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Abstract

BONFANTE, Gerson; KAIZER, Osvaldo Bazzan; PEGORARO, Luiz Fernando and VALLE, Acc醓io Lins do. Tensile bond strength of glass fiber posts luted with different cements. *Braz. oral res.* [online]. 2007, vol.21, n.2, pp. 159-164. ISSN 1806-8324. doi: 10.1590/S1806-83242007000200011.

Proper selection of the luting agent is fundamental to avoid failure due to lack of retention in post-retained crowns. The objective of this study was to investigate the tensile bond strength and failure mode of glass fiber posts luted with different cements. Glass fiber posts were luted in 40 mandibular premolars, divided into 4 groups (n = 10): Group 1 - resin-modified glass ionomer RelyX Luting; Group 2 - resin-modified glass ionomer Fuji Plus; Group 3 - resin cement RelyX ARC; Group 4 - resin cement Enforce. Specimens were assessed by tensile strength testing and light microscopy analysis for observation of failure mode. The tensile bond strength values of each group were compared by ANOVA and Tukey test. The significance level was set at 5%. The failure modes were described as percentages. The following tensile strength values were obtained: Group 1 - 247.6 N; Group 2 - 256.7 N; Group 3 - 502.1 N; Group 4 - 477.3 N. There was no statistically significant difference between Groups 1 and 2 or between Groups 3 and 4, yet the resin cements presented significantly higher tensile bond strength values than those presented by the glass ionomer cements. Group 1 displayed 70% of cohesive failures, whereas Groups 2, 3 and 4 exhibited 70% to 80% of adhesive failures at the dentin-cement interface. We concluded that resin cements and glass ionomer cements are able to provide clinically sufficient retention of glass fiber posts, and that glass ionomer cements may be especially indicated when the application of adhesive techniques is difficult.

Keywords : Post and core technique; Tensile strength; Resin cements; Glass ionomer cements.

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