

Frequency and Antimicrobial Susceptibility Pattern of Gram-Positive Cocci Isolated From Urine Cultures in Hospitalized Patients

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Background & Objectives: *Staphylococcus aureus* and Enterococcus species are the most common gram-positive agents of nosocomial as well as Urinary Tract Infections (UTI). Rapid distribution of drug resistance to previously effective antibiotics in these microorganisms, encounters the treatment with serious problems. Hence, the aim of this study is to survey frequency and antibiotic resistance pattern of the above mentioned microorganisms to prevent the creation of resistant strains.

Methods: This investigation is a retrospective study done by studying of 2566 hospitalized patients' urine culture reports in Tabriz Shahid Madani Heart Hospital during two years (2009-2010). The statistical analysis performed using SPSS vs. 16.0 and Excel software.

Results: Among 2566 urine cultures, microorganisms in 479 cases (18.7%) grew and 32 cases (6.7%) of them were related to gram-positive cocci (*Staphylococcus aureus* and Enterococcus species). Seventy two percent of patients were female and 28% were males. Mean age was 58 years (SD=15.3). Fifty six percent of positive cases were community-acquired infection and the most resistance was reported to Nalidixic acid. Thirty six percent of *Staphylococcus aureus* were resistant to Meticillin and 22% of Enterococcus species were resistant to Vancomycin using disc diffusion Methods.

Conclusion: Our study showed that resistance to Meticillin and Vancomycin in the above mentioned gram-positive cocci is highly prevalent requiring physicians' attention to logical prescription of antibiotic, emphasizing to antibiogram results, precision of laboratory on reporting results and outweigh of all, doing surveillance on their performance.

Keywords: Antibiotic Resistance; Nosocomial Infection; Urine Culture; *Staphylococcus aureus*; Enterococcus Species