURSES SOCIETY OF EMERGENCY MEDICINE, Karlovac, CROATIA

Keywords: nurses, society, emergency nursing, Croatia

Abstract :

Croatian Nurses Society of Emergency Medicine (CNSEM) was established in 2014 on the initiative of nurses and medical technicians who work in emergency medicine service and emergency departments. The main objective of activities of CNSEM is focused on professional training of nurses and technicians in emergency medicine. Over the past two years CNSEM has organized numerous training in emergency medicine for EMS teams, education of triage in the department of emergency medicine in accordance with the standards of education prescribed by Croatian Institute of Emergency Medicine. Educational programs are designed to provide specific knowledge and skills needed for a work at emergency medicine system. In addition, there were two courses called school of emergency medicine on the topic cardiorespiratory diseases, and care of trauma patient. There are plans for another 4 modules of school. This year was organized the congress of emergency medicine with international participation, in cooperation with Croatian Medical Association Croatian Society for Emergency Medicine, which brought together 320 participants. CNSEM has almost 300 members who actively participate in society activities. The Society cooperates with Croatian Institute of Emergency Medicine, and with other professional associations from Croatia and Slovenia. Also CNSEM joined the European Society of Emergency Nursing, and it is open for collaboration with another Society from another countries. Activities that are done provide better care for emergency patients.

#8245 : Triage - the comparison of two systems

Preferred format : ePoster

Authors:

Furdek Davorka (1), Damir Vazanic (2)

1. , CROATIAN NURSES SOCIETY OF EMERGENCY MEDICINE, Karlovac, CROATIA
2. , CROATIAN NURSES SOCIETY OF EMERGENCY MEDICINE, ZAGREB, CROATIA

Keywords: Triage, comparison, emergency department

Abstract :

With increasing number of patients, difficulty and complexity of medical care, emergency medicine departments have faced the problem of overload.

The system of work based on waiting in line, as it was the practice in some Croatian hospitals, has been replaced by the organized approach to emergency patients.

The triage is a formal process through which all the patients are being evaluated upon their arrival in emergency departments.

Within the Project of emergency medicine service improvement and investment planning in healthcare, in hospitals in Republic of Croatia the ED's are being established in which triage is having an important role. For that purpose, the Australasian triage scale has been implemented.

In 2010, the Ministry of health of Republic of Slovenia has issued an ordinance according to which all incoming patients in EDs need to be triaged using the Manchester triage scale.

The Manchester triage scale is based on 52 algorithms out of which 49 of them are applicable on children. The triage category is being assigned following algorithms, measured vital parameters and duration of symptoms.

Australasian triage scale is based on main symptom which is being detected from targeted anamnesis, as well as from observance of patient's general appearance and physiological parameters.

Triage categories have proscribed time for safe waiting for doctor's examination.

Generally, triage scales with 5 categories has been shown more effective than those with 3 or 4 categories.

The process of triage is being carried out by highly motivated I broadly clinically educated nurses/medical technicians.

The function of triage is to provide equal care for each patient in ED where numerous people with different health problems are coming at the same time.

#8246 : Abdominal pain: time for a second chance?

Preferred format : ePoster

Authors:

HECTOR ALONSO-VALLE (1), ANDREA CERVERO (2), FRANCISCO MATEOS (1), ENRIQUE PERAITA (1), LUIS PRIETO (1), MARIA GONZALEZ (1)

1. EMERGENCY DEPARTMENT, MARQUES DE VALDECILLA HOSPITAL, SANTANDER, SPAIN
2. , UNIVERSITY OF CANTABRIA, SANTANDER, SPAIN

Keywords: abdominal pain, diagnosis, outcome

Abstract :

Objective Abdominal pain evaluation in the emergency department (ED) is difficult and sometimes we can´t find a precise diagnosis. We reviewed a selected high-risk cohort of patients presenting to the ED with abdominal pain to evaluate for possible process breakdowns.

Design We conducted a retrospective chart review of ED patients >18 years at an tertiary academic hospital. We reviewed patients admitted in ED in November and Dicember 2015. A computerised 'trigger' algorithm identified patients possibly at high risk for diagnostic errors to facilitate selective record reviews. The trigger determined patients to be at high risk because they: (1) presented to the ED with abdominal pain, and were discharged home and(2) had a return ED visit within 10 days that led to a hospitalisation.

Results During the months of November and December 2015 19702 visits were recorded to the emergency room, within which, abdominal pain was the main complaint in 1653 visits (8.39%).820 visits (753 patients) with abdominal pain as presenting complaint were recorded in one month (analyzed period between 15 November and 15 December 2015). The average age of patients analyzed is 52.48 years (standard deviation: 21.7,minimum age 15 years,maximum age 104 years). During the period analyzed 82 patients (10.89%) were attended by abdominal pain in the first visit to the emergency room and later returned in a period ≤ 10 days Of this total, after the next visit, the final diagnosis was significantly changed in 40 patients (49%). Of the 82 patients who were evaluated in the ED in ≤10 days, 10 patients (12%) required emergency surgery after diagnosis on the second visit. Pathologies requiring surgery were: cholecystitis (4), Abscesses (3), Appendicitis (2), intestinal obstruction (1).Conclusions Abdominal pain continues to pose diagnostic challenges for emergency clinicians. In many cases, the differential diagnosis is wide, ranging from benign to life-threatening conditions.. Associated symptoms often lack specificity and atypical presentations of common diseases are frequent, further complicating matters.

#8247 : Management of anterior segment ocular trauma emergency

Preferred format : Oral presentation

Authors:

Alina Adriana Panga (1), Adriana Stanila (1), Dan Mircea Stanila (1), Marius Smarandoiu (2)

1. Ophtalmology, Department of Ophthalmology, Emergency Clinical Hospital Sibiu, Sibiu, ROMANIA
2. SMURD, SMURD Sibiu, Sibiu, ROMANIA

Keywords: ocular, trauma emergency

Abstract :

Aim of the study

The aim is to show emergency management in anterior segment trauma that occurred in the department of Ophthalmology at the County Hospital Sibiu.

Material and method

The study is based on a total of 92 cases (from January 2010 to January 2016), with these types of injuries:

Traumatic anterior pole concussion:

• With scleral rupture: 13 cases

• With no scleral rupture: 3 cases

- Penetrating anterior pole injuries:

• With the presence of intraocular foreign body: 25 cases

• Without the presence of intraocular foreign body: 48 cases

- By the location of the injury:

• Corneal: 33 cases

• Corneo-scleral: 24 cases

• sclera: 22 cases

Traumas with partially eviscerated eyeball: 11 cases

The conduct that was applied in the case of trauma was to evaluate the local emergency situation and mandatory radiography to detect intraocular foreign body.

Urgent wound suture was performed with separate wires 10.0 for the re-positioning of the herniated intraocular membranes.

In trauma cases older than 3-4 days was tried reinstatement intraocular membranes, and if not managed, it has resorted to resection and suture the wound membranes.

In trauma cases older than 3-4 days an attempt was made for the re-positioning of the intraocular membranes, and if not managed, the resection of the membranes was performed followed by the suturing of the wound.

In all cases presented with ocular anterior segment trauma, prophylaxis was made for tetanus and infections.

Results and discussions

The main therapeutic aim was the anatomic restoration of the eye.

The evisceration of the eyeball in emergency condition was not practiced without the written consent of two doctors and the patient.

The extraction of the foreign body was performed after three – dimensional location and after the suturing of the wound.

In most cases the functional recovery was partially because of the following affections: corneal leukoma, traumatic cataract, uveitis and secondary posttraumatic glaucoma.

