

MOLECULAR STUDY OF PANTON-VALENTINE LEUKOCIDIN GENE AND MECA AMONG STAPHYLOCOCCUS AUREUS ISOLATED FROM HOSPITAL ACQUIRED INFECTIONS AND COMMUNITY ACQUIRED INFECTIONS

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In the present study, the aim was to define the prevalence of Pantone Valentine leukocidin gene and Meca genes among community acquired infection (CAI) and hospital acquired infections (HAI) due to S aureus strains. The study was performed on one hundred ninety six S aureus strains isolated from clinical samples from hospital acquired infections obtained from HAI or CAI. S aureus isolates were subjected to molecular study for Meca gene and PVL by multiplex polymerase chain reaction (multiplex-PCR). PVL gene was significantly detected in higher frequency in CAI (41.9%), $P=0.0001$ compared to HAI (16.1%). However, Meca gene was detected significantly in HAI (23.6%), $P=0.02$ compared to CAI (10.8%), The majority of MRSA strains had PVL gene (66.7%). The findings of the present study support the hypothesis that PVL gene was significantly associated with community acquired infections. However, the combined presence of Meca gene and PVL were also common in S aureus isolated from hospital acquired infections. PVL gene was prevalent in wound infections. Further studies are required to determine if PVL gene can be used as a distinctive marker of CAI infections in Egypt.

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