

TITLE: ISOLATION OF OXACILLIN-RESISTANT *Staphylococcus aureus* IN HOSPITAL ENVIRONMENTS SURFACES

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ABSTRACT:

Infections caused by *S. aureus*, Gram-positive coccus colonizing the normal microbiota, mainly of the skin, are particularly difficult to treat due to the antimicrobial resistance profile. In Brazil, about 5% to 15% of hospitalized patients acquire a health care-associated infections, whose prevalence due to *S. aureus* varies from 17% to 26%, and of these, 70% to 100% are caused by multiresistant strains. The spread of healthcare-related infections has the most common pathway the transfer of pathogens from the hands of health professionals and patients. The surfaces with the highest frequency of contamination are: floor, bed frame, tables, clothes used by patients, pillows and mattresses. The aim of the study was to evaluate the presence of oxacillin resistant *S. aureus* (ORSA) on surfaces frequently touched by patients and healthcare professionals (sampling units: door handles and bed rails) before and after cleaning on weekdays and weekend. This cross-sectional study with a quantitative approach, was carried out in a ward of Infectology of the university hospital of Vitória, ES. The quality of the disinfection was evaluated by qualitative culture of *S. aureus* in a delimited area of the collection sites before and after cleaning during the patient's stay. Subsequently, the susceptibility profile of *S. aureus* strains against oxacillin was evaluated by means of disc-diffusion test. The variables studied were bacterial presence and antibiotic susceptibility profile. A total of 93 samples were collected, of which 37 (39.78%) were in bed rails and 56 (60.22%) in door handles, with similar proportions on weekdays and weekends. Of the 93 samples, 20 (21.51%) were positive for *S. aureus*, of these, 4 (20%) were identified as ORSA. Statistical analysis using Fisher test revealed that there is no association between the quality before and after cleaning. The analysis of the collection day, weekend and weekdays, revealed that there is independence between variables, confirming the presence of a standard of cleanliness, regardless of the day. The objective was to know the antimicrobial susceptibility profile of the resident flora of the hospital in order to facilitate the creation of protocols and more adequate strategies of empirical treatment of the infections that occur related to the health service and to enable the rational use of antimicrobials.

Keywords: Hospital infection, MRSA, ORSA, cleaning.

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