THE NUMBER OF STREPTOCOCCUS MUTANS COLONIES AFTER APPLICATION OF CHLORHEXIDINE, FLUORIDE, AND POVIDONE IODINE MOUTHWASHES IN CHILDREN AGED 6-12 YEARS

ABSTRACT

Background. Dental caries is one of the most prevalent infectious diseases and has a multifactorial etiology. Streptococcus mutans is one of the main etologies in resulting caries. Mouthwashes are believed to decrease the number of streptococcus mutans colonies, which can be used for the prevention of caries. Mouthwashes that contain sodium fluoride, chlorhexidine, and povidone iodine are frequently used in the market and have the ability as an antibacterial.

Purpose. The aim of this study is to find the most significant mouthwashes in decreasing the number of streptococcus mutans colonies.

Material and method. Fifteen samples were equally divided into three groups. Group A were instructed to rinse with 5ml of 0,2% chlorhexidine mouthwashes for one minute. Group B were instructed to rinse with 5ml of 0,2% sodium fluoride mouthwashes for one minute, Group C were instructed to rinse with 5ml of 1% povidone iodine mouthwashes for one minute. Salivary samples were collected before and after rinsing and cultured on TYC agar. The number of streptococcus mutans colonies were counted on agar medium. Kolmogrof-Smirnov Test conducted to determine normal distribution, followed by levene test and one-way ANOVA for further analyze. Results. There is significant difference between each group, p = 0.000 (p< 0.05). Conclusion. Sodium fluoride mouthwashes are more significant in reducing the number of streptococcus mutans colonies in saliva as compared to other mouthwashes.

Keywords: Mouthwashes, 0,2% chlorhexidine, 1% povidone iodine, 0,2% sodium fluoride, streptococcus mutans.