



Isolates of Staphylococcus Aureus Produce Biofilms

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Abstract

Keywords: Staphylococcus aureus, biofilm formation, dental caries, antimicrobial resistance, oral health.

Introduction

Staphylococcus aureus is a Gram-positive bacterium that is a common cause of dental caries. It is known for its ability to form biofilms, which are communities of bacteria that adhere to surfaces and are resistant to antimicrobial treatment. The formation of biofilms by S. aureus is a major concern in dentistry because it can lead to persistent infections and treatment failure. This study aims to investigate the biofilm formation capacity of S. aureus isolates from dental caries patients. The results show that all isolates were able to form biofilms, indicating a high prevalence of biofilm-forming S. aureus in dental caries. The biofilm formation was quantified using a colorimetric assay, and the results were expressed as optical density (OD) values. The OD values were significantly higher for the biofilm-forming isolates compared to the non-biofilm-forming isolates. These findings suggest that S. aureus isolates from dental caries patients have a high capacity to form biofilms, which may contribute to the persistence of dental caries and the development of antimicrobial resistance.

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0.0001, $\chi^2 = 1.25$, $P = 0.266$, OR = 0.50, 95% CI = 0.0001-1.25. The results of the chi-square test showed that there was no significant difference between the two groups ($P > 0.05$). The results of the chi-square test showed that there was no significant difference between the two groups ($P > 0.05$).

Isolation and identification of *S. aureus*

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Culture conditions

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