

**TITLE:** MULTIDRUG-RESISTANT *Staphylococcus aureus* ISOLATED FROM THE HANDS AND NASAL CAVITY OF PROFESSIONALS IN A SURGICAL CENTER IN A HOSPITAL.

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#### **ABSTRACT:**

Multidrug-resistant *Staphylococcus aureus* has often been found in the hands and nasal cavity of human beings and is among the leading causes of nosocomial infections. The aim of this study was to verify the presence of strains of *S. aureus* in the hands and nasal cavity of 27 health workers from the operating room in a hospital. Three collections were carried out from August to December 2019. The samples were collected with a sterile swab previously moistened with saline solution and later were sown in plates containing Salt Mannitol agar and incubated in a bacteriological incubator at  $36 \pm 1^\circ\text{C}$  for 48 hours. Characteristic colonies were confirmed by Gram-staining and biochemical tests. The Antibiotic susceptibility test was performed using the disk diffusion technique described by Kirby-Bauer. The results showed that 40.7% (11) of the health workers have *S. aureus* in the nasal cavity. 14.81% (4) of the professionals presented *S. aureus* in their hands in only one of the collections. Of the 36 strains of *S. aureus* isolated, 11.11% are methicillin resistant, 77.8% showed resistance to penicillin, amoxicillin /clavulanic acid and ampicillin/sulbactam and 58.3% were multidrug resistant. The sensitivity of strains observed mainly to ciprofloxacin (97.22%) and nitrofurantoin (97, 22%). The results allow us to conclude that the number of *S. aureus* carriers is relatively high and that the isolated strains are multidrug-resistant, mainly for the antibiotics of first choice used to control common infections.

**Keywords:** Carriers. *S. aureus*. Health-care workers. Antimicrobial resistance.

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