

Evaluation of the Effectiveness of Probiotic Mouthwashes in Reducing Cariogenic Bacteria and changes PH of saliva

Abdul Nasser H. Warwar, MSc(Oral Histology)* Mohammed I. Abdullah, MSc(Preventive Dentistry)** Wesam A. Sami, Masters(Dental Public Health)** Waleed Mohammed, PhD(Molecular Biology)***

ABSTRACT

Probiotic mouthwashes have shown promise in reducing cariogenic bacteria, through competitive inhibition and bacteriocin production. These mouthwashes contribute to oral health by improving salivary pH and reducing dental caries. The aim of this study is to evaluate the effectiveness of probiotic mouthwashes in reducing cariogenic bacteria. The study included a randomized controlled trial with two groups: a probiotic mouthwash and control group. Participants in the probiotic group used mouth wash containing *Lactobacillus rhammosus* daily for 3 weeks, while the control group used a placebo mouthwash. Saliva samples were collected at baseline, and after one week, two weeks, and three weeks to assess levels of *Streptococcus mutans* and *Lactobacilli*. Change in salivary pH were also measured to assess the oral environment. The probiotic mouthwash group showed significantly lower levels of *Streptococcus mutans* and *Lactobacilli* compared to the control group (65.9%, 66.7%) with a reduction in bacteria numbers at 3 weeks. In addition, the probiotic group showed a significant increase in salivary pH, reaching a mean value of 7.4. No significant adverse effects were reported and participants preferred the probiotic containing mouthwash for taste and convenience. The results refer that probiotic mouthwashes significantly reduce the bacterial load of cariogenic bacteria, *Streptococcus mutans* and *Lactobacilli* in the oral cavity

Keywords: Probiotic mouthwashes, Oral health product, Salivary pH, streptococcus mutans, Lactobacilli

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* Member of Teaching Staff at Department of Oral Histology
College of Dentistry, University of Anbar
AL- Ramadi city, Iraq.

** Member of Teaching Staff at Department of POP
College of Dentistry, University of Anbar
AL- Ramadi city, Iraq.

*** Member of Teaching Staff at Department of Basic Science
College of Dentistry, University of Anbar
AL- Ramadi city, Iraq.
Email: den.waleed.temem@uoanbar.edu.iq