**NASAL CARRIAGE RATE OF *STAPHYLOCOCCUS AUREUS* IN HOSPITAL PERSONNEL AND INPATIENTS AND ANTIBIOTIC RESISTANCE PATTERN OF ISOLATED STRAINS FROM NASAL AND CLINICAL SPECIMENS IN ARDABIL**


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**Background and objective:** *Staphylococcus aureus* is known as an important pathogen causing a variety of bacterial infections. Treatment of this bacterium with antibiotics has led to antibiotic-resistance, especially against methicillin (MRSA) and more recently rare resistance against vancomycin (VISA&VRSA). MRSA strains compared to MSSA strains are resistant to most of the antibiotics in routine use. Aims of this study were to determine nasal carriage rate of *S. aureus* in hospital personnel and inpatients and to determine antibiotic-resistance patterns in the above mentioned isolates in the same hospitals.

**Materials and methods:** *Staphylococcus aureus* isolates collected from nose of 460 hospital personnel and inpatients (160 strains) and from clinical specimens (46 strains) in Imam Khomeini and Sabalan Hospital in a 6 month period were studied in 2008.

**Results:** Our results showed 34.7% nasal carrier rate for *S. aureus* in hospital personnel and patients studied. Seventy seven isolates were able to grow on oxacillin agar, indicating 37.4% MRSA strains. MRSA strains were also resistant to 4-11 antibiotics tested in this study, but MSSA strains, which were resistant to penicillin G (100%), mainly showed sensitivity to other test antibiotics. All of the MRSA and MSSA strains were sensitive to vancomycin. Generally, the resistance to methicillin was higher in clinical isolates compared to isolates recovered from nose (p< 0.001).

**Conclusion:** In this study, all of the test isolates were sensitive to vancomycin, which necessitates more caution in using this valuable antibiotic. Screening of hospital personnel and in-patients will better control the incidence of this important bacterium and use of molecular methods in detection of them, especially screening for *mecA* gene will provide some measures in control of hospital acquired infections.

**Keywords:** *Staphylococcus aureus*, Nasal carriage, Methicillin, Vancomycin.