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**Factors associated with *Staphylococcus aureus* nasal carriage among medical students: Hospital-drug resistance biofilm****Vikrant Negi and Shraddha Sharma**  
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*Staphylococcus aureus* are primarily found in human moist squamous epithelium of the anterior nares. The incidence of *S. aureus* has been increasing emergence of drug-resistant strains called Methicillin resistant *Staphylococcus aureus* (MRSA). Medical students, second year onwards, are posted in various OPDs, wards, ICUs and operation theatres. Students with *S. aureus* nasal carriage may disseminate *S. aureus* to patients. This study was conducted to investigate the carrier rate of *S. aureus* among hospital unexposed & exposed medical students, comparing biofilm forming ability and its correlation with antibiotic resistance. 181 healthy medical students of Veer Chandra Singh Garhwali Government Medical Sciences & Research Institute, Uttarakhand, unexposed (n=74) and exposed (n=107) to the hospital environment volunteered in this study. Nasal swabs were obtained & cultured for the detection of *S. aureus*. Kirby-Bauers disc diffusion test for antibiotic susceptibility was performed. Beta lactamase production was identified by using Sykes and Mathew's test tube and agar plate methods. Congo Red Agar (CRA) and 0.1% Crystal Violet Assay (CVA) was done to see ability to form in vitro biofilm by isolated *S. aureus*. 29.28% medical students were found to be healthy carrier of *S. aureus*, for unexposed 17.57% and exposed 37.38%. MRSA carriage was observed in one student (exposed group). Prevalence of *S. aureus* nasal carriage increases with the duration of exposure to the hospital environment. The nasal carriage of *S. aureus* in medical students indicates the potential danger of dissemination of *S. aureus* including MRSA from them to the hospitalized patients. Biofilm producing strains indicates the potential possibility of acquiring implant associated infection.

**Biography**

Vikrant Negi is currently a PhD scholar at Rajasthan University of Health Sciences. He has completed his Post-graduation in Medical Microbiology from Kasturba Medical College, Manipal University. He has published 11 papers in reputed journals. He has won Gold Medal in bacteriology at MICROCON 2010 India, nominated winner of Scientists solution Innovative Student Project Fund Award 2011 and winner of quiz competition in Parasitology at AIIMS Jodhpur, 2016. He has served as a Demonstrator in Veer Chandra Singh Garhwali Government Medical Sciences & Research Institute, Uttarakhand and as a District Microbiologist at Integrated Diseases Surveillance Program, Jaisalmer, Rajasthan.

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