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Abstract

Detection of vanA, vanB, and selected virulence genes of Enterococcus faecalis isolates from Ribat University Hospital in Khartoum State

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Abstract:

Resistance to vancomycin among enterococci is an emerging health problem worldwide. In Sudan, limited data is present about its molecular epidemiology. This study aimed to detect vanA and vanB genes, virulence factors, and antimicrobial susceptibility of Enterococcus faecalis isolated from clinical specimens in Ribat University Hospital. From a total of 46 E. faecalis investigated in this study, VanB gene was present in 10.9% of the isolates while vanA gene was not detected at all. Fifty-nine percent of the isolates had gelE gene followed by asa1 (34.8%) and hyl genes (10.9%), while cylA and esp genes were not detected at all strains. Resistance to ciprofloxacin, co-amoxiclav, ampicillin, and vancomycin was found in 63%, 56.5%, 45.7%, and 34.8% of isolates respectively, whereas only 8.7% were resistant to nitrofurantoin. Our results indicate a high frequency of E. faecalis process vancomycin resistance with vanB genotype and high frequencies of gelE, asa1, and hyl virulence genes.

Biography:

Hisham N. Altayb is an Associate professor of molecular and microbiology at the biochemistry department,

college of sciences, King Abdulaziz University, KSA. My primary responsibilities are teaching postgraduate and undergraduate students (teaching genetics, virology, general biochemistry, and terminology, in addition to supervision of research). I also have experience in teaching molecular biology and advanced microbiology at different Sudanese universities for the last three years.

Recent Publications:

1. Potential activity of a selected natural compounds on SARS-CoV-2 RNA-dependent-RNA polymerase, and binding anity of the receptor-binding domain (RBD).

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