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Determination of *Staphylococcus* species of dental plaque biofilms and their antibiotic susceptibility

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Dental plaque is the biofilm found naturally on teeth and it is the etiologic agent in dental caries and periodontal diseases. *Staphylococcus* spp. are not usually isolated from the oral cavity, and when this occurs, they are considered to belong to the transitory microbiota. Individuals with periodontal disease represent possible reservoirs of these opportunistic bacteria in the oral cavity. Patients with periodontal disease represent possible reservoirs of these opportunistic bacteria in the oral cavity. The aim of this study was to isolate and identify *Staphylococcus* spp. from dental plaque biofilm on the external surface of the teeth and determination of *Staphylococcus* spp. antibiotic susceptibility. After culture of the biological sample in brain heart infusion broth, *Staphylococcus* strains were isolated on blood agar plates (bioMérieux, Marcy l'Etoile, France) at 37°C in aerobic conditions for 24 h. Antibiotic resistance patterns of strains were determined by using agar disk diffusion method. Molecular characterization of isolated *Staphylococcus* spp. from dental plaque biofilm was performed using sequencing analysis of the 16S rRNA gene. Sequences were compared with NCBI GenBank entries using the BLAST algorithm (<http://www.ncbi.nlm.nih.gov/BLAST>). A total of 19 staphylococcal biofilm isolates comprising of various species from dental plaque samples were identified. *S. pasteuri* and *S. epidermidis* were found to be the most prevalent species. Analyzed isolates were resistant to 2 or 3 antimicrobials; a multi-drug resistant and methicillin-resistant isolate of *Staphylococcus* spp. was obtained.

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