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# Retention of Fiber and Cast Posts with Different Lengths:A Comparative Study

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## Abstract:

Objective:

There is no definitive data on the strength of glass fiber and cast posts with different length. This *in vitro* study was designed to investigate and compare the effect of length on the retentive strength of glass fiber and cast posts.

Materials and Methods:

Sixty recently extracted intact maxillary canine teeth were cut 1mm above the CEJ. The specimens were endodontically treated and randomly divided into four groups (n=15). Specimens in groups FP(9) and FP (12) were prepared using Fiber post with 9 and 12 mm in length while groups CP(9) and CP(12) used cast post with 9 and 12mm length respectively. The force required to dislodge each post was recorded as retentive strength. Collected data were statistically analyzed using two-way ANOVA and post-hoc tests ($\alpha$=5%).

Results:

The mean retentive strength of groups FP(9), FP(12), CP(9) and CP(12) were 203.74 (SD=38.46), 324.54 (SD=42.92), 156.82 (SD=32.69), and 210.73 (SD=54.60) respectively.The results revealed a significant difference among retention values of tested groups, except for the FP(9) and CP(12) ($P<0.05$).

Conclusion:

Under the condition of this study, the retention of fiber posts was significantly more than cast posts with the same length. On the other hand, post length seems to have an impact on the retention of fiber and cast posts.

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