Conclusions

Of the 92 cases that occurred in the emergency department of Ophthalmology at the County Hospital Sibiu, distribution by type of injury and course of treatment was the following:

- 14.72% anterior segment concussion with or without scleral rupture

- 85.86% penetrating trauma

- 27.17% trauma with intraocular foreign body

- 52.17% trauma without the presence of intraocular foreign body

- 4.37% cases with evisceration of the eyeball

The therapeutic emergency conduct in the case of anterior segment traumas was the suture of the wound and the extraction of the foreign body (where it was the case) as soon as possible.

Eyeball evisceration was not performed in emergency

#8249 : HIV screening by rapid tests: acceptance and feasibility in an emergency department.

Preferred format : Oral presentation

Authors:

Anaïs Guincestre (1), Isabelle Vassor (1), Anne-Laure Feral-Pierssens (1), Pauline Moreau-Aelion (1), Richard Chocron (1), Philippe Juvin (1)

1. Emergency Department, European Georges Pompidou Hospital, Paris, FRANCE

Keywords: HIV, Investigation feasibility

Abstract :

Introduction. Since 2010, in France, the HIV screening strategy including the use of rapid tests has been strengthened and extended to the entire population aged 15 to 70 years old. This study aims at assessing the acceptance and feasibility of a systematic proposition of HIV testing using rapid tests, for adults consulting in the emergency department (ED) in an academic hospital.

Material and methods. We conducted a monocentric prospective study in a Parisian ED from February 29 to March 4 2016. Following national guidelines, we suggested to carry out HIV rapid test to any patient consulting in the ED. All these patients completed a questionnaire about their HIV risk factors. The primary study endpoint was the HIV rapid test acceptance rate. The secondary endpoints were (i) the feasibility of HIV screening by rapid tests in an ED, and (ii) the link between HIV risk factors and rapid test acceptance.

Results. Among 471 patients consulting in the ED, 200 were offered HIV testing, the screening rate was 42.6%. Among them, 153/200 (76.5%) accepted HIV testing. 80 patients (40%) had at least one risk factor for HIV, such as sexual partner native from an “at risk” country, multiple partners, use of intravenous drug or homosexual relationships. Risk factors for HIV are not significant factors to accept rapid test (43.1% vs 29.7%, p=0.1). After adjusting on confounding, age, nationality, factor risks for HIV and recently tested for HIV by blood test are not significantly associated to rapid test acceptance. Only knowledge concerning HIV auto tests seems to be a significant factor for accepting rapid test (OR=2.78; 95% IC [1.21-6.39]).

Conclusion. HIV rapid tests are accepted and feasible in an ED. Having HIV risk factors does not appear to affect the HIV rapid test acceptance. The autotest option tends to be an alternative for patients reluctant to rapid testing in ED.

#8250 : headache and neurological deficit

Preferred format : ePoster

Authors:

Sandra Guiu Marti (1), German jose Fermin Gamero (1), Pedro Rull Bertran (1), Julio Olsen (1), Claudina Revol (1), Bernardino Comas diaz (1)

1. Emergency department , Hospital universitario Son Espases , palma de mallorca , SPAIN

Keywords: headache , neurological deficit

Abstract :

Male 41 years without medical history that begins in the afternoon a picture of headache deaf features and occipital predominant location and right parietotemporal refractory to analgesia , to which is added from nausea morning and vomiting along with general malaise and loss left side of the body force, denies infectious symptoms or feeling in previous days dysthermia.

On arrival at the emergency presents Tª : 36º , FC. 45lpm , TA 128 / 65mmHg , Sat : 99 drowsy but conscious and oriented , reactive isochoric pupils, deviation left corner of the mouth , left-sided hemiparesis , rhythmic cardiac auscultation without murmurs and lung auscultation and abdominal preserved , Whit 25800 leukocytes / ul , 91.80 % neutrophils , lymphocytes 2.62 % 456000 platelets / ul Coagulation : standard without alterations in biochemical laboratory tests are performed where blood count presents.

It was decided to perform Neuroimaging : Brain CT hyperdensity upper , right sagittal sinus , sigmoid and right jugular vein filling defect after contrast administration regarding venous sinus thrombosis . Engorgement of veins. hypoplastic transverse sinus and sigmoid left . Cortico -subcortical hypodense occipital right in relation to cerebral edema cerebral congestion , effacement of sulci and fissures . partially obliterated Cisternas. ventricular system size and normal morphology centered midline

After result is oriented as ischemic acute cerebrovascular disease : cerebral infarction secondary to right parietal rare cause (cerebral venous thrombosis of superior sagittal sinus , rectum, sigmoid and right jugular vein) . admission is decided in Stroke Unit for clinical monitoring , anticoagulation treatment begins with enoxaparin and cerebral resonance is requested Magnita resulting in venous thrombosis level superior sagittal sinus

Neurology patient admitted for cerebral venous thrombosis. He has presented severe headache that initially required treatment with analgesia and mannitol , improvement in recent days after admission , good control with oral analgesia. During admission he has presented progressive improvement of the initial neurological deficit

In the general population, 98% experience a headache in his life , 75 % men and 95 % women, which tension between the origin 42 % , 12% and chronic migraine headache daily 3%

The headaches cerebral venous thrombosis according to a study of a number of hospital-based nationwide in Portugal which included all patients admitted to the neurology in the country identified 91 new cases of CVT , corresponding to an incidence of 0.22 / 100,000 per year (95% CI : 0 to 0.47), although this low incidence etiology should be in the differential diagnosis of headaches with neurological deficits.

#8251 : Low Back pain common cause of unusual illnesses

Preferred format : Oral presentation

Authors:

Madalina Gabriela Grecu (1), Josep Montesinos Cots (1), Jordi Pérez Torres (1), Carles Greoles Royo (1), Claudia Romero Ramírez (1), Salvador Sarrà Moretó (1)

1. Emergency Department, Xarxa Santa Tecla, El Vendrell, SPAIN

Keywords: Low back pain, back surgery, diabetes complications, spinal fistula, necrotizing lumbar fascia

Abstract :

Low back pain is a common symptom referred at the Emergency Department(ED). A Vas majority of patients seen there have non specific low back pain.

Amng patients who present low back pain less than one per cent will have a serious systemic etiology (cauda equina syndrome, metastatic cancer and sponal infection). Almonst all patients with theses conditions will have risk factors or other symptoms.

We present a report of two cases of known low back previous conditons.

First case, 70 years old female went into surgery in the past 20 days due to L4.L5 radiculopathy: left L4.L5 laminectomy and left L5 facetectomy were done. Last 24h acute low back pain developed., no fever , no other symptoms.No neurologic disorder was found neither swelling signs at surgery location.Conservative NSAID´s(non steroidal antiinflamtory drugs) and major opioids drugs were not effective. White blood count swowed mild leucocytosis amb elevated C reactive prtein. Arterial blood gases ranger normal.

Patient presented decreased conscious level and confusional stete front 7 to 9 Glasgow Coma Scale modified. No reverted with Naloxone, the orotracheal intubation was mandatory.

CT head scan was the done, showed left parietal lobe subcortical injury due to acute brain ischaemia.CT scan of lumbar area also located subcutaneous ascesss at laminectomy surgery.

Spinal fluid examination revealed elevated whiteand red cell count and porteins. Gram Staining and bacterial antigens tested negative.No grown at blood culture at day 5th.

Bacterial meningitis and spinal fluid fistula were suspected thus empirical antibioitic scheme started at ED: aciclovir, ampicilin, cefotaxime.Patient was referred to an Intensive Care Unit (ICU), once stabilized went to surgical reparing of spinal fistula.Spinal fuid and flid cultures both tested negative.

Seconda case, a 61 years old obese female with no known previous medical conditions. Low back pain in past 20 days in ED. Conventional X ray study revealed L4.L5 spondylolisthesis thus followed NSAID´s corticosteroids and major dermai opioids.Pain no controlled so far and then irradiated to right lower limb and promoting transient inmobility in past days.

