

## The Prevalence and Antimicrobial Susceptibility of Bacterial Uropathogens Isolated from Patients Referred to Imam Reza Hospital in Tehran During 1388-1389

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**Background & Objectives:** Urinary tract infection (UTI) is a common cause of referring patient to hospitals. In the absence of positive urine cultures in most cases, curing of patient with urinary tract infection is only based on clinical symptoms and urinary findings. These infections are also the most common causes of antimicrobial resistance in society. The aim of this study is to investigate the prevalence and antimicrobial resistance of bacterial uropathogens isolated from the patients with urinary tract infections who referred to Imam Reza hospital in Tehran during April 2009 to April 2010.

**Methods:** This cross-sectional and descriptive study was conducted in Imam Reza hospital, Tehran, Iran from April 2009 to April 2010. Clean- catch midstream urine specimens were obtained from the patient in appropriate and sterile condition and were cultured on Blood Agar and EMB. Bacterial isolates were identified by microbiological tests and antimicrobial susceptibility testing was performed according to CLSI guidelines.

**Results:** From 2350 urine specimens, 269 cases (11.4%) had positive results for bacterial cultures. 74% of patients were women and 26% were men. Of them 59.5% were outpatient and 40.5% were inpatient. Most common isolated bacteria which identified were: 192 isolates (71%) as *Escherchia coli*, 48 isolates (18%) as coagulase negative Staphylococci and 10 isolates (3.7%) as Enterobacter. *E.coli* was respectively sensitive to nitrofurantoin (94.5%), tetracycline (92%), co-trimoxazole (81%) and nalidixic acid (77.6 %). The results also indicate that among the gram-positive bacteria, coagulase negative Staphylococci show high resistance to penicillin (41.6%).

**Conclusion:** Our findings reinforce the need for ongoing investigation to show trends in antibiotic resistance. Knowing that prevalence rate and antimicrobial resistance and sensitivity of bacterial uropathogens to different antibiotic is continuously changing, it is recommended that results obtained from urine cultures and antimicrobial susceptibility testing all over the country should be in access of physicians in order to prevent misuse of unnecessary antibiotics.

**Keywords:** Urinary Tract Infection; Antibiotics; Antimicrobial Susceptibility Pattern