

Investigation of Antibiotic resistance profiles of Enterococci isolated from different clinical specimens in Qaem hospital, Mashhad

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Abstract

Background & Aim: Enterococci, gram-positive cocci, are important human pathogens in both community and hospital-acquired infections. Also, they are intrinsically resistant to many commonly used antimicrobial agents. The purpose of this study was to investigate antibiotic resistance profiles of Enterococci isolated from referred patients in Qaem teaching hospital.

Methods: A total of 110 isolates of Enterococci were collected from Qaem teaching hospital affiliated to Mashhad University of Medical Sciences during April to October 2014. Then the modified disk diffusion method (MDDM) was used for identifying the susceptibility of the isolates to 10 selected antibiotics.

Results: Resistance of Enterococcus strains to vancomycin, penicillin, ceftriaxone, erythromycin, ampicillin, amoxicillin, ciprofloxacin, gentamicin, nalidixic acid and co-trimoxazole was 5.4%, 54.5%, 70%, 79%, 41.8%, 35.5%, 71.8%, 65.4%, 89% and 71.8% respectively. In this study, 92 isolates were obtained from urine(83.6%) and 18 isolates(16.3%) were from various samples (7 isolates from blood, 1 isolate from cerebrospinal fluid, 3 isolates from scar and 7 isolates from secretions). Moreover, 51% of bacteriological isolates were obtained from men and 46% were from women.

Conclusion: Based on the results of this study, a significant percentage of Enterococcus strains are resistant to ceftriaxone, erythromycin, ciprofloxacin, nalidixic acid and co-trimoxazole. Therefore, there is a need for appropriate therapeutic strategies to control and prevent the spread of resistant strains.

Key words: Enterococci, Antibiotic resistance, Modified disk diffusion method