IN VITRO SUSCEPTIBILITY OF STAPHYLOCOCCI AND ENTEROCOCCI TO VANCOMYCIN AND TEICOPLANIN

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Background: Hospital-acquired infections (HAIs) pose a worldwide problem. They primarily concern intensive care, hematology-oncology, and surgical units. Coagulase-positive and coagulase-negative Staphylococci, especially their subgroups possessing the ability to develop resistance to methicillin, and Enterococci have a particular role in the etiology of HAIs. The aim of this study was to determine therapeutic Minimal Inhibitory Concentration (MIC) values for vancomycin and teicoplanin, two of the most commonly administered antibiotics in the treatment of infections caused by Staphylococci resistant to methicillin, and infections caused by Enterococci. **Material and methods:** The analyzed material included 200 bacterial strains collected from patients treated in the Intensive Care Unit, the Musculoskeletal Infections Unit and Surgical Clinics of the Military Institute of Medicine in Warsaw, Poland. The research was conducted in line with European Committee for Antimicrobial Susceptibility Testing (EUCAST) criteria by means of the Etest® gradient strips. **Results:** The analysis demonstrated full susceptibility of Staphylococci MSSA (methicillin susceptible Staphylococcus aureus), Staphylococci MRSA (methicillin resistant Staphylococcus aureus), and Enterococci to both antibiotics. Coagulase-negative Staphylococci demonstrated higher sensitivity to vancomycin. Teicoplanin demonstrated lower Minimal Inhibitory Concentration (MIC) than vancomycin against the analyzed strains of Enterococci. As regards coagulase-negative Staphylococci, vancomycin exhibited lower MIC than teicoplanin. **Conclusions:** The research confirmed current recommendations on the use of vancomycin and teicoplanin in the treatment of infections caused by Gram-positive bacteria, with a strong emphasis on their use in a therapy determining MIC values over a wide range of concentrations.