

Genotypic and phenotypic characterization of *Staphylococcus aureus* in children from Northern Portugal

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An evaluation of the prevalence of *Staphylococcus aureus* carriage among healthy preschool children in the Northern region of Portugal is important for an understanding of the prevalence of and diseases caused by, Methicillin-resistant *S. aureus* (MRSA) to provide better diagnosis and treatment. Nasal swabs were collected from three- to six-year-old healthy children who were attending kindergarten. Of the 283 children, 135 *S. aureus* strains were identified, from which 15 were MRSA. Antimicrobial susceptibility testing revealed that all tested strains were sensitive to vancomycin, and susceptibility to ampicillin, chloramphenicol, erythromycin, gentamicin, nitrofurantoin, oxacillin, penicillin, rifampicin and tetracycline were determined to be 84.4, 2.2, 73.3, 1.5, 19, 6.7, 91.1, 2.2 and 34%, respectively. These results show that the carriage of MRSA in healthy preschool children exists without the typical risk factors and that continuing surveillance and development of new methods for identifying and diagnosing MRSA are needed.