

TITLE: SENSITIVITY PROFILE OF BACTERIA ISOLATED FROM WOUNDS IN LOWER MEMBERS OF AMBULATORY PATIENTS

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ABSTRACT:

Infection in chronic wounds, especially in lower limbs, affect large portion of the population and is a major public health problem. A good strategy to minimize this problem is to combine culture and antibiogram of secretion, in order to evaluate antimicrobial sensitivity profile and minimize the risk of inadequate therapy. Thus, the objective of this study was to evaluate antimicrobial resistance profile of bacteria present in wound exudate, through tests performed on bacterial strains isolated from lower limb wounds of patients seen in outpatient care. This paper is linked to a project called "Quality of life and intervention in lower limb wounds", submitted to the research ethics committee of the University of the Sacred Heart (USC), and approved under number **382.481**. Ulcer exudates were collected from 10 patients, attended at multidisciplinary care clinic, from which it was isolated *Staphylococcus aureus* (70%) and *Pseudomonas* sp. (30%) strains. As some patients had more than one wound, some had both microorganisms in the same wound, as well as others had contamination only in one of the wounds they had. Bacteria were identified as follows: those that grew on mannitol agar with yellow coloration were submitted to a coagulase test, showing positive results, characterizing *S. aureus*. Those that grew in MacConkey were submitted to colony analysis and oxidase test, which was positive. The presence of pigment, scattered colonies and a sweet odor also suggested *Pseudomonas* sp. After preliminary identification of the bacteria, an antibiogram was performed. The chosen methodology was disk diffusion (Kirby & Bauer), and the interpretation of the results followed BRCast 2018 protocol. The results obtained in the antibiograms for *S. aureus* found high rates of resistance, especially to penicillin (100%), cefoxitin (71.42%), erythromycin (71.42%) and clindamycin (57.14%). Regarding *Pseudomonas* sp., more than 50% of the strains were resistant to levofloxacin and meropenem, and 100% to ciprofloxacin, ceftazidime, aztreonam and cefepime. High resistance rates shown by the isolates in this study, including to broad spectrum antimicrobials, highlights the importance of performing antibiograms even in outpatient collections. The correct choice of therapeutic regimen minimizes treatment failures and reduces the chances of multi-resistant bacteria selection.

Key words: Ulcers, *Staphylococcus aureus*, *Pseudomonas* sp., Bacterial resistance.