eP607
ePoster Viewing
MDR Enterobacteriaceae - a major threat

KPC-PRODUCING KLEBSIELLA PNEUMONIAE RESISTANT TO TIGECYCLINE: EPIDEMIOLOGY AND RISK FACTORS FOR COLONIZATION DURING INTENSIVE CARE UNIT STAY

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Objective: Tigecycline remains one of the last treatment options against carbapenemases-producing Gram negative bacteria. The emergence of tigecycline resistance poses a serious threat. The objective is to document risk factors for colonization by KPC-producing *Klebsiella pneumoniae* resistant to tigecycline (TR-Kp) of Intensive Care Unit (ICU) patients.
Methods: During a 2-year period, rectal samples were taken from each patient upon ICU admission and once a week after. Rectal swabs were inoculated in chromogenic agar and *K. pneumoniae* isolates were thereafter identified by standards methods (Enterotube II, BD, BBL). Antibiotic susceptibility test was performed by the agar disk diffusion method according to CLSI guidelines. MIC to tigecycline was determined by Etest (AB Biodisk). The presence of bla_{KPC} gene was confirmed by PCR. Epidemiologic data were collected from the ICU computerized database and patient?s chart reviews. Statistical analysis was performed by SPSS ver. 19.0.
Results: Among 257 patients, who were hospitalized for more than 6 days, 152 (59.1%) became colonized by susceptible to tigecycline KPC-producing *?. pneumoniae*, 39 (15.2%) by TR-Kp and 66 (25.7%) were not colonized. During the study period 305 KPC-producing *?. pneumoniae* isolates were collected. All isolates were resistant to standard antibiotics, while 197 (64.6%), 117 (38.4%), 103 (33.8%), and 88 (28.9%) were resistant to imipenem, gentamicin, colistin and tigecycline, respectively. Multivariate analysis identified administration of tigecycline, obesity, days at risk and the presence of colonized patients in nearby beds as important risk factors for TR-Kp colonization.
Conclusions: There exists a high percentage of TR-Kp colonization. As it was expected, administration of tigecycline predisposes to colonization. The presence of colonized patients in nearby beds also constitutes a risk factor, indicating the importance of patient-patient transmission via the staff.