Title: Comparison of the prevalence of ESBL producing Klebsiella pneumoniae isolated from hospitalized and outpatients

Authors: Maryam Mobarak Qamsary1* . Fereshteh Eftekhar2

Abstract: Background and objectives: Klebsiella pneumoniae is among the most common gram negative bacteria encountered by physicians worldwide. It is a common hospital-acquired pathogen, causing urinary tract infections, nosocomial pneumonia, and intra abdominal infections. K. pneumoniae is also a potential community acquired pathogen. As outbreaks due to extended-spectrum beta-lactamase (ESBL) producing isolates are frequent, regular surveillance of ESBL production would be important for management of hospital infections and prevent transmission through the community. Comparison of the prevalence of ESBL producing K. pneumoniae isolates from Imam Hossein Hospital and a reference laboratory center from outpatients.

Methods: 155 K. pneumoniae isolates were collected from July to October, 2010 (104 isolates were from at Imam Hossein Hospital in Tehran and 51 isolates were from a reference laboratory in Karaj). ESBL production was screened by double disk diffusion test (DDDT) using disks containing Cefotaxime, Ceftazidime, Cefepime to assess synergism with an amoxicillin/clavulanic acid disk. ESBL production was confirmed by phenotypic confirmatory test (PCT) using ceftazidime and ceftazidime/clavulanic acid suggested by the CLSI.

Results: ESBL production was confirmed in 13% of the nosocomial isolates and 25% of the isolates from the reference laboratory.

Conclusions: Compared to the other reports from Iran, the difference obtained in the prevalence rate between the two groups of isolates may be due to the collection locations. It may also reflect the efficiency of infection control measures in the hospital.

Although hospitalized patients are more likely to be infected by ESBL producing Klebsiella pneumoniae, our results were conflicting and the prevalence of ESBL production was higher among the community.

Klebsiella pneumonia, ESBL, Hospitalized and out patients.

Presentation: Poster