

Prevalence of ESBLs Genes in Clinical Isolates of *Pseudomonas aeruginosa* in Milad Hospital, Tehran, Iran

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Background & Objectives: *Pseudomonas aeruginosa* is a non-fermentative gram negative bacterium and one of the most frequent nosocomial pathogens which causes various types of infections. In this study frequency of some of ESBLs genes including VEB, PER, TEM, OXA-2 and OXA-10 among clinical isolates of *P. aeruginosa* in Milad Hospital were investigated.

Methods: One hundred and forty seven *P. aeruginosa* strains were isolated from Milad Hospital, after detection of isolates by biochemical Methods, ESBLs detected by screening and confirming Methods. After that chromosomal DNA was extracted using DNA extraction kit. Polymerase chain reaction (PCR) were performed for VEB, PER, TEM, OXA-2 and OXA-10 detection. The PCR products were run and visualized in 1.5% agarose gels stained with ethidium bromide.

Results: In this study, 147 isolates of *P. aeruginosa* isolated from clinical samples in Milad Hospital were investigated for ESBLs by phenotypic and genotypic Methods. Among them 50 isolates were positive for ESBLs by phenotypic methods. All of these 50 isolates carrying TEM type ESBLs. Results showed that 31 isolates had OXA-10, although none of them did not have OXA-2. Frequency of VEB type ESBLs was 6 isolates and PER type ESBLs were observed just in three isolates.

Conclusion: This study showed that some of isolates in addition to TEM type ESBLs had more than one ESBL type, for example one isolate synchronous had OXA-10 and PER type ESBLs, and 5 isolates had VEB and OXA-10 types ESBLs.

Keywords: ESBLs; *P. aeruginosa*; TEM