

Visual evaluation of in vitro cariostatic effect of restorative materials associated with dentifrices**Badran Turki Alsufayan**

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This study evaluated in vitro the cariostatic effect of 6 restorative materials with and without fluoride release (Fuji II LC, F-2000, Degufil Mineral, Sure Fil and Z-250) associated with a fluoridated and a non-fluoridated dentifrice (Sensodyne Original Formula and Sensodyne Sodium Bicarbonate), on human enamel. Class V-like cavities were prepared on 240 enamel slabs, assigned to 12 groups (6 materials and 2 dentifrices). After cavity restoration, the slabs were submitted to a thermocycling regimen of 1000 thermal cycles and demineralization/remineralization cycles. During pH cycles, slurries of fluoridated and non-fluoridated dentifrices were applied for 5 min. Formation of artificial caries-like lesions was scored independently and blindly by 5 calibrated examiners according to an ordinal scale ranked 0 to 3 by visual examination. The results were analyzed statistically by the Kruskal-Wallis test and pair-wise comparisons ($\alpha=0.05$). There were no significant differences ($p>0.05$) among the restorative materials associated with the fluoridated dentifrice. When used in association with the non-fluoridated dentifrice, Ketac-Fil showed the highest cariostatic effect followed by Fuji II LC and the other materials. Ketac-Fil was the only material that did not differ statistically when combined with either the fluoridated or the non-fluoridated dentifrice. In conclusion, under the tested experimental conditions, the association of restorative materials and fluoridated dentifrice yielded higher cariostatic effect, except for the conventional glass ionomer cement, whose cariostatic effect was not influenced by the type of dentifrice.

Key Words: enamel, dental caries, diagnosis, glass ionomer cement, composite resin.

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