

**RISK FACTORS FOR METHICILLIN-RESISTANT  
*STAPHYLOCOCCUS AUREUS* INFECTION AT QUEEN SIRIKIT  
NATIONAL INSTITUTE OF CHILD HEALTH  
(EMPHASIS IN INSTRUMENTAL PROCEDURE)**

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ABSTRACT

This retrospective study was conducted at Queen Sirikit National Institute of Child Health by reviewing 274 medical records of pediatric patients from whom *Staphylococcus aureus* (*S. aureus*) was isolated from January 2002 to December 2003, to identify the ratio of MRSA and MSSA and the risk factors for methicillin-resistant *S. aureus* (MRSA) infection in children. The susceptibility patterns to the commonly used antibiotics were also reviewed.

General information of the patients as well as information about clinical specimens, site of infection, antibiotic sensitivity pattern, instrumentation procedures and surgical interventions were collected by pre-formed questionnaire.

It was found that age less than 1 year, presence of chronic or underlying disease, having instrumentation procedures and undergoing surgical interventions were significant risk factors for MRSA. The instrumentation procedures caused highest risk for MRSA isolation, with an odd ratio of 11 (95% CI 5.2-23.3). Nearly half of the patients with *S. aureus* infection (43.8%) had received instrumentation procedures.

In the hospital-acquired infections, MRSA was significantly associated with endotracheal intubation and vascular catheterization, with odds ratios of 3.3 (95% CI 1.0-10.9) and 8.3 (95%CI 9.0-36.5), respectively.

Both MRSA and MSSA were highly susceptible to vancomycin. Cotrimoxazole, erythromycin and gentamicin were effective only against MSSA. Both strains of *S. aureus* were resistant to penicillin G, implying that this drug has no place in the treatment of *S. aureus* infection.

KEY WORDS: *STAPHYLOCOCCUS AUREUS*/MRSA/ MSSA/ RISK FACTORS / CHILDREN/HOSPITAL-ACQUIRED/COMMUNITY ACQUIRED.

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