ID: 2275

Congress: The First International Congress of Medical Bacteriology

Title: Antimicrobial Susceptibility patterns of Escherichia coli in urinary isolates from Imam Hasan Mojtaba Hospital, Karaj-Iran

Authors: Mohammad Reza Nahaei1, Samira Arad2, Naghme Mohassemi2, Amirmorteza Ebrahimzadeh Namvar3, Babak Asghari3, Gholamreza Azizi4,

Abstract: Background and aims: Urinary tract infection (UTI) is one of the most frequent bacterial infections encountered by clinicians in developing countries. Screening antibiotic susceptibility patterns of Escherichia coli at a local level yields important information about emerging problems of antibiotic resistance and provides assistance in administration empirical antibiotic therapy understanding of antimicrobial resistance pattern in E.coli the prevalent pathogen associated with urinary tract infection (UTI) is significant as a guide in choosing empirical antimicrobial therapy. The purpose of this study was to determine the antibiotic susceptibility patterns of E.coli strains isolated from with UTI.

Materials & Methods: 320 isolates were identified using routine conventional methods over a period of July 2010 to January 2011. Isolates were analyzed by standard antimicrobial susceptibility testing was performed by Kirby-Bauer disc diffusion method of the National Committee for Clinical Laboratory Standards.

Results: E. coli isolates were mostly susceptible to nitrofurantoin (81.2%), followed by ceftizoxime (70%), norfloxacin (65%), cefotaxime (62%). E. coli isolates had the highest resistance rate to ampicillin and amoxicillin (86% and 95.3%, respectively). Importantly, only 38.2% of E. coli isolates were susceptible to trimethoprim- sulfamethoxazole.

Conclusion: While drug resistance among bacterial pathogens is a developing gradually process, routine surveillance and monitoring studies should be performed to provide clinicians knowledge on the updated and most effective empirical treatment of UTIs. These data provide useful information for clinicians in determining the appropriate empirical antimicrobial regimen, and help authorities to formulate antibiotic prescription policies. It is important to limit the indiscriminate prescription of antibiotics. Ampicillin/amoxicillin is not suitable for empiric therapy of UTI in general practice or hospital patients in this region. Nitrofurantoin may be considered as a first-line empiric antibacterial agent for urinary tract infections in Karaj, Iran.

Escherichia coli, Antimicrobial Susceptibility, urinary tract infection

Presentation: Poster