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Prehospital incoming calls for Chest pain: Which factors do we need to set off the alarm?

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Background:

Non traumatic chest pain (NTCP) is a common complaint in emergency medical department (EMD). It overlies a wide spectrum of different etiologies, each requiring a specific therapeutic attitude. As such, the symptom analysis becomes delicate, particularly in prehospital care as variable clinical presentations might cover a single diagnosis and vice versa.

The aim of our study is to reveal the factors influencing the prioritization of incoming calls for a NTCP as well as indication of medical transport.

Materials and methods:

Our study is a transverse prospective survey accomplished at the prehospital emergency medical service (EMS) 03 of Sahloul University hospital, during a 2-months period running from January the 1st to February the 28th, 2017. It included all the incoming calls for NTCP from the Tunisian East-central area.

Data were collected via a form listing patient's social and demographic characteristics, clinical features, EMS praticians' attitude and subsequent patient' evolution.

Statistical analysis was realized meaning SPSS 22.0 program.

Results:

Overall, 274 calls for NTCP were saved and 198 patients were included. The symptomatology was considered as vital functions-threatening (priority 1) in 40,9%, and urgent (priority 2) in 28,8% of cases. The decicion of medical transport was made in 71.3% but remained unenforceable in 16.2 % of cases because of technical means unavailability.

The elderly patients were usually assigned to priority 1 and 2 (prioritization 1 and 2: 64 +/- 14 years vs. prioritization 3 and 4: 58 +/- 18, 7 years, p=0, 01).

In contrast, neither gender nor aged conditioned prehospital medicalisation.

Diabetes was the single factor significantly associated to a higher Medical transport (diabetic subjects 84, 4% vs. non diabetic ones 64%, p=0,009). Similarly, priorities 1 and 2 were more frequently attributed to diabetic individuals (diabetics 84,4% vs. 61,5%, p=0,004) and to smokers (smokers: 83,3% vs. weaned smokers: 69% vs. lifelong nonsmokers: 60,3%, p=0,045).

Heavy, retrosternal, epigastric, spontaneous/effort triggered as well as constrictive/burning chest pain were significantly associated to priorities 1 and 2, hence to medical intervention. Similar facts were concluded for NTCP combined with ST segment elevation myocardial infarction revealed on initial ECG.

Conclusion:

scrutinizing for cardiovascular risk factors and for functional signs is essential for determining the urgency level in the setting of an incoming call for a chest pain. Mdical regulation plays a substantial role in calls analysis and holds the key to a better resources management through a convenient detection of high-risk patients, therefore limiting interventions on fake emergencies.