In lumbar area a skin ulcer appeared as well as lower limb edema. No neurologic dysfunction nor fever were observed. Blood test revealed high blood sugar levels while white and red cell bllod count were normal.

Diabetic onset and right heart failure were oriented thus empiric antibiotic treatment was done plus iv furosemide and insulin.

CT lumbar scan was indicated: severe width reduction of foramens and lumbar spinal stenosis were shown.

Clinical condicion of patient worsened next 12 hours, palpable purupura appeared in abdomen anb lower limbs. Blood testes revealed reduced platelet count, elevated C reactive protein and Procalcitonin up to 17 ng/dl suggeting sepsis. Extended expectrum antibioitic scheme was initiated.

Chest and abdomen CT scan showed necrotizing lumbar fascia.

Haemodinamically unstable , required inotropic drugs until cardiac arrest in ED.

Cardiopulmonary ressucitation was successfully done and patient was refered to ICU were finally died at second day

#8252 : Usefulness of normal automated 12-lead ECG during the initial emergency department evaluation of patients with chest pain.

Preferred format : ePoster

Authors:

Natacha ALAVI (1), Richard CHOCRON (2), Anais GUINCESTRE (1), Alison HORN (1), Philippe JUVIN (2)

1. Service d'Accueil des Urgences Hôpital Européen Georges Pompidou, AP-HP, Paris, FRANCE
2. Service d'Accueil des Urgences, Hôpital Européen Georges Pompidou, AP-HP, Paris, FRANCE

Keywords: automated ECG, chest pain, emergency management

Abstract :

Background

Evaluation of chest pain accounts for millions of costly Emergency Department (ED) visits and hospital admissions annually. Of these, approximately 10–20% are myocardial infarctions (MI). Currently, the initial automated 12 lead ECG interpretation by the machine is easily accessible but underused.

Hypothesis

Patients with chest pain whose initial electrocardiogram (ECG) is automatically interpreted as normal do not require hospital admission for evaluation and management of a possible myocardial infarction.

Study objective:

To determine the usefulness of initial normal automated 12-lead ECG during the initial ED evaluation of patients with chest pain.

Methods

During two months, the medical records of a consecutive cohort of patients who presented to the ED of University Hospital with chest pain and initial automated ECG automatically interpreted by the machine were reviewed. The initial ECG of each patient was performed by the orientation nurse and then were evaluated for abnormalities by the emergency physician.

Results

Of the 185 patients presenting for chest pain, 82 (44.3%) have an initial 12 lead-ECG automatically interpreted as normal by the machine. Among those, 76 (92.7%) was also considered normal by the emergency physician (Kappa coefficient=0.22). Patients with normal automated ECG have less medical history of cardiac disease and needed less cardiologist advice ($p<0.001$). After adjusting on confounding (age, sexe, cardiovascular risk factors, troponin, d-dimer, palpitation, dyspnea), atypical chest pain, no cardiac history, return home and initial ECG considered normal by the emergency physician are significantly associated to normal automated ECG.

Conclusions

An initial ECG automatically interpreted as normal by the machine seems to be useful to manage patients with chest pain in ED and provide better screening of these patient during the initial evaluation.

#8253 : Practice Variation In The Management Of Minor Head Trauma In Children In Europe. A REPEM Study

Preferred format : Oral presentation

Authors:

Roberto Velasco (1), Niccolo Parri (2), Carmel Moore (3), Federica D'Elia (4), Liviana Da Dalt (5), Zsolt Bognar (6), Ricardo Fernandes (7), Patrick Van de Voorde (8), Özlem Teksam (9), Merel Broers (10), Santiago Fernandez (11), Maider Alcalde (12), Sergi Piñol (13), Anaida Obieta (14), Javier Gonzalez (15)

1. Pediatric Emergency Department., Rio Hortega University Hospital. (Valladolid, SPAIN), Laguna de Duero, SPAIN
2. Pediatric Emergency Department, Meyer University Children's Hospital, Florence, ITALY
3. Pediatric Emergency Department, Temple Street Children's University Hospital, Dublin, IRELAND
4. Pediatric Emergency Department, Hospital Robert Debré, Paris, FRANCE
5. Pediatric Emergency Department, Padua Hospital, Padova, ITALY
6. Pediatrics, Heim Pal Children's Hospital, Budapest, HUNGARY
7. Pediatric Emergency Department, Hospital de Santa Maria, Lisboa, PORTUGAL
8. Pediatric Emergency Department, University Hospital Ghent, Ghent, BELGIUM
9. Pediatric Emergency Department, Hacettepe İhsan Doğramacı Children’s Hospital, Ankara, TURKEY
10. Pediatric Emergency Department, Erasmus MC, Rotterdam, THE NETHERLANDS
11. Pediatric Emergency Department, Hospital Universitario Cruces, Barakaldo, SPAIN
12. Pediatrics, Hospital de Basurto, Bilbao, SPAIN
13. Pediatrics, Hospital de Tarrassa, Tarrassa, SPAIN
14. Pediatrics, Hospital Son Espasses, Palma de Mallorca, SPAIN
15. Pediatrics, Hospital de Cabueñes, Gijon, SPAIN

Keywords: minor head trauma, image test

Abstract :

BACKGROUND: Head injury is an important cause of mortality and morbidity in children. Earlier studies have described significant practice variation in the use of imaging after pediatric head trauma, with evidence to suggest that pediatric emergency departments (EDs) have lower rates of imaging than general EDs. Computed tomography (CT) is the imaging modality more commonly used in the ED evaluation of children with head trauma. The use of CT, however, is not uniform across all EDs, and variation between clinicians and pediatric EDs exists.and appears unrelated to the frequency of clinically important Traumatic Brain Injuries (ciTBIs).

OBJECTIVE: To describe the variation in use of imaging, observation and admission rate for children with minor head trauma (MHT) in Europe.

DESIGN: A 3 years retrospective chart review involving 17 pediatric EDs of 9 European countries was conducted. A structured data collection method was used. Inclusion criteria included children 18 years or less, history of trivial or MHT in the previous 24 hours from the evaluation in the ED. Data collected included demographic information, type of injury, mechanism of injury, type of imaging used and rate of admission to the observation unit or ward.

RESULTS: We report the preliminary results of 9 centers. Of 6535 charts reviewed, 6493 (99.4%) were analyzed. The mean age was 55.5 months (SD 49.4). 60.2% of the patients were male, without significant differences between hospitals. CT and observation rates varied across hospitals respectively from 0.8% to 19.6% and 12.3% to 41%. Main data about the management are shown in Table 1.

Hospital

	1	2	3	4	5	6	7	8	9
n	517	895	430	141	438	459	1190	515	1950
Minor HT	91.5%	86.1%	70.2%	32.6%	82.0%	84.8%	82.6%	85.4%	63.6%
Craneal X-Ray	8.1%	1.9%	11.4%	18.3%	21.7%	18.6%	3.6%	0.4%	4.8%
Head CT	2.2%	5.5%	2.1%	0.8%	4.6%	14.7%	3.0%	19.6%	2.9%
Observation Unit	24.1%	41.0%	17.9%	14.3%	30.1%	39.8%	23.5%	23.1%	12.3%
Admitted (Ward/PICU)	0.5%	1.8%	1.2%	0.8%	0.2%	1.2%	2.9%	18.3%	7.5%
CiTBI	0%	1.5%	0.7%	0.7%	0%	0.2%	0.4%	0%	0.5%

CONCLUSIONS: Preliminary results demonstrate a significant variation in the management of MHT in Pediatric ED across Europe when considering the rate of imaging, observation and ward admission. The reason for this variability may be based on differing criteria used by clinicians to order imaging, differences in the patient populations presenting to the various departments or training of physicians staffing EDs in the different

hospitals.

