The Effect of Different Times Application of Chlorhexidine on the Microbial Plaque

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Abstract

Statement of Problem: Previous studies have reported possible counteraction between chlorhexidine (CHX) and sodium lauryl sulfate (SLS) in dentifrice. For the same reason, different times application of CHX has been advocated.

Purpose: The aim of this study was to compare four different measures of CHX application along with tooth brushing on the plaque control.

Methods and Material: The study was a single blinded, randomized 4cell, cross-over design. It used a four day plaque accumulation model to compare four different oral hygiene regimens with a wash out period of 7 days. Forty healthy volunteers were enrolled in the study and received thorough dental prophylaxis at the beginning of each 4 day of the test period. The regimens included the use of CHX mouth rinse before (Regimen A), immediately after (Regimen B), and 30 minutes after tooth brushing (Regimen C). Regimen D included only brushing with SLS-containing dentifrice. At the end of each 4 day of the testing period, the plaque was scored with Turesky index. No other oral hygiene measures were allowed. The difference between the groups was analyzed using repeated measure ANOVA.

Results: The overall indices of regimens A, B, C, and D were 0.90, 0.87, 0.83, and 0.96, respectively. There was no significant difference in plaque accumulation among the four regimens.

Conclusions: Within the limitations of the present study, it can be concluded that the anti-plaque efficacy of 0.2% CHX rinse was not reduced in combination of tooth brushing with SLS-containing dentifrice, and there was no significant difference between the four regimens.

Key words: Chlorhexidine, Microbial Plaque, dentifrice, Sodium Lauryl sulfate