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## ***In-vitro* Sensitivities of Clinical Isolates of *Staphylococcus aureus* against Selected Cephalosporins**

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**Background:** *Staphylococcus aureus* continues to be a major cause of both community-acquired and health care-associated infections, including skin and skin structure infections, pneumonia, bacteraemia, endocarditis, osteomyelitis, prosthetic joint infections, and catheter-related infections. Cephalosporins are one of the most commonly used antibiotics in clinical practice due to their relatively safe and broad-spectrum activity against both Gram-positive and Gram-negative bacteria.

**Objectives:** To assess *in-vitro* sensitivities of control culture organism of *S. aureus* and clinical isolates of *S. aureus* against selected cephalosporins.

**Methods:** The control culture organism of *S. aureus* (ATCC 25923) and 48 clinical isolates of *S. aureus* from high vaginal swabs were sub-cultured on blood agar and antibiotic sensitivity tests were performed according to the CLSI guidelines and readings were taken after overnight incubation at 37°C.

**Results:** The control culture organism of *S. aureus* was sensitive to all cephalosporin antibiotics except cefuroxime. Among the clinical isolates of *S. aureus*, majority (33/48, 68.7%) were methicillin resistant and 31.3% (15/48) were methicillin sensitive. All isolates (15/15, 100%) of methicillin sensitive *S. aureus* (MSSA) and 18.2% of methicillin resistant *S. aureus* (MRSA) were sensitive to cefpodoxime. All clinical isolates (100%, 48/48) of MSSA and MRSA were resistant to cefuroxime. Majority of MRSA (69.7%) isolates have shown sensitivity to cefepime whereas only 15.1% of MRSA were sensitive to cephalixin. In comparison, an equal proportion of isolates of MSSA (93.3%) was sensitive to both cefepime and cephalixin. Out of all, the least percentage of MSSA (86.6%) was sensitive to cefotaxime.

**Conclusions:** Cefuroxime cannot be used as an antibiotic to treat *S. aureus* related infections. Majority of clinical isolates of *S. aureus* were methicillin resistant. As an empirical treatment, infections associated with MSSA may be treated with cefotaxime, cephalixin, cefepime and cefpodoxime except cefuroxime and those associated with MRSA may be treated with cefepime.

**Keywords:** *Cephalosporins, Empirical, In-vitro, MRSA, MSSA*