#8254 : The burned child: assessment of first aid given by a medical regulation assistant to a witness

Preferred format : ePoster

Authors:

Delphine Hugenschmitt (1), Bagou Gilles (1), Alexandre Allonneau (2), Hugues Lefort (2), Pierre-Yves Gueugniaud (1)

1. Pôle des Urgences, SAMU 69, Hospices civils de Lyon, F-69437 , Lyon, FRANCE
2. Service Médical d'urgence , Brigade de sapeurs-pompiers de Paris, Paris, FRANCE

Keywords: Children, medical regulation assistant, witness, burn, first aid

Abstract :

Introduction: Cooling the burn in children does not seem to be properly done by the witnesses. How do medical regulation assistants (MRA) guide witnesses on the phone when facing burns in children? Materials and methods: a retrospective observational study over one year of treatment by MRA with a call regarding burned child with referral to 15 or 112 medical dispatching center (SAMU). Listing of 4 items in direct calls to medical intensive care unit (MICU): advice given, cooling methods, duration of cooling, water temperature. Listing of these 4 items for calls transferred by the control room (CTA) of the Fire Brigade in addition to the control by the MRA advice given by CTA. Results: 25 SMUR records in 2014, evaluated 21 calls. Results: 25 MICU files in 2014, 21 assessed calls. Nine direct calls: no advice given (n=3), first aid information to be detailed (n=4), accurate and appropriate advice (n=2). Twelve transferred calls by CTA: accurate and appropriate advice by operatpr CTA (n=2), message given by CTA to be detailed (n=2), no information on advice given by CTA (n=8). No control on advice given by CTA nor given by MRA (n=8). Advice to be detailed on first aid measures (n=2). MRA mislead the witness (n=1). Control of CTA advice and appropriate MRA advice (n=1). witness in a panic (n=9). Cause: situation (n=8), language barrier (n=1). Discussion: telephone consultations are seldom brief and nearly inexistent. The possible causes are the flood of calls, the wish to rapidly transfer the call to the regulating doctor, the lack of proper training, deliberate omission thinking the other is more competent. There is a need to verify if the witness practices first aid, that he has received and understood the advices. The message given must be clear and accurate, reformulated, and proper integration must be confirmed. The absence of integration of advices is due to stress, to a sense of guilt or to a comprehension issue. Sometimes, in the absence of advise, the witnesses are the ones who asks, because they feel the need to feel comforted, to be active and control the situation. A poor message delays the management and increases stress. Conclusion: every element in the first aid chain is strategic. An adapted training on first aid measures and management of their position must be given to MRA to ensure an optimal prompt response to complainants. It is also necessary to valuate them without forgoing their competences.

#8255 : Dogs, a man’s best friend?

Preferred format : ePoster

Authors:

Jannette van Soest (1), Alet Pfaff (1)

1. Emergency Department, Ziekenhuis Rivierenland, Tiel, THE NETHERLANDS

Keywords: Capnocythophaga Canimorsus, Meningitis, Dog Bites

Abstract :

Pets are belonging to our community. Due to this there are occuring a lot of bite wounds. Most of them didn’t causing any infection.

A 37-year old man, with a prior history of Morbus Graves, presented at our ermergency department with progressive headache, neck pain, erythema and fever. One week prior to presentation he was bitten by a dog. The wound was rinsed. He didn’t start with antibiotic therapy. We saw a hemodynamic stable man without fever. He had an erythema at his extremities and his back, but no petechia. Neurologisch examination didn’t show any abnormalities. Kernig’s and Brudzinski’s sign were negative. Blood results showed a leucocytosis of 24x10^9/L and an elevated CRP of 273 mg/L. Lumbar puncture opening pressure was elevated. Cerebrospinal fluid was cloudy and showed elevated leucocytes. Under suspicion of a meningitis treatment was initiated with intravenous amoxicilline, ceftriaxon, aciclovir and dexamethason. Cerebrospinal fluid culture was positive for Capnocythophaga Canimorsus. Patient was discharged to home continuing with ceftriaxon monotherapy.

Capnocythophaga canimorsus is commensal bacterium in the oral flora of dogs and cats. Bite wounds, scratching wounds and even licks can cause an amount of infections, like meningitis and endocarditis. Mortality rates are up to 30 percent when causing a sepsis. Incidence in the Netherlands is 0.67 infections per million. The main risk for getting infected is alcoholism and asplenia. Incubation period is between one and eight days. Infections can cause a variety of symptoms at physical examination. It is a slow growing micro-organism and may not be visible for the first 48 hours at cultures. Antibiotics are needed for treatment. Those containing beta-lactamase inhibitors will cover Capnocytophaga Canimorsus, but also cephalosporins are used.

Doctors should be aware of less common infections caused by animal bites. When thinking of a Capnocytophaga Canimorsus infection initiate treatment and remember that is takes time to get a positive culture.

#8256 : Analysis of patients admitted to our hospital with pet bite wounds

Preferred format : ePoster

Authors:

Pilar Conde (1), Jesus Moreno (2), Pilar Moreno (3), Alberto Moreno (4), Raul Nevado (3)

1. (Emergency Department and Intensive Care Unit of the Traumatology and Rehabilitation Center, VIRGEN , junta de andalucia, Sevilla,
2. (Technological R&D Group, VIRGEN DEL ROCÍO UNIVERSITY HOSPITAL - Seville, Spain), junta de andalucia, Sevilla, SPAIN
3. Veterinary Hospital , Canitas , Sevilla, SPAIN
4. (Technological R&D Group, VIRGEN DEL ROCÍO UNIVERSITY HOSPITAL - Seville, Spain), junta de andalucia, Sevilla,

Keywords: pet, bite , wound, septis

Abstract :

Objectives

Pet bite wounds, specially dogs, it isan important pathology in medical emergencies and sometimes can be very serious. The aim of this study is a quantitative and qualitative analysis in our hospital to assess the quality of care of these processes.

Methodology

This paper presents a descriptive retrospective study of severe bite wounds by pets admitted in the Virgen del Rocío University Hospital during the years 2012-2015. The variables analized were: type of pet, age, sex, diagnosis, instituted treatment of patiens analyzed, hospitalization time, and final destination of the patients. Statistical programs inferences using chi-squared

Results

Patients with animal bite wounds: 71; among them were men: 56 (/)%) and women 15 (21%) with minmun age of 0y and a maximun of 82y

In 2015 there were 33 patients admitted with dog bite wounds; among them there were women 5 (15%)

In 2014 were 15 and they were 4 women (27%)

In 2013 there were 9 patients, among them 4 women (44%

In 2012 there were 13 patients and 2 of then were women (15%). The diagnostics obtaines were cranial an facial fracture: 7 (10%), fractures in extremities 8 (11%), head injuries 6 (8%), wounds on limbs an trunk 34 (48%), eyebal injuries 1 (1,4%), finger amputation 1 (1,4%, liver trauma: 3 (4%), pulmonary trauma 2 (3%), septic shock 3 (4%) an exitus 0 (0%). The hospitalization time had a minimun of 1 day an a maximun of 60 days; with an average of 6 days. Surgical treatment was performed in the 100% of cases. In 2013 ungent interventions were 11 (85%) an scheduled 2 (15%). In 2013 urgent interventions in 7 (78%) an scheduled 2 (2%. Urgent interventios in 2014: 13 (87%) an scheduled 2 (13%). In 2015 urgen interventions: 22 (67%) and scheduled: 11 (33%). complications during admission: 7 (10%)

Conclussions

1)More than half of patients admitted to the Hospital with dog bite injuries were male (56%)

2)All patients admitted to the hospital required surgical treatment.

3)A high percentege of pa

4) 21% of bite wounds were associated with fracture.

5) 7% of the patients had serious injuries that couls jeopardize their life.

