A285 - Integration of heparin-binding protein (hbp) and one sign of quick sofa score (qsofa) to predict 30-day outcome.

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Introduction:
Early prediction of the risk of death among patients admitted at the Emergency Department (ED) remains an unmet need. The prognostic performance of HBP that is secreted by neutrophils was prospectively validated in a series of sequential ED admissions.

Methods:
HBP and elements of qSOFA were analyzed prospectively in 310 serial ED admissions (main reasons for admission: acute abdominal pain 28.4%; fever 24.5%; vomiting/diarrhea 23.9%; dyspnea 22.3%; neurologic signs 11.3%; non-specific complaints 38.1%; most patients admitted for more than one reason). Upon ED admission patients were scored as low-risk, intermediate-risk and high-risk at the discretion of the physician. HBP was measured in blood samples upon admission by an enzyme immunosorbent assay.

Results:
HBP was significantly greater among patients who died very early (Figure 1). In five out of six of patients dying early HBP was greater than 15 ng/ml. We combined HBP more than 15 ng/ml and the presence of one sign of qSOFA into a new score; this had 82.4% sensitivity to predict 30-day mortality. The respective sensitivity of two signs of qSOFA was 23.5% (p: 0.002). The use of this new score allowed better stratification of patients originally considered at the triage as low-risk into high-risk (Figure 2).

Conclusion:
We propose HBP more than 15 ng/ml and one qSOFA sign as an early score for 30-day mortality at the ED.

Image 1:
**Figure 1**

![Distribution of survival](image1)

**Figure 2**

![30-day mortality](image2)