

PREVALENCE OF STAPHYLOCOCCUS AUREUS NASAL CARRIAGE IN ASYMPTOMATIC OTHERWISE HEALTHY INDIVIDUALS

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Abstract

Staphylococcus aureus is a bacterium that can colonize many surfaces and cause various infections, including skin and bloodstream infections. Although it can be asymptomatic, nasal colonization with *S. aureus* is a risk factor for serious staphylococcal infections, such as surgical site infections, bacteremia, skin and soft tissue infections, etc. The aim of this study was to determine the prevalence of *S. aureus* nasal colonization among medical students aged 19-21 years old who have not undergone clinical rotations. Nasal swabs were taken from both nostrils and immediately plated onto 5% sheep blood agar and identified using a Staphaurex™ Latex Agglutination Test. We found that 10/59 students (16.9%) carry *S. aureus* in their nostrils, while the rest showed mixed growth of Coagulase negative Staphylococci and *Corynebacterium* spp. Additionally, 1/10 of *S. aureus* colonizers showed pure growth of *S. aureus*. Antibiotic susceptibility testing on the isolated *S. aureus* showed 100% sensitivity against either Ciprofloxacin, Gentamicin, and Linezolid; sensitivity of 90%, 80%, 70%, 40%, and 30% against Cefoxitin, Trimethoprim/Sulfamethoxazole, Clindamycin, Azithromycin, and Penicillin, respectively. It is noteworthy that 1/10 (10%) of *S. aureus* isolate was MRSA (Methicillin Resistant *Staphylococcus aureus*). The prevalence of *S. aureus* nasal carriage in asymptomatic otherwise healthy individuals is relatively high, and caution is needed as they may act as a source of infection to people who are at risk for severe *S. aureus* infections.

Keywords: *staphylococcus aureus*, prevalence, medical students