Category 1 : **Circulatory shock**

A273 - *(How) do patients with different shock etiologies differ in clinical presentation at arrival to the emergency department?*

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Introduction:

Shock has been shown to have an in-hospital mortality as high as 33-52%. Early identification of the etiology improves prognosis, but the clinical picture is often obscured by altered mental status and comorbidities. The aim of this study is to describe clinical presentation, at arrival to the Emergency Department (ED), of patients with cardiogenic, septic or hemorrhagic shock.

Methods:

We conducted a retrospective cohort study of all adult (Age ≥18 years) patients arriving to the ED at Odense University Hospital between 2000 and 2011. Shock was defined as systolic blood pressure (SBT) ≤ 100 mmHg at arrival and ≥1 organ failure. The three etiological groups were defined as: Cardiogenic shock: Patients with discharge diagnosis indicating a cardiogenic cause. Hemorrhagic shock: Patients with blood transfusion and a discharge diagnosis indicating bleeding. Septic shock: Patients with discharge diagnosis of infection or sepsis who also had blood cultures made at arrival, and patients with positive blood cultures from the two other groups. Analyzed variables presented at arrival to the ED: Age, heart rate (HR), SBT, diastolic blood pressure (DBP), Charlson Comorbidity Index (CCI), Creatinine, bilirubin, platelets, International Normalized Ratio (INR), Coagulation Factors, hemoglobin (Hb), c-reactive protein (CRP), temperature (Tp), alanine transaminase (ALAT), albumin, carbamide, potassium, sodium, troponin t, and leucocytes including neutrophils, basophils, eosinophils, lymphocytes and monocytes. Not all variables were measured on all patients. Analysis was done with a k-sample equality-of-median test, STATA v 14.0.

Results:

We included 341 with septic, 226 with cardiogenic and 171 with hemorrhagic shock; their median age was 74years, 76years, and 71years (p=0.104), and 55%, 54% and 65% were male (p=0.239), their median CCI was 2, 2, 1 (p=0.064), respectively.

There were significant differences in median CRP: 133mg/L, 20mg/L, 13.5mg/L (p<0.001), Tp: 37.4º, 36.6º, 36 º (p<0.001), median creatinine: 154µmol/L, 135µmol/L, 112µmol/L (p<0.001), median troponin t: 0.06µg/L, 0.07µg/L, 0.01µg/L (p=0.001), median bilirubin: 11µmol/L, 11.5µmol/L, 7µmol/L (p<0.001), median ALAT: 25U/L, 28U/L, 17U/L (p=0.002), median leucocytes: 14.2×10^9/L, 10.9×10^9/L, 12×10^9/L (p<0.001), median lymphocytes: 0.06×10^9/LL 0.12×10^9/L, 0.11×10^9/L (p<0.001), respectively. Significant differences were also found in DBT, carbamide, neutrophils and eosinophils

Conclusions:

Patients who arrive to the ED with septic, cardiogenic or hemorrhagic shock differ in CRP and creatinine, and have other minor variations in clinical variables. The diagnostic value of these variables remains to be analyzed