

EV0351

ePoster Viewing

Resistance surveillance & epidemiology: Gram-negatives

Risk factors for colonization of carbapenemase-producing Enterobacteriaceae in the intensive care unit

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Background: Carbapenem-resistant Enterobacteriaceae (CRE), particularly carbapenemase producing Enterobacteriaceae (CPE), is an emerging threat worldwide. The aim of this study was identify risk factors for rectal colonization of CPE in medical and surgical intensive care unit (ICU).

Material/methods: We conducted retrospective case-control study comprising 33 cases of colonization of CPE and 132 controls (1:4 matched) from January 2014 to December 2014 at a tertiary care hospital. Active surveillance culture (rectal swab culture) for patients admitted to the medical and surgical ICU was performed at ICU admission, once per week and at ICU discharge. Case patients were those who acquired CPE during ICU admission. Control patients were subjects with no evidence of CPE or CRE colonization.

Results: The most common species among CPE was OXA-232 type *Klebsiella pneumoniae* (n=23). On univariate analysis, solid cancer (P=0.016), cardiovascular diseases (P=0.037), pulmonary diseases (P=0.013), neurologic diseases (P=0.049), length of ICU stay (P<0.001), mechanical ventilation (P<0.001), previous use of piperacillin/tazobactam (P=0.010), previous use of carbapenem (P=0.005), previous use of colistin (P=0.025), previous use of glycopeptide (P=0.014). Length of ICU stay was independently associated CPE colonization (OR, 1.040;95%CI, 1.004-1.076; P=0.029)

Conclusions: This study suggests that antimicrobial exposure and length of ICU stay play important roles in the colonization of CPE.