



Category: Metagenomics

# Prevalence of *Staphylococcus aureus* associated with Skin and Soft Tissue Infection (SSTI) among septic patients from Bhubaneswar

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## Abstract

*Staphylococcus aureus* is a major gram positive bacterial pathogen that causes a wide spectrum of clinical infections, ranging from localized soft-tissue infections to life-threatening bacteremia and endocarditis. *S. aureus* can infect tissues when the skin or mucosal barriers have been breached. This can lead to many different types of infections, including boils, carbuncles (a collection of boils) and abscesses. Deeply penetrating *S. aureus* infections can be severe. The incidence of methicillin resistant *S. aureus* (MRSA) in India ranges from 30-70%. The present study investigates the detection of *S. aureus* from pus swabs of hospitalized patients (Capital Hospital, Bhubaneswar) having skin infections and abscesses and its' susceptibility pattern to different antibiotics. Out of 230 samples collected 204 (88.9%) were culture positive for different bacterial pathogens from which *S. aureus* was 54 (23%). The incidence rate of *S. aureus* among male and female group studied was 56.3% and 43.7%, respectively. The isolated *S. aureus* was found to be resistant to most of the antibiotics such as azithromycin, doxycycline, ciprofloxacin, tetracycline, gentamycin, ofloxacin, chloramphenicol, ampicillin and oxacillin. Among the various antibiotics, the isolated *S. aureus* strains revealed resistant to methicillin (MRSA) and vancomycin (VRSA) were 90.7% and 14.8, respectively. The MRSA strains were confirmed genotypically by amplification of methicillin resistant (*mec A*) gene. *S. aureus* identification and its antibiogram profile are highly essential for implementation of treatment and control of the infection in Odisha.

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