Abstract: Background. Ventilator-associated pneumonia (VAP) is a type of nosocomial pneumonia that develops more than 48 hours after endotracheal intubation. Early recognition and treatment of VAP is important since timely and appropriate management can be lifesaving. This study aimed to determine the antimicrobial susceptibility pattern of microorganism causing VAP in the intensive care unit’s (ICU) of two university associated hospitals in the province of Mazandaran in Iran from 2008 to 2010.

Methods. This study was performed on VAP patients diagnosed with the clinical pulmonary infection score (CPIS) in ICU’s of two university hospitals. For each patient suspected of VAP, quantitative culture of endotracheal aspiration (QEA) was performed and minimum inhibitory concentration (MIC) was determined by microdilution test. Data was analyzed by SPSS 17 software and a p<0.05 was considered to be statistically significant.

Results. In this study, the type and the frequency of the microbial agents causing VAP was as follows: coagulase negative staphylococci (23.3%), E coli (21.7%), S. aureus (18.3%), P. aeroginosa (18.3%), enterobacter spp (11.7%). and K. pneumonia (6.7%). 57.14 % of the coagulate negative staphylococci were sensitive to vancomycin. All of the isolated E. coli were resistant to cefepime and ceftazidime but sensitive to gentamicin and meropenem. 45.45% of isolated S. aureus were resistant to vancomycin. All of the isolated P. aeroginosa cases were sensitive to amikacin while 50% were resistant to ceftazidime.

Conclusions. In patient with VAP, carbapenems had good activity against P. aeroginosa. Increasing resistance of S. aureus to vancomycin requires more attention and further studies.

Key words: antibiotic, MIC, VAP, ICU.

Presentation: Poster