

OXACILLIN SENSITIVITY AND RED PROPOLIS OF *Staphylococcus aureus* ISOLATES OBTAINED FROM CUTANEOUS INJURIES OF TRACTION EQUINES

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ABSTRACT:

The temperament and sudden reactions of equines make them more susceptible to cutaneous lesions, which when without proper care can be contaminated with bacteria and have the healing process prevented. One of the common pathogens in these lesions is *Staphylococcus aureus*, which can present resistance phenotype (MRSA strains) and cause a serious public health problem. Therefore the use of natural substances, such as propolis, that has antimicrobial and anti-inflammatory activities with the potential to assist in tissue repair has gained space in the therapy of cutaneous lesions in these species. The aim of this study was to evaluate the antimicrobial activity and antibiofilm of the propolis hydroalcoholic extract (EHP) on *S. aureus* isolates obtained from cutaneous lesions in traction equines. Exudates (N = 21), obtained with the aid of a sterile bed swab of acute and chronic skin lesions of traction equines, were stored in Stuart transport medium at 4°C and sent to the laboratory for morphological characterization and analysis of the presence of hemolysis, Gram staining and biochemical tests of catalase, oxidase, coagulase, PAB and also quantification of biofilm and antibiofilm. Sensitivity to oxacillin (OXA) as well as to EHP and results evaluated by descriptive analysis expressed as a simple percentage were verified. *S. aureus* was isolated in all samples, of which 90.47% (N = 19) were susceptible to OXA and 8.70% (N = 2) resistant. Among the OXA-sensitive isolates, 182 (2) was sensitive at high concentrations to EHP with a MIC of 156.25 µg / mL and CBM of 312.50 µg / mL. Isolates resistant to OXA, 198 (4) and 200 (1) were sensitive to EHP with MIC and MBC of 39.06 µg / mL. Concerning the biofilm in EHP formation, 42.85% (N = 3) of the isolates presented moderate production and 66.6% (N = 4) had poor biofilm production. As for the action against the consolidated biofilm, the EHP presented 71.42% (5/7) of action against 28.57% (2/7) of OXA. It is concluded that the hydroalcoholic extract of propolis presents a superior action to OXA on forming and consolidated biofilms, being a viable alternative for the treatment of cutaneous lesions in equines contaminated by *S. aureus*, particularly in cases of OXA resistant strains.

Key-words: Antimicrobial, Asinine, Antibiofilm, Phytotherapics.