

Results

Shear bond strength of group 1 (38,08 ±30,53 Mpa) was higher than group 2 (19,5±11,41 Mpa) but the differences weren't significantly different (p=0,21).

Conclusions

Adhesive application with Compothixo® did not improve the bond strength of composite to dentin.

- Oral Presentation 54

TITLE: Influence of cement and polymerization technique in post luting

AUTHORS: Montalvo Sánchez N, García Barbero AE, Vera González V, Aliaga Vera I.
SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S26.

* doi:10.4317/jced.17643838

<http://dx.doi.org/10.4317/jced.17643838>

Objectives

To evaluate the influence of cement type and polymerization technique on the push-out bond strength and microleakage of fiber posts.

Materials and Methods

32 human premolars were sectioned at the proximal cemento-enamel junction and endodontically treated employing Protaper rotary instruments. The root canals were obturated with gutta-percha cones using the lateral condensation technique and AH Plus sealer. Post space was prepared to a depth of 9 mm. Samples were divided into 4 groups according to the cement and the polymerization technique used: conventional dual resin cement, self-adhesive dual resin cement, immediate photocuring, and delayed photocuring. Each root were cut into 3 slices perpendicular to the long axis of the tooth. 20 specimens were subjected to micropush-out test and the remaining 12 were prepared to evaluate the microleakage. Complementarily, the samples subjected to microleakage test were observed by scanning electron microscope.

Results

Posts luted with self-adhesive resin cement produced lower bond strength and greater microleakage than those cemented with self etching adhesive and conventional resin cement. The polymerization techniques tested showed no differences in bond strength and microleakage. Root level affected the bond strength, with the lowest values for the apical third, but did not affect microleakage.

Conclusions

Self etching adhesive followed by conventional resin cement produced higher bond strength and lower microleakage than self-adhesive resin cement. Polymerization technique seems not to affect the variables studied.

- Oral Presentation 55

TITLE: An in-vitro microleakage study: A new "multimode" self-etch adhesive with enamel etching

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SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S26.

* doi:10.4317/jced.17643839

<http://dx.doi.org/10.4317/jced.17643839>

Objectives

The aim of this study was to evaluate the microleakage produced by a new all-in-one multimode self-etch adhesive on enamel and cementum by using a selective enamel etching.

Materials and Methods

A hundred and forty class V cavities were prepared with the occlusal margin in enamel and the gingival margin in dentin and restored with two different adhesives. The specimens were divided into two groups: Group 1) using Prime&Bond NT (Dentsply De Trey) with total etch technique; group 2) using Scotchbond Universal (3M ESPE) with selective enamel etching. After thermocycling process, the teeth were immersed in Indian ink during a period of 24 hours and cut longitudinally. Microleakage was evaluated in coronal and apical walls by optical microscope at 2,5x magnification. Data were statistically analyzed with the Chi-squared test (p<0.05).

Results

Enamel and cementum microleakage with Scotchbond Universal was higher than using Prime&Bond NT. At the enamel margin both adhesives showed less microleakage than in cement margin. The highest microleakage expression was found on cement when Scotchbond Universal was used.

Conclusions

Prime&Bond NT offers less microleakage level than Scotchbond Universal when used with selective enamel etching. More in-vitro microleakage studies are necessary.