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 **Original article
Study of Methicillin-resistant Staphylococcus aureus in indoor patients of a tertiary care hospital in North India**

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**Abstract**

**Background:** Methicillin-resistant *S. aureus* (MRSA), is one of the most common cause of nosocomial pathogen responsible for causing variety of human infections that may range from minor skin disease to life-threatening infections. In the present era of antibiotic resistance, the emergence of multi-drugs resistant organism is becoming more common. Prevalence of MRSA varies from one setting to other, therefore a study was planned to know prevalence and antibiotic susceptibility pattern of MRSA isolate in our hospital. To know the prevalence and antibiotic susceptibility pattern of MRSA isolates in indoor patients**. Materials and methods:** Detection and antibiotic susceptibility pattern of MRSA strains in *S. aureus* isolates from various clinical specimens sent from different departments of the hospital was done for a period of one year.

**Results**: Out of a total of 100 *S. aureus* isolates 31(31%), were found to be MRSA, detection MRSA was found be 100% by cefoxitin disc diffusion method and E test compared to oxacillin method (93.5%). Prevalence of MRSA strains was almost equal in male and females, but was more common in middle age group patients, no case was found in <10 years age group. In clinical samples, prevalence of MRSA was highest in urine samples (41.2%) followed by sputum (33.3%) and pus (28.9%). On comparing different departments of the hospital it was found to be most prevalent in medicine (41.7%) followed by surgery (38.1%), obs. & gyne (35.7%), TB & chest (33.3), ENT (23.8%) and orthopaedics (20%). Multi-drug resistance was seen in 75% of MRSA isolates compared to around 30% in MSSA isolates. All isolates were found to be vancomycin sensitive.

**Conclusion:** Multi-drug resistant MRSA is prevalent in our hospital setting and regular monitoring is needed to keep its prevalence controlled in future.