Brazilian Oral Research
Print version ISSN 1806-8324

Abstract

MAGALHAES, Ana Carolina et al. The influence of residual salivary fluoride from dentifrice on enamel erosion: an *in situ* study. *Braz. oral res.* [online]. 2008, vol.22, n.1, pp. 67-71. ISSN . doi: 10.1590/S1806-83242008000100012.

The objective of this study was to assess the salivary residual effect of fluoride dentifrice on human enamel subjected to an erosive challenge. This crossover *in situ* study was performed in two phases (A and B), involving ten volunteers. In each phase, they wore acrylic palatal appliances, each containing 3 human enamel blocks, during 7 days. The blocks were subjected to erosion by immersion of the appliances in a cola drink for 5 minutes, 4 times a day. Dentifrice was used to brush the volunteers teeth, 4 times a day, during 1 minute, before the appliance was replaced into the mouth. In phases A and B the dentifrices used had the same formulation, except for the absence (PD) or presence (FD) of fluoride, respectively. Enamel alterations were determined using profilometry, microhardness (%SMHC), acid- and alkali-soluble F analysis. The data were tested using ANOVA ($p < 0.05$). The concentrations (mean ?SD) of alkali- and acid-soluble F (礸F/cm? were, respectively, PD: 1.27??0.70/2.24^{A} ?0.36 and FD: 1.49??0.44/2.24^{A} ?0.67 ($p > 0.05$). The mean wear values (?SD, 衯) were PD: 3.63??1.54 and FD: 3.54??0.90 ($p > 0.05$). The mean %SMHC values (?SD) were PD: 89.63??4.73 and FD: 87.28??4.01 ($p > 0.05$). Thus, we concluded that the residual fluoride from the fluoride-containing dentifrice did not protect enamel against erosion.

Keywords : Tooth erosion; Dental enamel; Fluorine.

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Sociedade Brasileira de Pesquisa Odontol髆ica

Av. Lineu Prestes, 2227
Caixa Postal 8216
05508-900 S鋓 Paulo SP - Brazil
Tel./Fax: +55 11 3091-7810
e-Mail
bor@sbpqo.org.br