

## عنوان مقاله:

Antibiotic Resistance in Clinical Isolates of *Pseudomonas aeruginosa*: A New Viewpoint for Antibiotic Prescription

## محل انتشار:

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## خلاصه مقاله:

**Background:** A growing number of resistant *Pseudomonas aeruginosa* isolates have been reported. To make better choice of antibiotic, reporting and analyzing the recent antibiotic resistance patterns of the bacterium are of crucial importance. The purpose of the present study was to survey antibiotic resistance status in clinical isolates of *P. aeruginosa* and to make more options for antibiotic prescription by revisiting antibiogram results. **Methods:** A total of ۱۳۸ molecularly identified *P. aeruginosa* strains isolated from clinical specimens were tested for sensitivity to ۱۰ antibiotics using Kirby-Bauer disk diffusion method. In addition, phenotypic combined disk diffusion test (CDDT) was applied to screen metallo-beta-lactamase (MBL) producing *P. aeruginosa* isolates among imipenem-resistant isolates. To find the most suitable antibiotic against *P. aeruginosa* infections, a new analytical way was employed using SPSS and chi-square test. **Results:** Ceftizoxime showed the highest rate of resistance (۷۸.۹%) and amikacin showed the lowest (۳۳.۳%). ۵۱.۴% of the isolates showed resistance to Imipenem, ۷۸.۸% of which were positive for MBL production. Multidrug-resistant strain (MDR) isolates were observed in ۶۷.۳% of all isolates, ۷۴.۶% of Imipenem resistant isolates showed multidrug resistance and ۸۳.۹% of MBL positive isolates showed MDR. There was positive correlation between specimen source and resistance or susceptibility of *P. aeruginosa* isolates to some antibiotics in some specimens, and non-significant similarities in resistance or sensitivity to antibiotics in *P. aeruginosa* isolates ( $P < 0.05$ ). **Conclusions:** Resistance rate of imipenem, meropenem, gentamicin, tobramycin, ceftazidim, cefotaxime and ticarcillin was more than reported rates in previous studies. A higher proportion of MDR isolates and MDR-MBL producing strains suggest drastic dissemination of resistant isolates in the healthcare centers. Site specificity and non-significant similarity of the responses to antibiotics in *P. aeruginosa* isolates can provide a new sight for antibiotic prescription and better control of antimicrobial drug resistance.

## کلمات کلیدی:

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