TITLE: COAGULASE NEGATIVE *Staphylococcus* FROM BLOOD CULTURES OF INDIVIDUALS ATTENDED AT A NEONATAL INTENSIVE CARE UNIT OF A UNIVERSITY HOSPITAL OF RIO DE JANEIRO

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ABSTRACT:
The development of current medicine has contributed to the increasing importance of Coagulase Negative *Staphylococcus* (SCoN) in healthcare. Although they are often considered members of the microbiota, the involvement of these species in healthcare-associated infections (HAI) has been increasingly reported, especially in newborns. The main objective of this study was to retrospectively identify the isolation of coagulase-negative *Staphylococcus* from blood cultures of individuals admitted at the Neonatal Intensive Care Unit (NICU) of a University Hospital (UH), during a period of eight years (2014 - 2021), to identify the different species found and compare their antimicrobial susceptibility profile. Microbiological reports issued by the Clinical Pathology Service of the UH were analyzed, based on the consultation of the test results reports through the hospital software used. The results related to the growth of SCoN samples in blood culture of neonates were included in an Excel spreadsheet, as well as the antimicrobial susceptibility profile, issued by the sector's routine, through the PhoenixBD™ automated system (BD Diagnostic Systems, Sparks, MD). At the end of the survey, 51 SCoN samples were analyzed, with *Staphylococcus epidermidis* being the most frequently found agent (61%; 31/51), followed by *S. haemolyticus* (23%; 12/51), *S. hominis* (6%; 3/51), *S. capitis* (4%; 2/51), *S. lugdunensis* (2%; 1/51), *S. intermedius* (2%; 1/51) and *S. caprae* (2%; 1/51). During the years, *S. epidermidis* was isolated in all of them, except for the year 2020, while *S. haemolyticus* had no isolates in the years 2014 and 2021. The isolation of *S. epidermidis* has decreased over the years as the number of samples of other species has increased, mainly *S. haemolyticus*. Regarding the susceptibility profile, all samples were susceptible to vancomycin, daptomycin and linezolid and most were sensitive to minocycline (93.9%), rifampicin (88.8%) and tetracycline (80%). The samples showed high rates of resistance to penicillin G (98%), oxacillin (90.2%) and erythromycin (82.4%). From the analyzes carried out, we were able to understand the isolation profile of SCoN in the Neonatal ICU of our UH in the last eight years, identify the main species isolated and describe their susceptibility profile, and how this isolation has been shown over the years, to assist and possibly propose measures for the control and prevention of infections caused by SCoN in neonates attended at our hospital.

Keywords: Coagulase negative *Staphylococcus*; Neonatal Intensive Care Unit; Antimicrobial Resistance.