**Effect of dentin pre-treatment with Dolimite powder on demineralized dentine in deciduous molars**

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**ABSTRACT**

The objective of this study was to evaluate mineral alterations and repercussions on mechanical properties in sound and demineralized dentin of primary molars after treatment with powdered dolomite (DMT) followed by glass ionomer cement (GIC). Class I cavities were prepared in 32 decidous molars, divided into groups G1 (sound dentin) and G2 (demineralized dentin). The 16-tooth (G1DMT, G2DMT) received topical application of DMT and restoration of high viscosity GIC . The 16 teeth assigned to the groups (G1 and G2) were restored with GIC. The specimens were sliced and prepared for Knoop (KHN), Micro Raman and FEG microhardness analysis. The variables ( sound and demineralized dentin), treatment (without and with DMT) and interaction (dentin and treatment) were analyzed with factorial ANOVA and Bonferroni post-test at a significance level of 5% (α = 0.05 ). However, there was a significant difference in dentin interaction and treatment (p = 0.001). DMT associated with GIC determined improvement in the quality of the demineralized dentin substrate, with positive repercussions of the chemical-mechanical properties of the dentin.

Key words: Dental caries. Dentin. Tooth decay. Glass Ionomer Cement.

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