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Abstract (poster session)

**KPC-3 *Klebsiella pneumoniae* ST258 clone infection in postoperative abdominal surgery patients in an intensive care setting: analysis of a case series of 30 patients**

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**Objective:** We studied the clinical course, Intensive Care Unit (ICU) and hospital outcomes of 30 postoperative abdominal surgery patients who showed severe infections caused by *Klebsiella pneumoniae* Sequence Type 258 producing K. pneumoniae carbapenemase 3 (KPC-Kp). **Methods:** Patients with at least two positive blood cultures for KPC-Kp after admission to the ICU were recruited for a 12-month period and treated with a combination regimen of colistin plus tigecycline. They were started on a high-dose (initial dose of 200 mg then 100 q12) of tigecycline combined with colistin, taking into account intra-abdominal abscess severity and MCIs for tigecycline. **Results:** The average age of the patients was  $56.6 \pm 15$  (male = 16, female = 14), average APACHE score on admission was 22.72. Twenty out of 30 patients (66%) came from the surgical emergency unit. Patients showed KPC-Kp postoperative infection as follows: intra-abdominal abscess in 15 patients (50%), anastomotic leakage in 8 (24%), surgical site infection (SSI) in 4 (12%) and peritonitis in 3 (10%). Overall crude mortality rate in the ICU due to infection was 40% (12 out of 30 patients). Twelve out of 30 patients (40%) were started on a combination treatment of high-dose tigecycline and intravenous colistin; five of them showed tigecycline MICs of 0.8 - 1. Mortality was significantly associated with a greater number of surgical procedures, previous ICU admission ( $p < 0.0005$ ), APACHE II ( $p = 0.018$ ) and SOFA score ( $p < 0.0005$ ) and VAP (0.013). Treatment with high doses of tigecycline obtained a favourable outcome in patients with intra-abdominal abscess. **Discussion:** Critically-ill surgical patients with KPC-Kp infections have to be treated in a timely manner, taking into account the severity of post-operative complications such as intra-abdominal abscess and anastomotic leakage. In these cases, early suspicion and detection are essential to reducing infection-related morbidity and mortality. Finally, studies evaluating antibiotic combination therapy and well-controlled clinical trials are needed to define the optimal treatment of infections caused by KPC-Kp and, more generally, carbapenem-resistant bacteria.