Comparing fracture resistance of two esthetic posts, zirconia coated fiber posts and glass fiber posts against compressive load

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Background & Aim: Despite the esthetic properties, lack of enough clinical studies on the fracture resistance of newly introduced esthetic post and core systems, has limited clinical use of these posts. The purpose of this study was to compare fracture resistance of zirconia coated fiber post and glass fiber at the department of prosthodontics of the Azad Dental University of Tehran.

Material & Method: In this in vitro Experimental study, a total of 20 recently extracted mandible premolars were selected, sectioned adjacent to the CEJ and endodontically treated. The specimens were randomly assigned to two groups (n=10) post spaces were prepared and the fiber DT Light posts (RTD France) and zirconia coated fiber posts (Ice Light Danvill) were stated respectively in 2 groups. All post was cemented with dual cure resin cement (Panavia F2.0, Japan) and dual cure resin bonding (Panavia F2.0 Japan) according to the manufactures directions. Composite resin (Lumiglass RTD, Japan) cores were builds up using a preformed polyester matrix. After fabricating the PDL using elastic polymers (Impergum / ESPE) the specimens were embedded in acrylic resin, then secured in a Universal Testing Machine. A compressive load was applied at the 90 degree angle until fracture occurred, at the cross speed of 1 mm/min. Data with analysis oneway analysis of variance (ANOVA) and T test 9 (p<0.05).

Result: Teeth restored D.Light resistance posts exhibited significantly higher resistance to fracture than the other group. Teeth restored with DT Light fiber posts and Ice Light post were statically similar (p<0.05).

Biography
Azadeh Abdollahi has completed his DMD from School of Dentistry of Islamic Azad University of Tehran, Iran School of Dentistry of Islamic Azad University of Tehran, Iran. She has four years of professional experience as a General Dentist and also she has more than six international lectures and presentations.

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