Matthijs Arens

#8257 : Safety of adult procedural sedation and analgesia in the emergency department in the Netherlands

Preferred format : Oral presentation

Authors:

Matthijs Arens (1), Ties Eikendal (1)

1. Emergency Medicine, Radboudumc Nijmegen, Nijmegen, THE NETHERLANDS

Keywords: emergency department, emergency medicine, procedural sedation and analgesia, safety, incidents, complications, calculated risk, near miss, adverse events, morbidity, mortality, community hospital, university hospital

Abstract :

Introduction: several studies conducted in the world have shown that procedural sedation and analgesia (PSA) is safe. However, data from the Netherlands have thus far not been investigated. This retrospective study has been conducted to investigate how often PSA is carried out by emergency medicine doctors (EMD) on emergency departments (ED) and if this is carried out in accordance with the guidelines of the Netherlands Society of Emergency Physicians (NVSHA). The results of this study will be used to conduct a prospective study examining the safety of PSA.

Methods: the ED's of two community hospitals and a university hospital were approached. Through a general survey, general data were collected on the organization of the ED and PSA. Using the registration system of each hospital, key data were collected and analyzed regarding the occurrence of incidents, complications, calculated risk, near misses and adverse events. Percentages morbidity and mortality were calculated. At last we looked at the degree every hospital followed the guidelines of the NVSHA and the degree of taking care in complete registration.

Results: we found that PSA is carried out more in community hospitals compared to the university hospital. Of all procedures there were very low numbers of incidents, complications, near misses and adverse events. The number of calculated risk without any complication was higher. We found no morbidity or mortality following a PSA procedure. Every procedure was carried out following the guidelines of the NVSHA and registration was complete.

Conclusion: although we found very positive numbers of incidents, complications, near misses, adverse events, morbidity and mortality, we can't make any conclusions based on the retrospective character and the number of inclusions. Procedures were carried out strictly according to the guideline of the NVSHA and registration was complete. However, a prospective study is required to establish results on the safety of PSA by EMD's within the emergency departments in the Netherlands.

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#8258 : Post partum infective endocarditis: a case report.

Preferred format : ePoster

Authors:

sana lahmar (1), asma Aloui (2), sirine jaouani (2), imen mekki (3), nour el houda nouira (3), Maamoun ben cheikh (3)

1. Département urgences et réanimation, Hopital Habib Thameur, Tunis, TUNISIA
2. Service d'acceuil des urgences, Hopital Charles Nicolle, Tunis, TUNISIA
3. Service d'acceuil des urgences, Hopital Mongi slim, Tunis, TUNISIA

Keywords: partum, infective endocarditis

Abstract :

INTRODUCTION: Infective endocarditis (IE) is uncommon (30 cases/ 1 million). The outcome depends on clinical presentation of the desease. Due to unfrequent symptoms, it may be discovered at late stages with life-threatening complications. Urgent treatment is the only key to improve survival.

CASE REPORT : We report the case of a 28 year old woman, with no medical history, taken back by her husband, one month after postpartum (vaginal delivery), for fever and confusion. The patient had fever and no other neurological symptoms but a glascow coma scale of 14/15. Biological exams showed high white blood cells count (22000 elements /ml) . Cerebral venous thrombosis was suspected and confirmed by a cerebral CT scan. An anticoagulant therapy was started with a neurological improvement. A magnetic resonance imaging showed no evidence of cerebral thrombosis and showed meningeal hemorrhage. Two days later, some Janeway lesions appeared and systolic murmur in mitral. A trans-thoracic echocardiography was performed : infective endocarditis with an oscillating mass on mitral valve. A second CT scan showed a parietal mycotic aneurysm. An antibiotherapy was given with a favorable clinical and biological outcome. She underwent a valvular replacement surgery. At a follow up 6 month later, the patient was fine. No risk factor was found for this patient although an exhaustive physical exam. As far as we know, 30 cases of peri-partum IE were reported.

CONCLUSION : Although it is a rare event in peri-partum, the IE must be suspected due to its bad outcome if discovered lately. By multiplying physical examinations through the day and looking for those small symptoms leading us to IE, an early treatment could make the difference

#8259 : Frequency of acute respiratory infections in emergency medical services in the north of Montenegro for 2015 year

Preferred format : ePoster

Authors:

Tijana Rovcanin (1), Tijana Rovcanin (1)

1. Emergency Unit of Berane, Emergency Unit of Montenegro, Kragujevac, SERBIA

Keywords: infection,medical treatment,emergency clinics,children

Abstract :

Frequency of acute respiratory infections in emergency medical services in the north of Montenegro for 2015 year

Tijana Rovcanin[1] ,Vlado Dragas[2] , Stevana Dragas[3]

Keywords: infection,medical treatment,emergency clinics,children.

INTRODUCTION: Respiratory infections in infants and young children include about 20% of the medical examinations in emergency clinics.Epiglottitis ,laryngitis(croup) and laringotraheobronhiolitis are diseases that are mainly present in children younger than 5 years and are often urgent situation with which we meet in emergency clinics in the north of Montenegro.They are characterized by the most common triad of symptoms: inspiratory stridor or dyspnea , hoarseness and coughing (barking dog) .An important predisposing factor for the inflammation may be viruses (Parainfluenza , Influenza A and B , RSV) , the bacteria(Haemoflus inf .) , allergic causes , as well as psychological factor.This disease have special characteristics because of the anatomical structure of the respiratory tract children , because the airways are narrower and shorter , easy to actively develop greater muscle constriction in infections , mucous membranes is better vascularised , due to the underdeveloped immunity kids are more vulnerable and susceptible pathogens respiratory infections. TARGET: Testing the performance of urgent therapeutic care and the prevalence of these diseases in relation to the total morbidity as and the mutual relationship of male and female population the incidence . METHODS AND MATERIALS : During the writing of this paper , we used a retrospective analysis of medical protocols in emergency Units Berane and Andrijevica for period January - December 2015 . RESULTS : During 2015 in units of Berane and Andrijevica was examined by a doctor on duty 12 434 patients , which is quite a big number .On addition a total of 3 720 had symptoms of what makes (30 %) of the total number of hits .Of this number, 3236 patients (87 %) are male and 484 (13 %) were female children.We first started therapeutic treatment of the patient by the following combination of agents (dexamethasone 0.6 ml / kg) , inhalationsteroids (Pulmicort , Becotide) , hidratation.In 74 % of the cases we have had a great success, while about 26 % was sent tofurther therapeutic treatment pediatrician . CONCLUSION: The male population is predominant in morbidity 87 %.This infection in children are quite difficult and life threatening condition.The presence of a mild clinical symptoms should be prevented occurrence of severe symptoms , as well as to educate parents about the importance of regular immunoprophylaxis in children. Particular attention should be paid when meeting with such patients , not to open mouth and do not try to examine the throat as it may be due to sudden stimulation to complete obstructions and cardiorespiratory arrest. [1] Tijana Rovcanin, physician, Emergency Unit Berane[2] Vlado Dragas, physician, Emergency Unit Plav[3] Stevana Dragas,physician, Emergency Unit Andrijevica

[1] Tijana Rovcanin, physician, Emergency Unit Berane[2] Vlado Dragas, physician, Emergency Unit Plav[3] Stevana Dragas,physician, Emergency Unit Andrijevica

#8260 : Acute ischemia of left lower limb and massive pulmonary embolism

Preferred format : ePoster

Authors:

Florica Pop (1), Monica Puticiu (1), JOHANNA ELIZABETH CLOKE (1)

1. University of Medicine Vasile Goldis, Arad, County Emergency Hospital Arad, Arad, ROMANIA

Keywords: ischemia, pulmonary embolism, massive,acute

Abstract :

Man of 47 years old is brought by ambulance with paraesthesia at the shank and left foot, sudden feels dizziness. He has no previous medical history. As risk factors we have: smoking, caffeine user, stress, sedentary (truck driver).

