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Abstract (poster session)

Risk factors for *Burkholderia cepacia* complex bacteraemia among intensive care unit patients in a Greek general hospital

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Objective: We performed a case-control study to investigate risk factors of bacteremia in non-CF patients and describe the epidemiology of BCC infection in our institution. **Methods:** In a 16 month-period between January 2010 and April 2011 BCC was recovered from 13 patients without CF admitted to the Intensive Care Unit (ICU) of our hospital. A case of BCC bacteremia was defined as a positive blood culture for the bacteria combined with deterioration of clinical status. Controls (N=52) were defined as patients who had spent at least 7 days in the ICU within 2 weeks of the primary episode of BCC bacteremia of their matched case but did not have BCC isolated during the study period. (N=52). Risk factors that were investigated were the presence of tracheostomy, malignancies, administration of colistin during the last 10 days, administration of propofol 3 days before the onset of symptoms, administration of central venous catheters, recent abdominal surgery, length of hospitalization, preexisting comorbid conditions, presence of percutaneous feeding tube and renal failure. Multivariate logistic regression analysis (stepwise selection procedure) was performed in order to determine independent risk factors of acquisition of BCC bacteremia. Covariates were included in the model if monivariate logistic regression analysis revealed that were significantly associated with BCC bacteremia at an p value of <0.10. **Results:** Multiple regression analysis (table attached) revealed the presence of tracheostomy, malignancies, length of hospitalization, administration of colistin during the last 10 days and administration of propofol 3 days before the onset of symptoms as independent risk factors for BCC bacteremia. Meropenem and ciprofloxacin and piperacillin-tazobactam were the most active agents against BCC. **Conclusion:** Because BCC colonizes the respiratory tract, it is not surprising that factors associated with compromised respiratory status, such as tracheostomy emerged as significant risk factor for BCC bacteremia. Underlying malignancy is associated with immunosuppression. The continuous infusion of propofol supports bacterial growth because it is a lipid based emulsion. Other researchers had concluded that administration of antibiotics decrease the risk of BCC bacteremia. However, because of the intrinsic resistance to colistin of BCC, the administration of the antibiotic eliminates the other bacteria responsible for bacteremia and allows the growth of BCC.

RISK FACTOR	ODDS RATIO	ODDS RATIO (95% CI)	P VALUE
Presence of tracheostomy	2,23	1,01-3,45	0,044
Malignancies	3,01	1,4-4,61	0,023
Administration of colistin	4,12	1,53-6,81	0,019
Administration of propofol 3 days before the onset of symptoms	5,23	2,2-8,46	0,012
Length of hospitalization	1,9	1,01-2,78	0,049