

Antimicrobial Resistance and Molecular Typing of *Pseudomonas aeruginosa* and *Acinetobacter baumannii* Isolated from a burn hospital in Tehran, Iran**Article 2**, Volume 7, Issue 2, Summer and Autumn 2019, Page 40-43 [XML](#) Document Type: ResearchPaperDOI: [10.22070/jbcp.2019.4544.1118](https://doi.org/10.22070/jbcp.2019.4544.1118) **Authors** [Mohammad Mehdi Attarpour Yazdi](#)¹; [Sareh sadat Hosseini](#)²¹Department of Microbiology, Faculty of Medicine, Shahed University, P.O. Box 18155/159 Tehran, Iran²Department of Microbiology, Faculty of Medicine, Shahid Beheshti University, Tehran, Iran**Abstract**Background and Objective:

Acinetobacter baumannii and *pseudomonas aeruginosa* are common opportunistic gram negative bacteria related to hospital acquired infections. Multidrug resistant microorganisms have emerged as the causes of nosocomial infections worldwide. In this study, we evaluated the existence of blaTEM, blaSHV and blaCTX-M genes among *Pseudomonas aeruginosa* and *Acinetobacter baumannii* strains isolated from hospitalized patients in one burn hospital in Tehran, Iran.

Materials and Methods:

From June 2015 to May 2016, 82 isolates were collected from burn patients hospitalized in one burn hospital in Tehran, Iran. A total of 82 isolates of gram negative, none fermentative bacilli including *pseudomonas aeruginosa* (58 isolates) and *Acinetobacter baumannii* (24 isolates) were tested for susceptibility to selective antibiotics by disk diffusion recommended in CLSI guidelines. All the resistant isolates were subjected to PCR assay for blaTEM, blaSHV, and blaCTX-M genes that encode ESBL.

Results: Resistance to gentamicin was 83%, but resistance to cephalosporins was higher than gentamicin. Out of the 47 *pseudomonas aeruginosa* resistance isolates, 24 and 9 isolates were CTX-M and TEM producer, respectively. Among 8 *Acinetobacter baumannii* isolates that were resistance to all antibiotic, 7 and 1 isolates were CTX-M and TEM producer, respectively. bla SHV gene was not detected in any of isolates.

Conclusion: High level of resistance to most antibiotic tested and high prevalence of bla CTX-M gene in this study, indicating the careful detection of antimicrobial resistant strains is needed in order to prevent further resistance to antimicrobial in Iran. **Keywords** *pseudomonas aeruginosa*; *Acinetobacter baumannii*; bla CTX-M; blaTEM; bla SHV

Statistics

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