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Abstract (publication only)

Prevalence of PAPI-1 in clinical isolates of *Pseudomonas aeruginosa*

N. Sadeghifard*, Z. Rasaei, M.R Zolfaghari, S. Ghafourian (Ilam, Qom, IR)

Objectives: The aims of this study were to evaluate frequency of PAPI-1 in *Pseudomonas aeruginosa* isolated in References laboratory of Ilam, Milad and Emam Khomaini hospital in Iran and to study frequency of extended spectrum beta-lactamases (ESBLs) among isolates which were positive and negative for PAP-1. **Methods:** Forty-eight clinical isolates of *P.aeruginosa* were obtained during April 2010 to Sep 2010. The isolates were evaluated for ESBLs by screening and confirming disk diffusion methods and for PAPI-1 by PCR methods. **Results:** The results of the current study showed that 31.5% (n=15) of 48 isolates of *P. aeruginosa* isolates were positive for ESBLs by screening and confirming disk diffusion methods. In this study, of 48 *P. aeruginosa* isolates in all laboratories, 10 isolates were resistant to azteronam and 3rd generation of cephalosporin and produced ESBLs, While in Imam Khomaini hospital 4 and in References laboratory of Ilam 5 isolates were ESBLs positive. Generally, 15 isolates were ESBLs positive that also confirmed by confirming disk diffusion methods. The results of PAPI-1 detection showed 35.4% (n=17) of isolates were positive for PAPI-1, which 42.1% (n=8) were found in isolates in milad hospital, 29% (n=5) of PAPI-1 positive were detected in References laboratory of Ilam and 23.5% (n=4) in Imam khomaini hospital. Interestingly, all the PAPI-1 were ESBLs positive and no PAPI-1 detected in non-ESBLs *P.aeruginosa*. **Conclusion:** This was first study of prevalence of PAPI-1 in clinical isolates of *P.aeruginosa* which showed most of PAPI-1 positive strains had high levels of resistance and produced ESBLs. It is suggested that PAPI-1 maybe has an important role in antibiotic resistance of *P.aeruginosa*.