

P0415

Paper Poster Session II

Antibiotic use and resistance - interventions and observations

**Should the patients colonized with extended-spectrum beta-lactamase-producing Gram-negative bacilli (E-GNB) get anti-E-GNB active empirical treatment for community-acquired pneumonia (CAP)?**

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**Objective.** Gram-negative enteric bacilli may cause community-acquired pneumonia especially in elderly debilitated patients. It is not known whether the E-GNB coverage should be included in the empirical treatment of CAP in the colonized patients. **Methods.** We performed a retrospective matched-pairs analysis. Data on cases and controls were extracted from the database of a large teaching hospital. Patients admitted for community-acquired pneumonia from January 2009 to May 2014 colonized with E-GNB were matched to the patients with the same admission diagnosis and negative E-GNB surveillance cultures. The surveillance cultures were performed according to the hospital protocol in patients at risk for E-GNB colonization (transfer from other hospitals and health care institutions including nursing homes, previous colonisation with E-GNB and living abroad). One control was individually matched to one case based on age, McCabe index, and oxygen supplementation need. The empirical antibiotic treatment was given by physicians according to the national guidelines. The statistical analysis was performed by SPSS 20.0 for Windows. The comparison of the groups was made by chi-square test. **Results.** 120 matched pairs were included in the study. The colonized patients suffered more frequently for chronic neurologic diseases ( $p=0.006$ ), the frequency of diabetes, chronic lung diseases, cardiovascular diseases and other chronic diseases was the same. In the non-colonized group more patients received co-amoxiclav (78.3% vs 50.8%,  $p=0.008$ ), and in the colonized group, more patients were treated with piperacillin/tazobactam (18.8% vs 5.0%,  $p=0.009$ ) and carbapenems (16.7% vs 2.5%,  $p<0.001$ ). Empirical antibiotic treatment of CAP was more successful in patients without E-GNB colonisation in comparison to colonized patients ( $p=0.002$ ). Intra-hospital survival was also better in patients without colonisation than in colonized patients ( $p=0.023$ ). In a subgroup of 33 pairs, in which patients, colonized with E-GNB, received empirical antibiotic therapy active against E-GNB, the success of empirical treatment ( $p=0.013$ ) was still better in the non-colonized group ( $p=0.015$ ), there was no difference in survival ( $p=0.17$ ). Comparison of 87 pairs in which colonized patients received E-GNB non-active therapy showed statistically higher treatment efficacy ( $p=0.023$ ) in the non-colonized group, the difference in intra-hospital survival was borderline ( $p=0.067$ ). **Conclusion.** Empirical treatment of CAP is less effective in patients colonized with E-GNB, but probably the colonisation is more a prognostic sign than a predictor of the aetiology of CAP.