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Effect of *Lactobacillus rhamnosus* LGG and *Bifidobacterium lactis* BB-12 on gingival health and dental plaque in adolescents: A randomized controlled clinical trial

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Aim: Probiotics are live microorganisms, mainly bacteria that have been investigated over the past decade for their health-promoting effects in human. Recently, there was an increased interest to explore their effects in the oral health field including dental caries and periodontal disease. Many types of probiotic bacteria are those that belong to the genera *Lactobacillus* and *Bifidobacterium*. The purpose of this study was to determine the effect of a probiotics combination (*Lactobacillus rhamnosus* GG, LGG, and *Bifidobacterium lactis* BB-12, BB-12) on dental plaque accumulation and gingival health in adolescents.

Methods: 108 school children, aged 13-15 years, participated in this double-blind, randomized and placebo controlled trial. They were divided into two groups: Probiotics (n=54) and placebo (n=54). Both groups received two lozenges twice a day during a four-week period. Plaque Index (PI) and Gingival Index (GI) were recorded at the baseline and after four weeks.

Results: 101 subjects completed the study. There was a significant reduction ($p<0.001$) in GI among the participants in both groups. However, the reduction was higher in probiotic group as compared to control group ($p=0.012$). No significant difference was found in PI between the groups ($p=0.819$). There was a significant positive correlation between decreased PI and GI scores in both groups.

Conclusion: The short-term daily consumption of LGG and BB-12 probiotic lozenges decreased the gingival inflammation in adolescents. Thus, it might be a suitable and simple adjunct to standard oral care for improving the gingival health.

Biography

Abrar Alanzi is a Specialist of Pediatric Dentistry and works as an Assistant Professor at Department of Preventive and Developmental Sciences, Kuwait University, Kuwait, where she has been since 2013. She completed her Post-graduate studies in Pediatric Dentistry and MS from University of Maryland Baltimore, Maryland, USA. She was a Clinical Instructor in Pediatric Dentistry at the University of Maryland Baltimore for the year 2011-2012. She is a board-certified by the American Board of Pediatric Dentistry and an active member of American Association of Pediatric Dentistry (AAPD), International Association of Pediatric Dentistry (IAPD), and International Association for Dental Research (IADR).

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