At at primary evaluation in emergency department patient is conscious, responsive, AV = 98b / min, TA = 160 / 112mmHg, SaO2 = 98% TC = 36.6C, slightly anxious. Secondary evaluation highlights at the examination of the left lower limb following items: local paleness, cold, lack of pulse in pedia artery, posterior tibial artery, popliteal artery, femoral left artery and paresthesia. A few minutes after arrival clinical condition suddenly worsens, patient is showing : dyspnea, tachycardia (AV = 126b / min), paleness, TA = 120/104 mmHg, SaO2 = 86% D-Dimer> 5ug / ml and EKG BRD with SI QIII, TIII. Patient receives 5000 IU intravenous heparin bolus and CT angiography with contrast agent is performed (thorax and abdomen with pelvis) that highlights the pulmonary artery trunk of 31mm caliber, APD and APS 26mm caliber. Endoluminal thrombus in the pulmonary arteries, extended at the level of superior lobar arteries that are completely obstructed, extended also to the bilateral lower lobar and right middle artery with their branch segments almost completely obstructed. Aorta and collateral branches permeable of normal size. Common iliac artery, internal and external permeable with calcified atheroma and segmental stenosis in the internal iliac. Right common femoral artery permeable in the incipient segment with parietal thrombus occluding in a proportion of about 30%. Left common femoral artery shows an intraluminal clot wich completely obstructs. Retractile fibrous lesion in the right posterior sinus phrenic rib. Several nodules in the bilateral pulmonary area. Trachea and main bronchi free. Without fluid in the pleural cavity.

Conclusion: massive pulmonary embolism and acute ischemia of the left lower limb

Is administered intravenously thrombolytic (Actylise) with restore circulation in left lower limb and local,general and pulmonary symptom relief (warm skin; disappearance of paleness, paralysis, pain and mild paresthesia; SaO2 99-100%; without dyspnea and tachycardia). Patient is hospitalized in coronary intensive care for therapeutic and clinical monitoring.

#8261 : cardiac arrest management in grey's anatomy – is it compliant with advanced cardiac life support guidelines?

Preferred format : Oral presentation

Authors:

Louise Ballesty (1), Richard M. Lynch (2), Breda Ward (2)

1. , Midlands Regional Hospital Mullingar, longford, IRELAND
2. , Midlands Regional Hospital Mullingar, Westmeath, IRELAND

Keywords: grey's anatomy,cardiac arrest, resuscitation, acls

Abstract :

Introduction

Medical TV drama series have increased in popularity over the past 10-15 years with in excess of 20 million viewers for each episode of Grey's Anatomy. Evidence suggests that viewers overestimate the survival chances of resuscitation in cardiac arrest. This effect increases with increasing amount of these medical dramas watched. Advanced Cardiac Life Support training has contributed to the increased survival from cardiac arrest. (42.7% in 2000 to 54% in 2009). Cardiac arrest

Aims:

The primary aim of this study was to determine if cardiac arrest management in Grey's anatomy is compliant with Advanced Cardiac Life Support Guidelines.

The secondary aim was to determine if outcomes of in-hospital cardiac arrest in Grey's Anatomy were consistent with published outcomes.

Results:

This is the most comprehensive analysis of Grey's anatomy available. All 246 episodes of Grey's Anatomy in seasons 1-11 inclusive were watched separately by two of the authors and the findings were checked by the third author. Cardiac arrest was observed in 111 (45.1%) episodes. Of these 43.2% were traumatic, 42.3% cardiac, other 8.1% and was not stated in 6.3% of cardiac arrests.

In excess of 60% of all cardiac arrests demonstrated significant deviation from ACLS guidelines.Significant

The initial cardiac arrest rhythm was correct in 10.9%, incorrect in 4.1% and could either was not visible or not stated by the television characters in 85% of patients. Overall survival was 42.3%. 30.6% of patients died while outcome was not stated in 27% of cases.

52 (46.8%) of cardiac arrest patients were defibrillated. Of these 20 (38.5%) were appropriate, 13 (25%), inappropriate and 22 (42.3%) insufficient information was available to determine appropriateness of defibrillation.

Conclusion

Medical TV dramas demonstrate significant deviation from ACLS guidelines. Despite this survival rates are consistent with real life figures. No data regarding survival to discharge was available.

#8263 : Cinical and Laboratory Predictors of Injury Severity in Pediatric Trauma Patients

Preferred format : Oral presentation

Authors:

Murat Anil (1), Serdar saritas (1), alkan bal (1), Yuksel Bicilioglu (2), Gamze Gokalp (1), Ayse Berna Anil (3), Fulya Kamit Can (4)

1. Pediatric Emergency Department, Tepecik teaching and Research Hospital, Izmir, TURKEY
2. Pediatric emergency department, Tepecik teaching and Research Hospital, Izmir, TURKEY
3. Pediatric Intensive Care Unit, Izmir Katip Celebi University Medical School, Izmir, TURKEY
4. Pediatric Intensive Care Unit, Tepecik teaching and Research Hospital, Izmir, TURKEY

Keywords: blunt trauma, injury severity, pediatric trauma

Abstract :

Aim: to determine significant correlation between clinical and basic laboratory findings and injury severity in pediatric trauma patients.

Methods:In this prospective study, children with high energy blunt trauma presenting to Pediatric Emergency Department of Tepecik Teaching and Research Hospital, Izmir, Turkey were included. The clinical findings, basic laboratorry tests and radiological results were analyzed. Pediatric Trauma Score (PTS), Revised Trauma Score (RTS), BIG score and Injury Severity Score (ISS) were calculated. The patients divided into two group: the patients discharged from emergency department (group 1) and the patients hospitalized more than 24 h or died in the emergency department (Group 2). After the the univariate analysis, logistic regression test were done. The Pearson correlation analysis were used between ISS and the significant parameters.

Results: A total of 213 children with high-energy blunt trauma (mean age: 6.1 ± 3 years, minimum: 1 month, maximum: 15 year, male / female: 143 / 70) were included the study. The most common trauma etiology was trafic accident in 114 patient (53.5%). 108 patients were discharged from emergency department. 103 of 213 patients were hospitalized more than 24 h. 2 patients died in the emergency department. The number of patients who died in all patients was 4. In logistic regression analysis, respiratory rate, Glaskow Coma Scale (GCS), WBC, glucose, activated prothorombin time, BIG score, PTS and RTS were significantly different in Group 2. The best correlations were determined between ISS and GCS ($p<0.001$; r: - 0.604) and between ISS and PTS ($p < 0.001$, r: - 706).

Conclusion: PTS and GCS were the best basic predictors of trauma severity in emergency department for children with high-energy blunt trauma.

#8264 : Emergency department performance indicator based on 48 hr admit mortality rate!

Preferred format : Oral presentation

Authors:

Sundararaj Manou (1), Mohit Arora (2)

1. Author, Leeds Teaching Hospitals NHS Trust, Leeds, UK
2. Co Author, Leeds Teaching Hospitals NhS Trust, Leeds, UK

Keywords: Emergency department, Mortality, Quality Indicator

Abstract :

Aim: To establish if mortality rate with in 48hrs of admission categorised by cause of death can be used as performance indicator for Emergency departments and be used to guide quality improvement work.

Method: The study was done at Leeds Teaching hospitals with two ED departments with combined emergency attendance of 1,84,000 patients per annum.

The data was obtained by simple enquiry of the existing IT systems (patient activity system & symphony). A spread-sheet of all patients who died with in 48 hours of admission from ED was created between 1st April 2015 to 1st April 2016.

In depth case notes review of time of arrival, time to see clinician, age, sex and time to treatment based on working diagnosis was collected.

