

A Comparative Evaluation of Fracture Resistance of Endodontically Treated Teeth Restored by Glass fibre Post System and Zirconia Post– An in vitro Study

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Abstract

Objectives: The purpose of this in vitro study was to evaluate the fracture resistance of endodontically treated teeth restored by different post systems. **Method:** 40 maxillary canines with anatomically similar root segments were taken and then decoronated at the cemento-enamel-junction. After establishing the working length 1mm short of the apex, the canal was prepared by crown down technique using rotary protaper followed by obturation. After 24 hours, post space preparation was done using Pecho reamer. All the specimens were then being divided into 2 groups {Group 1: Glass Fiber Posts, Group 2: Zirconia Posts}. The posts were then cemented into the tooth using a resin sealer and acrylic resin cylinders were obtained using cylindrical molds. Specimens were subjected to increasing compressive load (N) until fracture. **Results:** There was statistically significant differences were observed between the two groups and it indicated that Zirconia posts have the better fracture resistance capacity. **Conclusion:** Within the limitation of this study it is concluded that the Zirconia posts has the better fracture resistance than Glass fiber posts.