

**Influence of type of luting cement used with all-ceramic crowns on load capability of post-restored endodontically treated maxillary central incisors.**

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Adhesive luting of the final restorations is supposed to support the overall strength of post-endodontically restored teeth. For evaluating adhesive vs conventional cementation, the load capability of adhesively restored endodontically treated teeth (ETT) with glass fibre-reinforced composite posts (GFRCP), resin composite cores and all-ceramic crowns was determined. Thirty-two caries-free human upper, central incisors were randomly assigned to four groups, endodontically treated and cut 2 mm above the cemento-enamel junction. All teeth were restored with GFRCP, composite core build-ups and all-ceramic crowns. All-ceramic crowns were cemented with zinc phosphate cement (I), glass ionomer cement (II), and a self-adhesive resin cement (III and IV). After thermo-mechanical loading, the specimens were loaded to fracture. Maximum load capability  $F(\max)$  and fracture patterns were compared using non-parametric statistics. Median values for the maximum load capability  $F(\max)$  (minimum/maximum) in [N] were: I = 503 (416/1,038), II = 442 (369/711), III = 502 (326/561) and IV = 518 (416/652). No statistically significant differences were found for  $F(\max)$  ( $p = 0.761$ ) and fracture patterns ( $p = 0.094$ ) between the experimental groups. The type of cementation of all-ceramic crowns, whether self-adhesive or conventional, appears to have no impact on the load capability of ETT restored with GFRCP and composite core build-ups.

PMID: 18040728 [PubMed - indexed for MEDLINE]