

ONLINE ISSN : 1881-1361 PRINT ISSN : 0287-4547

Dental Materials Journal Vol. 29 (2010), No. 3 p.286-296

[PDF (1996K)] [References]

## Comparison of micro push-out bond strengths of two fiber posts luted using simplified adhesive approaches

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(Received October 5, 2009) (Accepted January 12, 2010)

## Abstract:

By means of a micro push-out test, this study compared the bond strengths of two types of fiber-reinforced posts cemented with luting cements based on two currently available adhesive approaches as well as evaluated their failure modes. Sixty extracted single-rooted human maxillary central incisor and canine teeth were sectioned below the cementoenamel junction, and the roots were endodontically treated. Following standardized post space preparation, the roots were divided into two fiber post groups and then further into three subgroups of 10 specimens each according to the luting cements. A push-out test was performed to measure regional bond strengths, and the fracture modes were evaluated using a stereomicroscope. At the root section, there were no statistically significant differences (p>0.05) in push-out bond strength among the tested luting cements. Nevertheless, the push-out bond strength values of glass fiber-reinforced posts were higher than those of carbon fiber-reinforced posts, irrespective of the adhesive approach used. On failure mode, the predominant failure mode was adhesive failure between dentin and the luting cement.

## Key words:

Fiber-reinforced post, Luting cement, Push-out test

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To cite this article:

Emre MUMCU, Ugur ERDEMIR and Fulya Toksoy TOPCU. Comparison of micro pushout bond strengths of two fiber posts luted using simplified adhesive approaches . Dent. Mater. J. 2010; 29: 286-296 .

doi:10.4012/dmj.2009-089 JOI JST.JSTAGE/dmj/2009-089

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View "Advance Publication" version (May 20, 2010).

