

# EUSEM Non-Invasive Ventilation Fellowship

At the 2016 EUSEM conference in Vienna, two young physicians were chosen for a Non-Invasive Ventilation Fellowship sponsored by EUSEM in an effort to gain competence in the field of NIV in the emergency care setting. The fellowship was the first of its kind for EUSEM and below is a short report of my experience in Italy.

On the first day we had a theoretical learning day, in which powerpoint presentations – highlighting the basics of blood gas analysis, indications/contraindications of NIV, clinical scenarios and an introduction to ventilation equipment. During the following days we attended the emergency department (ED) and intensive care (ICU) where we could observe patient treatment and analyse blood gases and NIV setting adjustments over time.

Locations chosen for the fellowship were: Centro di Rianimazione l'AOU Maggiore della Carita di Novara (ICU), Ospedale S. Andrea di Vercelli (Emergency/ICU), Presidio Ospedaliero S.S. Pietro e Paolo – Borgosesia (Emergency), Ospedale San Giovanni Bosco (Sub Intensive Care dept).

Instructions were excellently provided by dr. Roberta Petrino, Roberta Marino, Andrea Fassiola, Niccola Bacciottini, Carlo Olivieri, Fiammetta Pagnozzi and her consultant staff at the sub-ICU.

We were able to follow patients from ED to ICU and then to discharge. We saw use of high flow O2 and various NIV set-ups including the use of helmet. The majority of patients were COPD-exacerbations and pulmonary edema, but there were several pneumonia cases, traumatic pulmonary contusion and one sepsis patient in higher level care units we were able to follow.

We were also able to follow the decision making process in more complicated cases when NIV wasn't enough and the decision to intubate was made.

One of the more fascinating aspects of this fellowship was cultural. Italy is vastly different from Norway in that as a Catholic nation with different patient attitudes regarding care, the need to aggressively treat is higher. In Norway, we have a set capacity of NIV rooms, only CPAP is started in the ED and if a patient is so prolonged in their chronic illness, there is sometimes a decision made not to start NIV at all. Italians do not have this luxury, have very busy ED's so treatment must be started immediately, which makes them particularly good at NIV in the emergency room setting.

And while this was primarily a NIV fellowship we also gained experience in ultrasound, particularly assessing volume status via IVC ultrasound, lung ultrasound to check for b-lines and ruling out pneumothorax, as well as abdominal ultrasound.

The combined use of ultrasound with NIV made this a particularly enriching fellowship and would not have been possible without the efforts of our Italian colleagues who took the time during their busy schedules to ensure this fellowship was a success.

Many thanks to all those involved!