Title: RESEARCH OF PATHOGENIC BACTERIA IN ICU INSTRUMENTS USED IN A PUBLIC HOSPITAL

Authors   Miguel, Y.C.S. [1], Vargas, J.A. [1], Guedes, P.G.[2]

Institution [1]SUPREMA - Faculdade das Ciências Médicas e da Saúde de Juiz de Fora (Alameda Salvaterra, 200 - Salvaterra, Juiz de Fora - MG, 36033-003); [2]UFSM - Universidade Federal de Santa Maria (Av. Roraima nº 1000 Cidade Universitária - Camobi, Santa Maria - RS, 97105-900)

Abstract:

INTRODUCTION: The health-care associated infections (HAIs) are a major cause of mortality in intensive care units (ICU). They are defined as any infection that primarily affects the individual being in the hospital or outpatient. Of the transmission sources are instruments of ICU, as stethoscopes and thermometers. The major bacterial pathogens involved are Staphylococcus *aureus, Pseudomonas sp, Acinetobacter sp*. and members of the *Enterobacteriaceae*.
OBJECTIVES: The objective of the study is to isolate and identify pathogens in instruments used in the ICU of a public hospital and establish their antimicrobial resistance profile.
MATERIALS AND METHODS: Surfaces 11 stethoscopes, 11 termômentros and 2 cufômetro were analyzed. The samples were collected with a sterile swab, introduced amid Stuart, they were subsequently inoculated into BHI broth at 35°C ± 1°C for 24/48h after incubation was carried peal Agar 5% sheep blood, agar mannitol salt and agar MacConkey, incubated at 35 ± 1°C for 24/48h under aerobic conditions. The isolated colonies were carried out biochemical and physiological evidence of identification was later performed the antimicrobial susceptibility testing for strains of clinical interest.
RESULTS AND DISCUSSION: There was bacterial growth in 17 (70.83%) instruments totaling 26 bacterial strains. Seven were identified (26.92%) strains of *Klebsiella pneumoniae*, 2 (7.69%) *Providencia stuartii,* 1 (3.85%) *Proteus mirabilis,* 1 (3.85%) *Enterobacter cloacae*, 2 (7.69%) of *Enterobacter aerogenes*, 1 (3.85%) *Acinetobacter sp.*, 5 (19.23%) of *S. aureus* and 1 (3.85%) strain of *Enterococcus sp*. Regarding the antimicrobial resistance profile is emphasized that 100% of *S. aureus* strains were MRSA, *K. pneumoniae* and *E. cloacae* showed 100% resistance to carbapenems, *Acinetobacter sp* showed 100% resistance to meropenem, piperacillin/tazobactam, sulfazotrim, levofloxacin and gentamicin, other strains have low resistance to antimicrobials.
CONCLUSION: Microbiological analyzes of surfaces are of great importance in environmental contamination risk assessment by establishing a profile of possible sources of transmission of IRAS. Thus we conclude that the instruments require continuous cleaning and hospitals must maintain strict disinfection protocols and programs to reduce bacterial spread and ensure patient safety

Key Words: Health-care associated infections (HAIs), Instruments, Intensive care unit (ICU), Bacteria