

## ABSTRACT

**TITLE OF THE STUDY:** Clinico-microbiological profile of *Staphylococcus aureus* pyodermas in Dermatology outpatients.

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**DEGREE AND SUBJECT:** (MD) (Dermatology, Venereology and Leprosy)

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**OBJECTIVES:** The study sought to evaluate the clinical and microbiological features of *Staphylococcus aureus*, isolated from outpatients presenting with pyodermas to the Dermatology outpatient department between July 2009 and July 2010.

**METHODS:** An open, prospective, cross-sectional study was carried out in the Department of Dermatology, Venereology and Leprosy, Christian Medical College and Hospital, Vellore from July 2009 to July 2010 for patients presenting with pyodermas. Pus cultures were obtained by standard methods and *S.aureus* isolates were further characterized for methicillin-susceptible(MSSA) and methicillin-resistant *S.aureus*(MRSA) phenotypically and genotypic characterization for presence of PVL was done by PCR. MRSA were further subclassified to community associated-MRSA(CA-MRSA) and hospital associated-MRSA, as per CDC criteria for clinicians.

**RESULTS:** 298 patients (184 males, 114 females) were enrolled into the study. *S.aureus* was the most commonly isolated organism 66.4% (198/298). Among all *S.aureus*, 27.3% (54/198) were MRSA. CA-MRSA accounted for 92.6% (50/54) of MRSA. Furuncles

(49.1%) and non-bullous impetigo (14.1%) were the most common presentations among primary pyodermas. Overcrowding, low socioeconomic status, exposure to two or more systemic antibiotics, prior exposure to  $\beta$ -lactam antibiotics or macrolides in the past 1 year and history of recurrent pyodermas or household clusters of infection was significantly associated with MRSA pyodermas. Clinical signs like surrounding erythema ( $p=0.015$ ), induration ( $p=0.009$ ), lymphangitis ( $p=0.001$ ) and fever ( $p<0.0001$ ) were significantly associated with MRSA. There was no significant association between MRSA and presence of PVL ( $p=0.174$ ). None of the HA-MRSA isolates were found to be positive for PVL carriage. Necrotic changes in primary pyodermas were found to be significantly associated with PVL ( $p=0.001$ ).