# Prevalence and Pattern of Antibiotic Resistance Pattern of Gram-negative Bacteria Isolated from Urinary Tract Infections in Patients Referring to Neka Medical diagnostic Laboratories

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**Abstract**

**Introduction:** Urinary tract infection(UTI) is one of the most common bacterial infections. The aim of this study was to identify bacterial agents and determine their drug resistance pattern in patients referring to the Neka diagnostic laboratories.

**Material and Methods:** This descriptive cross-sectional study was conducted from January 2012 to April 2013 in patients referred to the Neka Diagnostic Laboratories. Morphological study and identification of isolated bacteria by using hot dyeing and differential biochemical tests were performed. Antibiotic resistance of bacteria was determined by Disc diffusion method in Muller Hinton Agar medium.

**Results:** Of the 573 patients, the most commonly isolated bacteria in the urine included 258 isolates of *Escherichia coli* (45%), 69 isolates of *Enterobacter* (12%), 18 isolates of *Klebsiella* (3.14%), and 7 *Pseudomonas* isolates (1.22%). *Escherichia coli* isolates showed the highest and lowest resistance, respectively, to Sulfamethoxazole (30.23%) and Norfloxacin (0.39%) and to the highest sensitivity to Gentamicin (56.59%).

**Conclusion:** The results of this study indicate an increase in the resistance of the strains of *E.coli* to the Sulfamethoxazole and Ciprofloxacin antibiotics, which may be due to the overdose of these antibiotics. The report of antibiotic susceptibility to commonly occurring organisms in this area can be considered by physicians in experimental treatments.

**Keywords:** Urinary tract infections, Disc diffusion method, Antibiotic resistance