

عنوان مقاله:

Comparison of traditional and novel remineralization agents : A laser fluorescence study

محل انتشار:

مجله بهداشت دهان و دندان و اپیدمیولوژی دهان و دندان, دوره 9, شماره 1 (سال: 1399)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

BACKGROUND AND AIM: The first clinical symptom of tooth decay is the appearance of a white spot lesion (WSL) on the tooth surface. This study is performed with the aim to evaluate the efficacy of six different remineralization agents in vitro with the DIAGNOdent laser fluorescence method. **METHODS:** In this study, 44 extracted, impacted human wisdom teeth (44 specimens) without caries were used to obtain standard demineralized enamel surfaces. The teeth were divided into eight groups consisting of two control (positive and negative) and six experimental groups [Fluoride (F) gel, casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) cream, CPPACP + F cream, NovaMin + F toothpaste, Xylitol-Hydroxyapatite + F cream, and Ozone + F]. De-/re-mineralization solutions were applied with a pH-cycle approach to areas of 3 × 3 mm on the buccal/lingual surfaces of the teeth for 9 days. The remineralization agents were applied to the demineralized areas and the samples were then kept in artificial saliva. The DIAGNOdent measurements were performed before and after the application of the remineralization agents. The Wilcoxon and Kruskal-Wallis tests were used for analysis of the data. **RESULTS:** The mean scores obtained after the DIAGNOdent measurements were 3.82 and 6.91 in the negative-control and positive-control groups, respectively. There were significant differences in the scores before and after the remineralization procedure in all experimental groups ($P < 0.05$). When the mean differences before and after treatment were compared between the groups, CPP-ACP + F provided significantly more remineralization than other experimental groups ($P < 0.05$). **CONCLUSION:** Remineralization of demineralized areas was achieved in all experimental groups. The highest degree of remineralization according to the DIAGNOdent scores before and after the procedure was observed in the CPP-ACP + F group.

کلمات کلیدی:

Tooth Remineralization, Lasers, Fluorescence, Xylitol, Ozone

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