The information was grouped based on ED clinician diagnosis prior to analysis.

Results: The death rate with in 48hrs of admission to hospital from ED was 2.25/1000. The diagnosis on admission was sepsis (32%), COPD, (22%), Cardiac (20%), Gastro (9%)and cerebral event((9%).

There was significant variation in time to see clinician and time to treatment between the groups. 100% of patients with initial diagnosis of COPD, gastro, cardiac problems were seen and treatment was commenced with in 120 minute's of arrival to ED. Only 45% patients with Sepsis were seen and treated within the same time.

Over all the time to management is quicker for all causes in one department compared to the other.

Conclusion: The 48 hours mortality data is easy to gather from the exiting IT systems in the hospital. Our study highlighted the need to review our internal process in management of septic patients. The mortality rate can be used as performance indicator to analyse trends within the same hospital. It will be of little value to compare against different ED's as this is dependent on populations they cater to.

Categorising this data based on diagnosis can help in reviewing internal ED process and form a basis for future quality improvement work.

Discussion:

The mortality data is easy to gather, the task of review and analysis of individual case notes is time consuming. The variation of case mix between the two departments is reflected in the results of the 48hr post admission mortality rate and the management of these patients.

The mortality rate is an objective indicator and its trend, can be used to inform on effects of change in internal process.

#8266 : Does the triage systems classification meet the expectations of the emergency medical staff

Preferred format : ePoster

Authors:

Pedro Garcia Bermejo (1), Luisa Tarraso Gomez (1), Asif Muhammad (1), Maria Cuenca Torres (1), Jose Luis Ruiz Lopez (1)

1. Emergency department, Hospital de La Ribera, Alzira, SPAIN

Keywords: Triage, emergency department

Abstract :

Introduction

When the emergency demand exceed the resources, the triage system, helps to manage the patients clinical risk into a properly and safety patient flow through the Emergency Department. As far as the triage is not based on diagnosis, it is usually in charge of the nursing staff, although there are groups in the health system who believes there would be important differences if the triage were run by the physicians.

Objetive

The proposal of the study was to assess whether the standardized system classification meet the expectations of medical staff, studying a group of patients which were classified and allocated in the Emergency Department areas by de Nursery with the Triage Manchester System (STM) and then clarified and allocated in the Emergency Department areas by the physicians of an Emergency Department.

Methodology:

Observational, descriptive-comparative study, in which data from a sample of patients over 18 years old that attended the emergency department of the Hospital Universitario de La Ribera for a month were collected; where currently the Manchester triage system is used. The complaint and vital signs were passed after to the physicians who classified the patients giving a priority and a location in one of the emergency department areas

Results

We analyzed 52 cases of patients of both sexes who attended the emergency department. No percentage differences found between men and women. Regarding priority established the triage system as physicians were P4 (little urgent) was the most coincidence with 68.8% of them; the priority P2 (urgent) appeared in the STM, while the emergency physician did not establish it, but if established priority P5 (nonemergency) which did not occur with the STM. In locations established between the STM and established by the physicians the largest choice was consultation (low complexity patients); however the location resuscitation (high complexity) was in the STM.

Conclusions

There was no full agreement between the classification of patients from the degree neither of urgency, nor as to the location of the patient by the Manchester Triage System and patient care priority assigned by the physician. The start up of improvement groups of triage that establish modifications to Manchester Triage System can get closer to the expectations of emergency physicians in relation to the severity of the patient requesting assistance.

#8267 : Systems triage. Are effective?

Preferred format : ePoster

Authors:

pedro Garcia Bermejo (1), Luisa Tarraso Gomez (1), Maria Jose Cortes Gomez (1), Vicente Ribes Gadea (1), Maria Cuenca Torres (1), Jose Luis Ruiz Lopez (1)

1. Emergency department, Hospital de La Ribera, Alzira, SPAIN

Keywords: Triage, emergency department, Discriminator, Blood presure

Abstract :

Introduction

Hospital triage systems are designed for prioritization of patient care, being a fundamental tool in the Emergency Services due to the overcrowding of these. The triage system implemented in Valencia is the Manchester triage system, which provides for prioritizing the patient in five categories

Not all vital signs are taken into account in this system, when assessing the patient. Blood pressure, is recorded only when the patient is pregnant.

Objective

Assess whether blood pressure can change the priorities of patients and should be taken into account in all Classification Systems.

Material and methods

It is an observational, descriptive and prospective study conducted in the emergency department of the University Hospital of the Ribera, which is a Department of Health of Valencia in Spain which covers over 240,000 patients. The study period is from 1 March to 31 May 2015. Patients older than 14 years attending the service are included, calculated a sample with a confidence level of 95% and 5% error, they were 41155 wich 381 stories analyzed.

Results

Most patients were male with an average age slightly higher at 62 ± 20.79.The reason for consultation / more representative complaint was abdominal pain (61%); the diagnostic label was mostly used "Adult poor general condition" (23.8%) followed by abdominal (18.7%) pain, being the discriminator "recent problem" described most often (32.80%). A high percentage of patients were assigned a priority "P4" (68.7%).

15% of patients had altered blood pressure values. 56.9% were susceptible to change the assigned priority. In all these patients a change to a higher priority less time required care was performed. The reason for consultation most representative of this group was abdominal pain (24.2%). The most commonly used diagnostic label in the second sample of patients was "Adult poor general condition" (33.3%) being the most commonly used discriminator most frequent (54.5%) "recent problem”.

Conclusions

The Blood pressure itself would change the priority in the case to be taken into account in the Manchester triage system for any type of discriminator, not only in pregnant women.

#8269 : The impact of flight physicians on patient survival rates: should more air ambulance crews include medical personnel?

Preferred format : ePoster

Authors:

Gary Jevons (1), Samuel Goodall (2)

1. Medical Student, University of Bristol, Bristol, UK
2. Medical Student, University of Bristol, Cardiff, UK

Keywords: air ambulance, pre-hospital, HEMS

Abstract :

Background: Paramedics staff most air ambulances in the UK. The Air Ambulance Association has announced its intention to deploy physicians on more of its helicopters. However, there is scarce literature examining the impact of flight physicians upon patient outcomes. This paper is a literature review of studies that evaluated the impact of physician- versus paramedic-staffed air ambulances upon patient survival rates.

Methods: Studies from 1990 to 2014 were identified through MEDLINE, EMBASE, and CINAHL. Original studies comparing the pre-hospital treatment provided by physician-staffed helicopter emergency medical services (HEMS) with either a) non-physician-staffed HEMS or b) non-physician-staffed ground emergency medical services (GEMS) were included.

Results: A total of ninety studies were identified of which twenty-five met our inclusion criteria. Physicians increased the survival rate in two of the six studies that compared physician-staffed versus non-physician-staffed HEMS. Physicians increased survival rate in eight of the nineteen studies comparing physician-staffed HEMS to non-physician-staffed GEMS. The remaining studies showed that the addition of a physician to the HEMS crew made no difference to survival rates. No study identified a lower survival rate in patients receiving physician treatment. Two of the three studies including exclusively trauma patients found an improved survival rate with the addition of a physician. Six of the eight studies that included a highly experienced or Consultant physician in the HEMS team had an improved survival outcome compared to the control group.

Conclusion: The deployment of HEMS physicians would be most beneficial for patients who have sustained a traumatic injury and an experienced anaesthetist, preferably of Consultant level, is most likely to increase patient survival rates. However, the studies display a wide variability in findings and most contain methodological weaknesses. Further research should identify which patients benefit most from pre-hospital treatment by physicians.

