Prosthetic management of a patient with severe tooth loss with FRC post and core
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Abstract
An endodontically treated tooth sometimes needs support from the root canal by means of a root canal preparation and the fabrication of a post and core restoration. Recently, fiber-reinforced composite (FRC) root canal posts have been introduced as an alternative to the conventional materials. This article presents a case report of Prosthetic management of a patient with extensive tooth loss with FRC post & core with step by step procedure.

Key Words: Tooth loss; Post and core; Metal free ceramics

Introduction
Fiber-reinforced composite (FRC) root canal posts have been introduced to be used instead of metal alloys and ceramics. (1) The biomechanical properties of FRC posts have been reported to be close to those of dentin. (1,2) No post-associated failures during 3 years of follow-up were reported in a study where 236 endodontically treated teeth were restored using carbon/graphite fiber posts. (1,3) The failure rate using prefabricated metal posts was reported to be 8%. (1,4) This article presents a case report of Prosthetic management of a patient with extensive tooth loss with FRC post & core with step by step procedure.

Case Report
A 20 year old male reported with a complaint of fractured tooth in the upper anterior region from 2 months. He gave a history of trauma two months back and was associated with pain which subsided on taking medication. On clinical examination, the teeth was fractured in relation to 11, 12 (Ellis class II) which was non-tender and non-mobile. Radiological examination revealed root to be stronger.

A definitive treatment plan was made as follows: As the root structure was very strong with no peri-apical pathology, endodontic treatment of the residual teeth was planned. Canal preparation was done to receive posts (Figure 1a). During the canal preparation 4 mm of gutta percha retained to ensure apical seal. Canals were irrigated with saline and impressions of the post space were made with rubber base impression materials. From the cast post were prepared and cemented using the resin cements (Figure 1b-g). Impression for made on the cemented posts to receive the final restoration. Up on the cemented posts temporary crowns were given for one week. 11 & 12 were finally restored with the metal free ceramic crowns for excellent esthetics (Figure 1h). Patient was then recalled for regular visits to check for success of the restoration.

Discussion
The FRC glass fiber-reinforced composite posts have been commercially available since June 2001. (5) Excellent clinical experience has been gathered with these posts to date. (6) Three-year study reports attest to the clinical success of FRC. Nonetheless, FRC does not escape the typical disadvantage of composite posts, i.e. poor radiopacity. FRC Plus has been developed in an effort to overcome this disadvantage. (7)
The newly developed FRC Plus offers advantages like, natural aesthetics due to high translucency, cost effective, time saving, high retention in conjunction with proven adhesives and compatibility with the root structure due to dentin-like elasticity, for the restoration of teeth that demonstrate extensive damage.(8) This case demonstrates the use of FRC post and core to the crown to achieve a high degree of esthetics.

**Conclusion**

In conclusion FRC can be used by dentists for the rehabilitation of anterior teeth successfully.

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**References**


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