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Isolation of enterococci, their antimicrobial susceptibility patterns and associated factors among patients attending at the University of Gondar Teaching Hospital**Amelework Yilema**

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Background: Enterococci become clinically important especially in immune-compromised patients and important causes of nosocomial infections. Data on the prevalence, antimicrobial susceptibility patterns and associated factors of enterococci are scarce in Ethiopia.

Aim & Methods: A hospital based cross-sectional study was conducted at the University of Gondar Teaching Hospital from February 28, 2014 to May 1, 2014. Pre-tested structured questionnaire was used to collect socio-demographic data and possible associated factors of enterococci infections. Clinical samples including urine, blood, swabs and other body fluids from patients requested by physician for culture and antimicrobial susceptibility test during the study period were included. A total of 385 patients were included in the study. Data were entered and analyzed using SPSS Version 20. P values <0.05 were considered as statistically significant.

Result: The overall prevalence of enterococci infection was 6.2% (24/385). The commonest sites of infections were urinary tract followed by wound and blood. Among the 24 isolates, 33.3% (8/24) were resistant to all tested antimicrobial agents. 41.7% (10/24) of the enterococci isolates were Vancomycin resistant enterococci (VRE). Moreover, two third of the isolates were multidrug resistant (MDR) enterococci. In multivariate analysis, duration of hospital stays for two days and more than two days with infection rate: 17/32 (53.1%), previous history of any antibiotics (AOR= 9.13; [95% CI; 2.01-41.51], P=0.00) and history of urinary catheterization (AOR=8.80; [95% CI; 1.70-45.64], P=0.01) were associated with presence of higher enterococci infections than their respective groups.

Conclusion: The prevalence of enterococci infections among patients with UTIs, wound infections and sepsis were higher than the other patients. Multi-drug resistant enterococci including VRE were isolated from clinical samples in the study area. Being hospitalized for ≥ 48 hours, having history of any antibiotic administration and catheterization were associated factors for enterococci infections. Presence of VRE indicates decreased antibiotic treatment options of multidrug resistant enterococci. Therefore, efforts should be made to prevent enterococci infections and emergency of multidrug resistant enterococci. Moreover, species identification and detailed study using genotypic methods are needed.

Biography

Amelework Yilema has completed her MSc in Medical Microbiology from Gondar University, Ethiopia. She is an Assistant Researcher of HIV Reference Laboratory, has one published papers in journal and has been serving as Technical Expert.

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