Category : **Sepsis/septic shock: management**

A63 - *Trends in the epidemiology and treatment of sepsis – a nationwide observational study*

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Introduction:
Registry-based studies have shown a trend towards increasing incidence of sepsis, with declining mortality rates in recent years, but there is concern that this might be due to variability in coding practices. The objectives of this study were to describe the incidence and outcome of sepsis using observed clinical criteria rather than discharge coding.

Methods:
This was a retrospective, observational study. All adult admissions to Icelandic (ICUs) during six years (2006, 2008, 2010, 2012, 2014 and 2016) were screened for severe sepsis or septic shock by ACCP/SCCM criteria. Population incidence, patient characteristics, treatment received and outcome were compared across the study years.

Results:
During the six study years, 9166 patients were admitted to Icelandic ICUs, 971 (10.6%) because of severe sepsis or septic shock. The crude incidence of sepsis requiring admission to ICU remained stable between 0.55-0.75 per 1000 inhabitants. No significant trends were observed over time in patient age (mean 64.7 years), APACHE II score (mean 21.4), SOFA score (mean 8.1) or Charlson Comorbidity Index (mean 4.2). Mortality rates declined slightly from the first study year (2006) to the last (2016), both 28 day (27.7% to 22.2%, *p=0.25*) and one year 45.8% to 38.2%, *p=0.17*).

Patients admitted to the ICU from the emergency department (ED) were 477 (49.1%). Length of stay in the ED before ICU admission increased from 2:52 (hr:min) in 2006 to 4:53 (*p=0.003*) in 2016 and the time to drawing of blood cultures increased from 0:41 in 2008 to 1:21 in 2016 (*p=0.013*). The time to a lactate measurement decreased from 4:03 in 2006 to 1:09 in 2016, *p<0.001*). Achievement of the goals of the Surviving Sepsis Campaign Guidelines was not associated with better 28-day survival (p=0.60).

Conclusion:
Using observed clinical criteria in a nationwide population, the incidence and outcome of sepsis did not change over an 11-year period. Variations in treatment parameters are likely explained by organizational alterations.