



Relationship Between Streptococcus Mutants and Lactobacillus in Saliva with Tooth Decay in Children

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Citation:

Izanlou M, Saeedi Kia A. Relationship Between Streptococcus Mutans and Lactobacillus in Saliva with Tooth Decay in Children. *Iranian biomedical journal. Supplementary* (12-2024): 412.

ABSTRACT

Introduction: Tooth decay is one of the most common chronic infectious diseases in childhood, caused by many factors, including incorrect health habits, social factors, diet, and oral microbial flora. Streptococcus mutans and lactobacillus are microorganisms that play a role in causing tooth decay. The present study aimed to investigate the relationship between streptococcus mutans and lactobacillus in saliva and tooth decay in children.

Search Strategy: This study was conducted in 2024 as a review and through searching in databases such as Scopus, Google Scholar, SID, and PubMed. The search was conducted using the keywords “dental caries”, “streptococcus mutans”, “lactobacillus”, and their Latin equivalents based on MeSH. Then, related studies from 2008 to 2022 were identified after screening the title, abstract, and full text with the aid of the Strobe checklist. Among 24 studies, 11 studies were selected to announce the results.

Results: According to 11 articles, Pearson's correlation test showed a significant relationship between individuals' caries experience and the levels of streptococcus mutans; however, this relationship was not observed in the case of lactobacillus. The number of streptococcus mutans in children with dental caries has been found to be higher than that of other oral bacteria. It is important to note that some studies have overlapping findings.

Conclusion and Discussion: According to the findings of this study, as well as other research, and considering that Streptococcus mutans is the primary microbial agent responsible for tooth decay, it is recommended that fluoride mouthwashes be used in kindergartens. Schools should provide these mouthwashes to children to help prevent tooth decay. Additionally, health centers and schools should conduct annual tests at the beginning of each school year to measure the levels of Streptococcus mutans. If necessary, appropriate care programs should be implemented.

Keywords: Child, Lactobacillus, Streptococcus mutans