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Abstract

[AMARAL, M^{ica} Tostes](#); [GUEDES-PINTO, Ant^{io} Carlos](#) and [CHEVITARESE, Orlando](#). Effects of a glass-ionomer cement on the remineralization of occlusal caries: an *in situ* study. *Braz. oral res.* [online]. 2006, vol.20, n.2, pp. 91-96. ISSN 1806-8324. doi: 10.1590/S1806-83242006000200001.

This work evaluated the remineralization of demineralized enamel of pits and fissures of human third molars sealed with a glass ionomer cement (Fuji IX, GC Corporation - Japan) or with a Bis-GMA sealant (Delton - Dentsply). Ten volunteers participated in this *in situ* study that consisted of two thirty-day periods using intra-oral devices, with a weeks interval in between. Four experimental treatment procedures and one control were randomly assigned to the volunteers specimens: Group I, no treatment, control; Group II, artificial caries process; Group III, same treatment as Group II, but sealed with Delton (Dentsply); Group IV, same treatment as Group II, but sealed with Fuji IX (GC Corporation - Japan); Group V, same treatment as Group II and no sealing. Groups I and II were not submitted to the oral environment and served as controls. After a period of 30 days in the oral environment, the specimens were removed from the devices, embedded in acrylic resin, ground flat and polished. Then, Knoop hardness tests were performed, with a 25 g static load applied for 15 seconds. The measurements were made from the base of the fissure up to an opening of 600 μ m, pre-established between the inclines of the cusps. Three indentations were then made, located at 25, 75, and 125 μ m in depth from the outer enamel margin and 100 μ m apart from each other (Micromet 2003). The Brieger F and Bonferronis tests were applied to the measurements. It was concluded that sealing with the glass ionomer cement Fuji IX was capable of making the enamel of pits and fissures more resistant by increasing the value of Knoop hardness.

Keywords : Glass ionomer cements; Dental enamel; Hardness.

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