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Investigation of antimicrobial susceptibility, class I and II integrons among *Pseudomonas aeruginosa* isolates from hospitalized patients in Isfahan, Iran

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Objectives: The role of integrons in the transfer of antibiotic resistance is one of the important issues, therefore, this study is aimed to investigate antibiotic resistance pattern and prevalence of class 1 and 2 integrons in *Paeruginosa* isolated of nosocomial infection.

Material and Methods: *Paeruginosa* isolates were collected during the April 2016 to August 2016 at a teaching hospital affiliated to Isfahan University of Medical Sciences, Isfahan, Iran. Antibiotic susceptibility pattern was assessed using disk diffusion method. PCR was carried out to detect the tox-A, class 1 and 2 integrons gene using the specific primers.

Results: A total of 72 confirmed *P. aeruginosa* isolates that half of them from ICU and most of the isolates were isolated from trachea samples. Antibacterial susceptibility pattern showed that ceftazidime revealed the most resistance (76.4%) and colistin was the most effective antibiotic (100%) and molecular analysis of class I and II integrons showed 55.5% and 29.1% of isolates were positive, respectively and The proportions of MDR isolates were significantly higher among integron-positive isolates with 43.3% compared to negative isolates with 22.9%.

Conclusion: Our results showed relevance among class 1 and 2 integrons and MDR *P. aeruginosa* isolates. According to the importance of integrons in acquisition and dissemination of antibiotics resistance genes among these pathogens, so, the performance of antibiotic surveillance programs is recommended for control the spreading of antibiotics resistance genes.

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