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Acta Medica Iranica
2009;47(4) : 325-328

Original Report

Evaluation of Antimicrobial Susceptibility Patterns of Enterococci Isolated from Patients in Tehran University of Medical Sciences Teaching Hospitals

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Received: January 15, 2008

Accept: July 30, 2008

Abstract:

This study investigated the antibacterial resistance among enterococci isolated in Tehran hospitals. A total of 277 *Enterococcus faecalis*, 123 *Enterococcus faecium* and 13 isolates of other enterococcal strains were collected from 1 March 2002 to 15 April 2004 from three teaching hospitals of Tehran University of Medical Sciences. The minimum inhibitory concentrations (MIC) of tested antibiotics were determined by agar dilution method. Susceptible and resistant isolates were defined according to the species-related MIC breakpoints of the Clinical and Laboratory Standards Institute (CLSI) guidelines. Sixty- three percent of isolates were resistant to rifampicin (MIC₉₀ 64 µg/ml), 44% to ciprofloxacin (MIC₉₀ 16 ≤ µg/ml), 43% to erythromycin (MIC₉₀ 512 µg/ml), 32% to ceftazolin (MIC₉₀ 256 ≤ µg/ml), 25% to penicillin (MIC₉₀ 32 µg/ml), 21% to ampicillin (MIC₉₀ 128 ≤ µg/ml), 8% to vancomycin (MIC₉₀ ≤ 8 µg/ml), and 8% to teicoplanin (MIC₉₀ 16 ≤ µg/ml). All of the vancomycin-resistant strains carried the vanA phenotype and genotype. High level resistance to gentamicin and streptomycin were found in 52% and 83% of the isolates, respectively. The results indicated that a significant percentage of isolates are resistance to different antibiotics, pointing out the need for control strategies to avoid dissemination of resistant isolates and for continuous surveillance for the detection of emerging resistance traits.

Keywords:

Antimicrobial susceptibility patterns . enterococci . vancomycin resistant enterococci

TUMS ID: 14511

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