



Keywords: Pseudomonas aeruginosa, Photodynamic inactivation (PDI), chitosan

P1053: The prevalence of resistance to 15 antimicrobial drugs in Pseudomonas aeruginosa recovered from patients in Tehran, Iran

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Background and Aim: Pseudomonas aeruginosa is an opportunist pathogen which causes different infections especially in patients with impaired immunity. This microorganism is the common cause of nosocomial infections. Meanwhile, different resistance mechanisms make this microorganism resistant to the large number of antimicrobial drugs. Studies of antibiotic resistance of clinical isolates in different periods may lead to use of appropriate drug especially in empirical treatment.

Methods: In the three-month period in spring of 2013, all the clinical isolates of P. aeruginosa were studied from the aspect of resistance to 15 antimicrobial drugs by the means of disk diffusion method using Rosco company disks (Denmark) in the laboratory of Pars Hospital in Tehran, Iran.

Results: A total number of 55 P. aeruginosa isolates were recovered from different clinical samples of hospitalized patients (27.3%) and outpatients (72.7%). Totally 54.5% of these patients were male and most of them were at the age of 45 or above (81.5%). Most of the isolates were collected from sputum (40%), urine (38.2%) and wound and abscess (12.7%). Among the studied antibiotics, the lowest level of resistance was documented to colistin (3.7%). Resistance to meropenem and piperacillin-tazobactam were also low (22.6% and 24.1%, respectively). Resistance to ceftriaxone, amikacin, ceftazidime, ciprofloxacin, gentamicin and tobramycin were detected in 38.6% to 50.9% of isolates. Moreover, resistance to cefotaxime and trimethoprim-sulfamethoxazole were observed in 69% and 73.6% of isolates, respectively, while resistance to ampicillin, amoxicillin-clavulanic acid, cefuroxime and nitrofurantoin were observed in 94.4%, 87.9%, 93.5% and 95.2% of isolates, respectively. Most of the isolates were exhibited multidrug resistant.

Conclusion: The prevalence of resistance to the wide range of antimicrobial agents in P. aeruginosa isolates in Tehran emphasizes that it is vital to prevent from their dissemination especially in patients with impaired immunity. In addition, use of appropriate drug especially in empirical treatment is very important.

Keywords: Pseudomonas aeruginosa, Antimicrobial susceptibility, multidrug resistant

P1054: Use of multilocus sequence typing (MLST) in Molecular epidemiology study of antibiotic resistance Pseudomonas aeruginosa isolated in Iran

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