

P2467 Use of alternatives to carbapenems in ICU patients with bloodstream infection due to ESBL-producing *Enterobacteriaceae*: a multicentric, prospective, observational cohort

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Background: In 2010, EUCAST changed recommendations for the interpretation of antibiograms of ESBL-producing *Enterobacteriaceae* (ESBL-PE), allowing prescription of third-generation cephalosporins, or betalactam/betalactamase inhibitor combinations as alternatives to carbapenems. We evaluated frequency and factors associated with prescription of alternatives in ICU patients with ESBL-PE bloodstream infection (BSI).

Materials/methods: Between 2011 and 2017, all consecutive adult patients exhibiting ESBL-PE BSI in the ICU of 5 Northern French Hospitals were included in a multicentric retrospective cohort study.

Results: A total of 148 ESBL-PE BSI were included. Our patients were predominantly male (73%), with a median age of 64 years (range: 17-90). Upon BSI onset, the median SOFA score was 6 (range: 0-19), the median Pitt bacteremia score was 3 (range: 0-14) and 85 patients (57%) exhibited shock. Seventy-six ESBL-PE strains (51%) were susceptible to at least one alternative. An empirical antibiotic treatment was started in 144 patients, with an alternative to carbapenems in 53 patients (37%). Global mortality rate in ICU was 34% (39% with empirical carbapenems vs 30% with empirical alternatives, $p=0.2$). Proportion of appropriate empirical antibiotic treatment was 87% (100% with carbapenems vs 75% with alternatives; $p<0.001$). A definitive treatment was prescribed in 140 patients, with an alternative to carbapenems in 43 patients (31%). Ten patients treated with empirical carbapenems received definitive alternatives. Factors associated with empirical prescription of an alternative rather than a carbapenem were shorter hospital stay prior to BSI (14 ± 17 vs 31 ± 30 days, $p<0.001$), community acquired BSI (19% vs 5%, $p=0.025$), and urinary source of infection (53% vs 33%, $p=0.03$). Factors associated with definitive prescription of an alternative were ESBL-PE susceptibility to at least one alternative (84% vs 41%, $p<0.001$), and empirical prescription of an alternative (79% vs 18%, $p<0.001$).

Conclusions: In our cohort of ICU patients with ESBL-PE BSI, prescriptions of alternatives as empirical or definitive treatments represented approximately one third of prescriptions. In our area, ICU physicians promoted carbapenem-sparing regimen even in case of severe ESBL-PE BSI. The recently published Merino Trial will probably impact their practice.

