

A STUDY ON AEROBIC BACTERIAL ISOLATES FROM PATIENTS SUFFERING FROM SYMPTOMATIC URINARY TRACT INFECTION

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ABSTRACT

- **BACKGROUND:** Urinary tract infection (UTI) is one of the most important causes of morbidity in the general population and is the second most common cause of hospital visits. UTI is the most frequent bacterial infections in women. They occur most frequently between the ages of 16 and 35 years. 10% of women getting an infection yearly and more than 40–60% having an infection at some point in their lives. Urinary tract infection occurs four times more frequently in females than males. Recurrences are common, with nearly half of people getting a second infection within a year.
- **MATERIALS AND METHODS:** A total number of 312 Mid stream urine (MSU) specimens received aseptically in the Microbiology laboratory for a period of one year from November 2015 to October 2016. All the specimens were subjected to culture on Blood agar and MacConkey agar and were incubated overnight at 37°C aerobically. The isolated organism was identified by colony morphology, Gram stain and biochemical reactions using standard techniques. All the isolated bacteria were subjected for antimicrobial sensitivity testing on Mueller Hinton agar using the disc diffusion technique.
- **RESULTS:** In the present study, Escherichia coli (52.43%) was the most common pathogen followed by Klebsiella spp (24.27%). The other organisms isolated were Staphylococcus aureus (12.62%), Pseudomonas aeruginosa (3.89%), Enterococcus faecalis (4.85%), Proteus vulgaris (1%) and Coagulase negative Staphylococcus (1%). Uropathogens in the present study showed higher susceptibility to Amikacin (81.6%) and the other antimicrobial susceptibility were Netlimicin (79.6%), Gentamicin (65%), Ofloxacin (51.5%). Nalidixic acid (6.8%) was least active against uropathogens in the present study and the other antibiotics that were resistant included, Cefaclor (90.3%), Cefadroxil (87.4%), Cefuroxime (85.4%). The isolation rate of uropathogens was 33.22% and higher female preponderance (58.25%) was observed in the present study.

- **CONCLUSION:** UTI still remains a worldwide therapeutic problem, not only as a nosocomial disease, but also as a community-acquired infection. Antimicrobial resistance of uropathogens has increased worldwide. Knowledge of local prevalence and antimicrobial resistance patterns among urinary bacterial isolates is important in guiding the clinicians for appropriate empirical therapy of UTI before the culture report is ready.

KEYWORDS: Antimicrobial Sensitivity, Empirical Therapy, Microorganisms, Urinary Tract Infection