

**Incidence of extended spectrum beta-lactamase producing pseudomonas aeruginosa and frequency of oxa-2 and oxa-10 genes.**

**ABSTRACT**

*Pseudomonas aeruginosa* has emerged as a major cause of infection in the last few decades. The objective of this study was to determine the distribution of extended spectrum beta lactamaseproducing *P. aeruginosa* and the frequency of OXA-2 and OXA-10 genes. 350 and 120 *P. aeruginosa* samples were isolated from patients in two locations in Iran representing the region of the Middle East. Antibiotic pattern and OXA type ESBLs were detected by disk diffusion and PCR methods. Of 350 isolates of *P. aeruginosa* isolates in the first location, 105 (30%) isolates were positive for ESBLs from which 92 (87.61%) isolates were positive for OXA-10 Type ESBLs while only 5 (4.76%) isolates were positive for OXA-2 ESBLs by using PCR methods in Ilam hospitals. In the second location, 46 (38.33%) of *P. aeruginosa* isolates were positive for ESBLs of which 29 (63%) were positive for OXA-10 Type ESBLs and only 1 (2.1%) isolates were positive for OXA-2 ESBLs by PCR methods in Kerman hospitals. Results of the current study showed the presence of high percentage of OXA genes, 2 and 10, ESBLs in the region of the Middle East associated with extended resistance profile against almost all cephalosporins. Moreover, comparing the results of the studied two cities indicated that distribution of OXA type ESBLs is locally diverse even in the same geographical region.

**Keyword:** *Pseudomonas aeruginosa*; OXA-2; OXA-10; Gene; ESBLs.