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Title: Prevalence and drug resistance of Pseudomonas aeruginosa isolated from outpatients with urinary tract infections referred to the specialized and subspecialized clinics of Tabriz University of Medical Sciences, Iran (2004-2011)

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Abstract: Background and Objectives: Urinary tract infections (UTIs) are the frequent infectious diseases in men and especially in females. Except enterobacteriaceae and gram-positive cocci, Pseudomonas aeruginosa is the other most important causative agents of UTIs. Recent reports have shown increasing resistance of these bacteria to commonly used antibiotics. The aim of this study was to determine the prevalence of P.aeruginosa and the antibacterial resistance of this urinary pathogen.

Material and Methods: In this 8 years descriptive study, the clean catch midstream urine samples of outpatients with suspected UTI, referring to specialized clinics of Tabriz University of Medical Sciences, were collected and cultured on blood agar plates and MacConkey agar. The positive cultures with more than 100,000 colony forming units/ml, were sub-cultured for identification. Antibiotic susceptibility testing was performed on Muller-Hinton Agar by using disc-diffusion (Kirby-Bauer) method.

Results: A total of 19768 urine specimens, 1846 cases (9.3%) were found to be positive culture, which 68% of them belonged to females. The rate of isolation of P.aeruginosa from urine samples was found to be 5%(n 92) which was more prevalent in men(82.6%).The highest antibacterial resistance of P.aeruginosa were seen to ampicillin, amoxicillin-clavulanic acid, cefixime, cefazolin, and erythromycin, and lowest resistance to amikacin, norfloxacin, ciprofloxacin and ticarcillin.

Conclusion: It seems that irregular and mis use of antibiotics is the main reason of high resistance amount in our country, therefore, the selection of antibiotics for empiric therapy should be based on the sensitivity and resistance pattern of uropathogens in the respective region. A national program is recommended to provide judicious use of antibiotics and lower the bacterial resistance rates.

Key Words: Urinary Tract Infections (UTIs), Pseudomonas aeruginosa, Antibiotic resistance

Presentation: Poster