

Staphylococcus aureus carriage in selected kindergartens in Klang Valley

ABSTRACT

Introduction: Nasal colonisation of *S. aureus* in healthy children was 18% to 30%. One to three percent of them were colonised by Methicillin-resistant Staphylococcus aureus (MRSA). Although MRSA infection has become increasingly reported, population-based *S. aureus* and MRSA colonisation estimates are lacking. The main objective of this study was to determine the prevalence of *S. aureus* carriage among children.

Methods: Nasal samples for *S. aureus* culture were obtained from 250 children from three kindergartens in the Klang Valley, after consent was obtained from the children and their parents. Swabs were transported in Stuart medium, and inoculated on mannitol-salt agar within four hours of collection. Identification and disk diffusion test were done according to guidelines. Polymerase chain reaction was done on MRSA isolates for the presence of *mecA* and *lukS/FPV* genes.

Results: Overall prevalence of *S. aureus* and MRSA carriage were 19.2% (48/250) and 1.6% (4/250) respectively. *mecA* gene was present in all isolates, 50% isolates carried Panton-Valentine leucocidin (PVL) gene. Scmec type I was found in 2 isolates and the remaining isolates has Scmec type V.

Conclusion: The prevalence of *S. aureus* and MRSA carriage were similar to other studies. However, risk of contracting severe infection might be higher due to presence of PVL gene in half of the MRSA isolates.

Keyword: Children; Nasal colonisation; Staphylococcus aureus