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## **High Prevalence of Community-Associated Methicillin-resistant *Staphylococcus aureus* Infections in patients admitted to District General Hospital-Matara**

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Methicillin-resistant *Staphylococcus aureus* (MRSA) shows resistance to most commonly used antibiotics. MRSA can be classified as community-associated (CA) or healthcare-associated (HA) based on epidemiological, genotypic, and antibiotic susceptibility patterns. This study aimed to investigate the prevalence and predominant MRSA types isolated among patients admitted to District General Hospital, Matara (DGHM). Consecutive *S. aureus* isolates were collected from August to November 2020 from the clinical microbiology laboratory of DGHM. All *S. aureus* and MRSA isolates were confirmed using standard microbiological methods. Sociodemographic and clinical data were collected from medical records. Based on the antibiotic profile, isolates were identified as HA-MRSA (often resistant to  $\beta$ -lactam antibiotics as well as erythromycin, clindamycin and fluoroquinolones) and CA-MRSA (often resistant only to  $\beta$ -lactam agents, erythromycin and occasionally to fluoroquinolones), as described by the Centers for Disease Control and Prevention, USA. A total of 103 *S. aureus* isolates were collected from the laboratory during the study period. The isolates were from 52 (50.5%) males and 80 (77.7%) adults ( $\geq 18$  years). Isolates were obtained from pus (75, 72.8%), blood (17, 16.5%), respiratory (6, 5.8%), sterile fluid (3, 2.9%) and urine (2, 1.9%) cultures. Of all *S. aureus*, 57 (55.34%) isolates were identified as MRSA mainly from pus (42, 73.68%) and blood (8, 14.04%). In all MRSA isolates, resistance to non- $\beta$ -lactam antibiotics were seen as 88% to erythromycin, 35% to clindamycin and 47% to ciprofloxacin. A total of 17 isolates showed resistance to all 3 antibiotics indicating, 29.8% of the MRSA as HA-MRSA and the rest as CA-MRSA (70.2%). The majority of *S. aureus* isolated from clinical cultures at DGHM during the study period were MRSA. CA-MRSA can be recognized as the predominant MRSA type. More robust analyses including epidemiological and molecular data are needed to confirm the leading MRSA types.

*Keywords: Antibiotic resistance, CA-MRSA, HA-MRSA, MRSA infection, Prevalence*