“Early risk stratification for mortality based on predisposition, qSOFA and renal function in patients admitted to the Emergency Department with a diagnosis of pneumonia: a prospective study”

Colombo L (1), Pasini S (2), Pugliese P(3), Colombo S(3), Clerici E(1), Rusconi I(1), Macheda A(1), Rossignoli G(1), Bianchi F(1), Castagna F(1), Silini F(1), Panizzardi F(1), Rattescati PM (4) - (1) Pronto Soccorso - DEA Ospedale San Paolo, Milano; (2) Medicina Interna, Ospedale di Lodi; (3) Pronto Soccorso - Medicina D’Urgenza Ospedale Niguarda, Milano; (4) Dipartimento di Medicina Interna, Medicina VI, Ospedale San Paolo, Milano - livocolombo@me.com

**BACKGROUND**

Although lower respiratory tract infection is one of the most common cause of death worldwide, at present the early risk stratification for mortality in patients admitted to the Emergency Department (ED) with pneumonia is not identified adequately using currently available like CURB65 and PSI: the former has a low sensitivity, the latter a low specificity.

**AIM OF THE STUDY**

The purpose of the study was to identify the main features associated with mortality within one month in patients admitted to the ED for pneumonia. We focused both on the main predispositions, comorbidities and on clinical and laboratory data.

**METHODS**

Prospective study: all patients admitted for infection of any origin (a total of 542 patients)

Patients admitted for pneumonia (214 patients; 181 discharged, 31 dead)

**WHAT ARE THE MAIN FEATURES RELATED TO MORTALITY?**

**RESULTS**

There were 214 patients admitted for pneumonia (62.1% males): among them, 181 were discharged from the hospital and 31 died (14.4%).

The features related to mortality were: age (71.2 vs 82.7 years, p<0.001), bed rest (18.1% vs 51.6%, p<0.001), use of antibiotics in the previous month (32.4% vs 54.8%, p<0.01), a recent hospitalization (less than a month before) or coming from a nursing home (15.5% vs 32.2%, p<0.05) and serum creatinine levels (1.2 mg/dL vs 2.1 mg/dL, p<0.001). Moreover, a qSOFA ≤2 on arrival in ED had a high specificity (91.1%).

**CONCLUSION**

Patient’s predisposition (age, recent use of antibiotics or hospitalization and coming from a nursing home), qSOFA and renal function could be relevant features to achieve a more accurate early risk stratification for mortality in patients admitted to ED and hospitalized for pneumonia.