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Abstract (eposter session)

Predictors of mortality in patients with septic shock due to Enterobacteriaceae BSI receiving appropriate initial antibiotic treatment

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Objective: Bloodstream infections (BSI) due to Enterobacteriaceae are associated with high morbidity and in-hospital mortality. Failure to provide adequate initial antimicrobial therapy and severe sepsis at presentation have previously been shown to be important determinants of patient outcome. However risk factors for mortality in patients with septic shock due to Enterobacteriaceae BSI receiving appropriate initial antibiotic treatment have not been previously evaluated. **Methods:** We conducted a retrospective cohort study of hospitalized patients with septic shock and blood cultures positive for Enterobacteriaceae at “Umberto I” Hospital, a 1250-bed urban teaching hospital (December 2009 to December 2011). All data were analyzed using SPSS (version 20.0 SPSS Inc., Chicago, IL). **Results:** One-hundred nineteen patients with septic shock due to Enterobacteriaceae (69 *E. coli*, 30 *K. pneumoniae*, 9 *Proteus* spp and 11 *Enterobacter* spp) were enrolled in our study. The overall 21-days mortality rate was 34.4% (41 of 119). No differences were found in terms of ESBL producing bacteria isolated between patients who died or survived (41.4% vs. 26.9%; $p = 0.14$). At univariate analysis significant predictors of mortality were: infection acquired in intensive care unit (48.7% Vs 23%, $p = 0.007$), higher SOFA score evaluated at day of infection (median 9 Vs 6, $p < 0.001$), BSI complicated by breakthrough bacteremia (19.5% Vs 5.1%, $p = 0.022$) and inadequate source control of infection (33.3% Vs 0%, $p = 0.003$). At multivariate logistic regression analysis, only higher SOFA score was independently associated with a greater risk of hospital mortality (OR 1.204; 95% CI: 1.087-1.334, $p < 0.001$). **Conclusion:** Among in-patients affected by septic shock due to Enterobacteriaceae BSI receiving adequate initial antibiotic therapy, the severity of clinical conditions appears to be the most important determinant of clinical outcome.