
Title: Study of urinary tract infections: bacterial causes and antibiotic resistance model in Rasht polyclinic

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Aims Urinary Tract Infection(UTI) following respiratory system infection is the most common bacterial infections in human. If not treated, UTI can lead to dangerous complications such as pyelonephritis, cystitis or urethritis, uremia and early delivery and abortion. The aim of this study is to determine bacterial agents of UTI in persons referred to Rasht social supply number one specialized polyclinic during 2015-2016 and also to determine their antibiotic resistance model and therefore the suitable antibiotic to treat urinary infections. **Methods:** In the present study 7852 persons with clinical symptoms and suspected to urinary tract infection were sampled. Urine of the patients were collected during June 2015 -2016 (one year) and were cultured. The isolated bacteria were identified using biochemical tests. Disk diffusion susceptibility test was used to determine susceptibility of the isolates to antibiotics. **Results:** In this study 472 (6.01%) patients out of 7852 were shown to be urine culture positive (71.18% females, 13.34% males and 15.46% 1- 6 years old children). The most isolated bacterium was E.coli with frequency rate of 73.72%. The other bacteria were Enterobacter spp. (9.54%), coagulase negative staphylococci (7.62%), Klebsiella spp (3.6%), Citrobacter spp. (2.54%). The isolates were most sensitive to amikacin followed by ciprofloxacin and most resistant to amoxicillin followed by cotrimoxazole. **Conclusion:** The results of this study showed that the most isolated bacteria were E.coli and UTI rate in women was higher than men. This study concluded that the least effective antibacterial agent was amoxicillin, and therefore it is not suggested for treatment of UTI.as, amikacin was the most effective one.

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