

P2466 Epidemiology and risk factors associated to mortality in bloodstream infections: impact of MDR and XDR bacteria

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Background:

Mortality related to bloodstream infections (BSI) is high. It's still unclear if multidrug resistance *per se* could be an independent factor for increased mortality in patients with BSI. Objective of the study was to determine the epidemiology and outcomes of BSI. Secondary objective was to determine risk factors associated with mortality among patients with BSI, in particular among those caused by MDR bacteria.

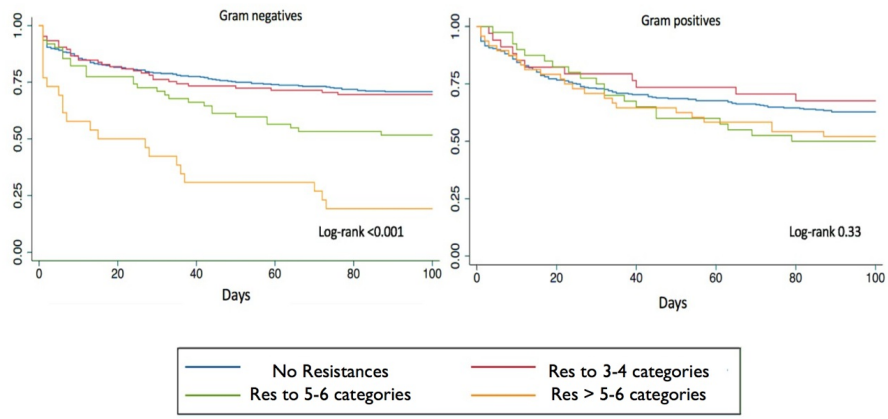
Materials/methods: Retrospective observational study conducted from November 2015 to June 2017 in an Italian tertiary care hospital. All patients with BSI admitted to the hospital were included. Primary outcome was all-cause mortality rate at 7, 30, 90 days. Univariate and multivariate analysis were performed to evaluate predictive factors for mortality, including co-morbidities, pathogens and resistance patterns. MDR and XDR were defined according to ECDC definitions.

Results: The study included 1,049 patients with 1,598 positive bacterial isolates. Crude mortality rates at day 7, 30, 90 were 10.14%, 21.04%, 33.49% respectively. 27.84% of patients had a MDR bacteremia, 2,1% had a XDR. Survival curve resulted significantly worse for patients with resistant gram negative bacteremia compared to non-resistant isolate or to gram positives (Fig1). Independent risk factors for mortality for all periods resulted: Pitt score >2, respiratory and abdominal primary site of infection and *Pseudomonas* XDR as causative agent. Charlson score > 4, *K. pneumoniae* carbapenem resistant and *Acinetobacter* XDR resulted risk factor for 30- and 90- day mortality. We performed a sub-analysis including only patients in stable conditions at the time of bacteremia (Pitt Score<2). Infection sustained by gram negative XDR, Charlson score >4 were confirmed as independent risk factors for 30- and 90- day mortality. No correlation was found between resistance and mortality in gram positive group.

Conclusions:

Bacteremia is an event with extreme impact on patients' outcome. Patients with severe conditions had the higher risk of mortality. However, XDR gram negative isolates had a relevant negative impact on outcome, independently from patients' clinical severity. In particular *Pseudomonas* XDR, *Acinetobacter* XDR, and *Klebsiella* resistant to carbapenems resulted causative agent independently related to overall mortality. On the other side, a MDR bacteremia does not increase mortality *per se*.

Kaplan–Meier survival estimates



29TH ECCMID
13-16 APRIL 2019 AMSTERDAM, NETHERLANDS
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