P0127 **Assessment of de-escalation of empirical antimicrobial therapy in ICU settings with high rates of multidrug-resistant bacteria: a multicentre prospective cohort study**

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Background: De-escalation of empirical antimicrobial treatment has been recommended by Surviving Sepsis Campaign Guidelines (1) in critically ill patients with severe sepsis or septic shock. However, this strategy has not been adequately evaluated in settings with increased prevalence of multidrug-resistant (MDR) bacteria. The aim of this study was to identify frequency, associated factors and safety of de-escalation in Greek intensive care units (ICUs) with recognized MDR prevalence (2).

Materials/methods: Prospective observational study conducted in 12 ICUs during a 1-year period, analyzing the first septic episode of patients with microbiologically documented sepsis or septic shock. Patient characteristics including diagnosis (medical or surgical), illness severity (APACHE II and SOFA scores), empirical antibiotic regimen, culture results, ICU length of stay (LOS), and ICU mortality were recorded. Antibiotic de-escalation was defined as change to narrower spectrum antibiotics or discontinuation of part of the initial antibiotic regimen on the basis of culture results.

Results: A total of 211 patients were enrolled. MDR *Acinetobacter baummannii* was the most frequent pathogen (34.2%), followed by MDR *Klebsiella pneumoniae* (16.3%) and *Pseudomonas aeruginosa* (8.2%). Blood stream and the lung were the most frequent sites of infection (both 41%), followed by abdomen (8%). De-escalation was applied in 44 patients (20.9%), whereas it was not feasible in 75 patients (44 %) due to the recovery of MDR pathogens or it was not applied, although the microbiology results allowed it, in 92 patients (56 %). There was no significant difference in age, diagnosis, admission APACHE II and SOFA scores and ICU LOS between patients with and without de-escalation. Compared to non-de-escalation, de-escalation strategy was associated with a shorter duration of shock (4±5 vs. 9±7 days, p<0.001) and lower rates of superinfections (28% vs. 54%, p=0.07), renal dysfunction (2.3% vs. 29.7%. p<0.001) and all-cause mortality (15.4% vs. 46.4%, p<0.001).

Conclusions: Antimicrobial de-escalation was applied in 20.9% of patients with sepsis or septic shock in ICUs with prevalence of MDR pathogens and it was associated with favorable clinical outcomes. Whether the aforementioned association between the de-escalation strategy and clinical outcome has a causative relationship or not, should be elucidated by further studies.