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Nasal carriage of Methicillin-Resistant *Staphylococcus aureus* (MRSA) in health care workers and healthy individuals in a tertiary care hospital

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Staphylococcus aureus is one of the pathogenic microorganisms widely present in human. It colonizes the skin, glands, mucous membrane, and anterior nares in healthy adult population. Approximately 25-30% of normal individuals are carrying *S. aureus* in their anterior nares and skin. It is one of the commonest human pathogen that causes both nosocomial and community-acquired infection. *S. aureus* can commonly be treated with antibiotics. But over a period of time, some strains of *S. aureus* have become resistant to antibiotics such as penicillin, methicillin, oxacillin. *S. aureus* having resistance against methicillin, is known as Methicillin-Resistant *Staphylococcus aureus* (MRSA), was first discovered in 1961. Longer stay in hospital and prolonged antibiotic administration to the patients resulted in methicillin resistance. In the present study, the prevalence rate of methicillin-resistant *Staphylococcus aureus* in nasal swabs among Health Care Workers (HCWs) and healthy individuals in a tertiary care hospital was studied. 60 nasal swab samples were collected and cultured on the blood agar plates. *S. aureus* was identified and confirmed using gram staining and biochemical tests. By Kirby-Bauer disc diffusion method, antibiotic susceptibility test was performed for the detection of MRSA using cefoxitin disc. In result, 41.66% (25/60) *S. aureus* and 31.66% (19/60) MRSA strains were isolated. MRSA carriage rate in males were 30.30% (10/33) and in females 33.33% (9/27). High prevalence rate of MRSA was detected in 21-40 years of age group, i.e., 40.47% (17/42). MRSA isolated in health care workers was 32.65% (16/49), among which, carriage rate was found highest in nurses. In conclusion, percentage of MRSA prevalence was quite high among hospital care workers particularly in nurses. Therefore, periodical surveillance of MRSA should be done in all the health care workers in the hospital.

Biography

Lovely Gupta is pursuing BTech+MTech (Dual) degree course from Amity Institute of Biotechnology, Amity University, Uttar Pradesh from India.

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