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## Community-acquired methicillin-resistant *Staphylococcus aureus* can persist in the throat

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### Abstract

Colonization by *Staphylococcus aureus* is an important factor in infections caused by this microorganism. Among the colonization niches of staphylococci are the nose, skin, intestinal tract, and, recently, the throat has been given relevance. Infections caused by community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) can be fatal. Persistence of *S. aureus* is an important process in the pathogenesis of this microorganism and must be studied. The aim of this study was to determine the persistence of *S. aureus* in the throat, and characterized the strains. We studied the persistence of *S. aureus* for 6 years in the throat of apparently healthy people. The isolated strains from the persistent carriers were characterized through PFGE, *spa*-typing, SCC*mec* typing, resistance to methicillin, presence of virulence genes (adhesins and toxins), and the formation of biofilm. We found persistent and intermittent carriers of *S. aureus* in the throat, with methicillin-sensitive (MSSA), methicillin-resistant (MRSA) strains, and confirmed for the first time that CA-MRSA colonizes this niche. These strains can colonize persistently the throat for four years or more. Typification of strains through PFGE and *spa*-typing revealed that some carriers present the same strain, whereas others present different strains along the period of

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