

The Diagnosis of Bacterial Factors of Urinary Tract Infections and Their Resistance to Various Antibiotics in Tabriz City

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Background & Objectives: Despite various antibiotics, drug resistance of bacteria that cause urinary tract infections is increasing. So different antibiotic resistance among pathogenic bacteria has created a lot of health problems. The purpose of this study is to determine the bacterial factors of urinary tract infections and their resistance towards various antibiotics.

Methods: In this retrospective study, the most common causes of urinary tract infections including *Escherichia Coli*, *Klebsiella* species, and *Citro Bacter* species and their resistance to antibiotics such as Cephalexin, Gentamycin, Ceftriaxone, Cephalotin, Norfloxacin, Penicillin, Azithromycin, Trimethoprim, Nalidixic acid, Doxycycline, Ampicillin, Vancomycin, Ceftizoxime, Cefotaxime, Ciprofloxacin, Cefixime, Co-Amoxiclav, Chloramphenicol, and Erythromycin have been investigated. In this study, 125 males and 840 females were included for urine culture.

Results: Of total 965 subjects (125 males and 840 females) 158 cases of urinary tract infections are diagnosed, which includes 21 males and 137 females. The isolated bacterial factors include *Escherichia coli* in 9 male and 115 female patients, *Klebsiella* species in 5 male and 9 female patients, and also, *Citrobacter* species in 7 male and 13 female patients. *Escherichia coli*'s resistance is to Ceftriaxone, Cephalexin, and Cephalothin; *Klebsiella* species' is to Penicillin, Trimethoprim, Ampicillin, and Ceftriaxone; *Citrobacter* species' is to Azithromycin, Penicillin, Cephalothin and Ampicillin.

Conclusion: These findings indicate that the most effective drugs for the treatment of factor pathogens of urinary tract infections are Norfloxacin and Gentamycin.

Keywords: Urinary Tract Infection; Drug Resistance