

Título: BIOFILM FORMATION AND SUSCEPTIBILITY PROFILES OF *STAPHYLOCOCCUS HAEMOLYTICUS* STRAINS ISOLATED FROM BLOOD CULTURES

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Resumo

Staphylococcus haemolyticus belongs to the group of coagulase negative staphylococci (CoNS) and is part of the human normal flora of skin and mucous membranes. It is also an opportunistic pathogen and the second most frequently CoNS isolated from human blood cultures. The ability to produce biofilm and the notoriously multi-resistance to antimicrobial agents, favours *S. haemolyticus* as an emerging cause of nosocomial infections. The aims of this study were to evaluate the ability of biofilm production and research the resistance to oxacillin and vancomycin in *S. haemolyticus* samples. Were selected for this study, 25 samples of *S. haemolyticus* isolated from blood cultures in the years 2013 and 2014, provided by the HUPE's bacteriology laboratory. The MALDI-TOF method, was used for the bacterial identification. Antibiotic susceptibility testing by the disk diffusion method was performed according the guidelines of the CLSI, 2014, and MIC (oxacillin and vancomycin) evaluated by the broth microdilution method. Semi-quantitative adherence assay in polystyrene microtiter plates was performed as previously described by Stepanovic et al. (2000), and glass surface adherence assay was performed as previously described by Pereira et al. (2014). MALDI-TOF identified 25 strains as *S. haemolyticus*. Results of the disk diffusion tests shown multiresistance to varied antimicrobial agents in 88% of *S. haemolyticus* strains isolated from blood culture. All strains were oxacillin resistant and vancomycin sensitive (MIC). For semi-quantitative adherence assay, 24% of the strains were strongly adhered, and 76% of the strains adhered at the sides of the glass and at the interface between the medium and air (+++). *S. haemolyticus* has a high resistance to many antibiotics used in the hospital routine, so the rational use of antibiotics and to establish the permanent supervision of both pathogenic as resistance is required.

Key words: *Staphylococcus haemolyticus*, bacteremia, resistance, blood culture.

Development Agencies: CNPq, SR2-UERJ, FAPERJ, CAPES