Abstract

Objective, Determining the prevalence of nasal carriage of S. aureus, both sensitive to methicillin and resistant to it, in preschool children and evaluating the presence of Panton-Valentine leukocidin genes in the isolates. Methods, This was a cross-sectional study in which cultures from anterior nares were obtained from healthy preschool children. Isolates were identified as S. aureus based on morphological and biochemical tests. Antibiotic susceptibility profiles were determined by the disk diffusion method. All the isolates were further analyzed by multiplex PCR to determine the presence of mecA and PVL genes, methicillin-resistant isolates were also SCCmec typed by multiplex PCR. Results, Overall S. aureus nasal colonization prevalence was 38.5 % and 4.8 % for methicillin-resistant strains. All the methicillin-resistant isolates carried the genes for PVL, two isolates possessed the SCCmec type IV, two were SCCmec type I and one was SCCmec type II. Conclusion, This study revealed high PVL-positive, methicillin-resistant S. aureus colonization prevalence in healthy preschool children from Cartagena, which may play a key role in the epidemiology of community-associated infection by methicillin-resistant S. aureus in healthy children from this particular geographical area.

Keywords

Nasal carriage, Staphylococcus aureus, methicillin resistance, healthy children (source, MeSH, NLM).