#8270 : A silent bomb in the head; A Case Report

Preferred format : ePoster

Authors:

Oğuz Eroğlu (1), Ertan Cömertpay (1), Mustafa Köksal (1), Mehmet Faik Özveren (1), Figen Coşkun (1)

1. Department of Emergency Medicine, Kırıkkale University, Kırıkkale, TURKEY

Keywords: Dermoid cysts, intracranial localization,rupture, emergency department

Abstract :

A 59-year-old male patient was brought to the emergency department with complaints of sudden onset of weakness on his right foot and dizziness. The general appearence was medium and his consciousness was tend to sleep; GCS 14, BP: 138/78 mmHg, pulse:72/min, RR: 24/min with no fever respectively. It was learned that he had suffered balance problems and had a fall history four days ago but no cranial imaging had not been planned by admitted health institution. His medical history only revealed that his simple analgesic use due to recurrent unilateral headache since last year. On neurological examination, pupils were isochoric, spontaneous vertical nystagmus in both eyes and 4/5 right upper extremity strength while the left was 5/5 were detected. A ruptured dermoid cyst extending to silyvi fissure and middle cranial fossa in the right frontal lobe, causing 11 mm midline shift with calcification and fat density was seen on brain CT. The images also showed widespread distribution of fat density throughout the other parts of cranial fossa and subarachnoid space due to rupture. The patient was consulted with neurosurgery department for hospitalization and operation. After the surgery, he was followed up in ICU post-operatively and discharged from the hospital at 7. day.

Dermoid cysts (DC) are originated from ectodermal cells at embryonic period. They are ectodermal inclusion cysts which are benign, slowly growing and sometimes show malignant transformation. Intracranially localized DC consist %0.2-%1.8 of primary intracranial tumors. Intracranial DC can reach very large sizes due to their slow growth rate without any symptom or sign. Clinical symptoms depend on the localization of the lesion and created adjacent parenchyma compression. However they may be acutely symptomatic in case of a rupture or an infection. Intracranial DC may rupture spontaneously or during a surgery and cyst contents may spread throughout subarachnoid space. When they ruptured, they may present with headache, nausea, vomiting, visual disturbances, dizziness, epilepsy, chemical aseptic meningitis, hemiparesis and changes in mental status. Both for Computed Tomography and Magnetic Resonance Imaging, images of fat particles in subarachnoid space as a result of a rupture or determination of fat content are typical.

The accessibility of brain CT and MR imaging may be vital in the diagnosis of patients with sudden onset of headache, dizziness or neurological diagnosis.

#8271 : Prevalence of ambulatory care sensitive conditions and their association with patient characteristics in emergency department patients

Preferred format : Oral presentation

Authors:

Anna Slagman (1), Johann Frick (1), Julia Searle (1), Möckel Martin (1)

1. Emergency and Acute Medicine (CVK, CCM), Charité Universitätsmedizin Berlin, Berlin, GERMANY

Keywords: ambulatory care sensitive conditions, avoidable ED visits, emergency department use, health care utilization pattern

Abstract :

Introduction

Ambulatory care sensitive conditions (ACSC) consist of a subset of diagnoses (ICD10 codes) and are established to be potentially avoidable hospitalizations. ACSC are being used as a surrogate parameter for the quality of ambulatory care.

Objective

To investigate the prevalence of ACSC in ambulatory as well as hospitalized patients on the basis of diagnoses coded during the Emergency Department (ED) stay and in hospital.

Methods

The study populations consisted on consented, non-surgical ED-patients with all symptoms and severity levels (n=1,152). All electronically documented routine data were retrieved from the hospital information system (HIS). A follow-up was performed after 1 year to obtain outcome measures. ACSC were defined according to Purdy et al. (Public Health; 2009).

Results

Of all patients, 57.5% (n=662) were discharged home after ED-visit (ambulatory patients) and 42.5% (n=490) were hospitalized (inpatients). ACSC were coded in 18.1% (n=208) of all patients as an ED-diagnosis and in 25.3% of all inpatients as hospital main diagnosis. ACSC showed an increasing trend with higher Manchester Triage Category (MTS) only in inpatients (red=37.5%, orange=30.0%, yellow=21.9%, green=20.6%, blue=0.0%; p=0.022) and ACSC in all patients were more frequent older patients (

Conclusions

Our results show a high prevalence of ACSC in the ED and especially in hospitalized patients with higher triage categories. According to the ACSC concept every fourth hospitalization of ED-patients could have been avoided by adequate treatment in the primary care setting. Thus prospective studies should focus on the identification of influencing factors and potential supply gaps, especially in vulnerable populations, in the German health care system.

#8274 : Implementation of the Step-by-Step approach in the management of the infant under 90 days old with fever without source

Preferred format : Oral presentation

Authors:

Borja Gomez (1), Lidia Martinez (1), Oihane Morientes (1), Javier Benito (1), Iker Gangoiti (1), Santiago Mintegi (1)

1. Pediatric Emergency Department, Cruces University Hospital, Barakaldo, SPAIN

Keywords: Young febrile infant, invasive bacterial infections, Pediatric Emergency Department

Abstract :

OBJECTIVE: To identify the impact of the implementation of a sequential approach (Step-by-Step approach) in the management of the infant ≤90 days old with Fever Without Source (FWS).

METHODS: Descriptive study including two cohorts of patients (pre- and post-implementation of the new protocol, in December 2013) attended at the Pediatric Emergency Department (PED) of a Tertiary Teaching Hospital. Data were obtained from a prospective registry in which all the infants ≤90 days attended with FWS are included. We excluded those patients in whom any of the complementary tests included in the Step-by-Step approach was not obtained and those in whom a blood culture was not obtained.

During each period, those patients meeting all the following criteria were classified as low-risk patients and so were considered suitable for outpatient management without performing a lumbar puncture and without receiving antibiotic treatment:

- Pre-implementation period (September 2008 – August 2013):
    - Well-appearing
    - >28 days old
    - No leukocyturia or nitrituria in the urine dipstick
    - Procalcitonin (PCT) <0.5 ng/mL
    - C-Reactive Protein (CRP) ≤40 mg/L
    - Leukocyte count 5,000-15,000/mcL
    - Absolute Neutrophil Count (ANC) ≤10,000/mcL
- Post-implementation (February 2014 – August 2015):
    - Well-appearing
    - >21 days old
    - No leukocyturia in the urine dipstick
    - PCT <0.5 ng/mL
    - CRP ≤20 mg/L
    - ANC ≤10,000/mcL

We analysed demographic data, complementary tests performed, diagnostics received, antibiotic received and discharge rate. We defined Invasive Bacterial Infection (IBI) as the isolation of a bacterial pathogen in blood, cerebrospinal fluid or any other sterile fluid.

RESULTS: we included 1,015 out of the 1,236 infants attended in the pre-implementation period (82.1%) and 387 out of 421 (91.9%) in the post-implementation (p<0.01), being classified as low-risk patients 38.6% and 55.8% of them, respectively (p<0.01).

Comparing the two periods, a lumbar puncture was performed in 25.9% vs 15.7% of the infants (p<0.01); 31.2% vs 26.6% received antibiotic treatment (p=0.09) and 46.1% vs 37.9% were admitted to ward (p<0.01). The decrease in the admission rate in ward was associated with a increase in the admission rate in the Observation Unit (for

Among those patients managed as out patients, 8.9% and 6.7% respectively returned to the PED (p=0.35), none of them due to a clinical worsening and without differences in the admission rate in the return visit. Two IBIs were diagnosed among low-risk infants during the first period (0.5%) vs none in the second period. One of the IBIs would have been identified using the Step-by-Step approach (CRP: 33 mg/L).

CONCLUSIONS: the implementation of the Step-by-Step approach has increased the percentage of young febrile infants classified as low-risk

patients, suitable for an outpatient management, without increasing the number of patients with IBI misclassified. The admission rate and the lumbar puncture rate have decreased without associating an increase in the return visit rate.