

Fiber Posts in Dentistry

Ratul Chatterjee*

BDS (Dr. R Ahmed Dental College and Hospital), West Bengal University of Health Sciences, India.

***Corresponding Author:** Ratul Chatterjee, BDS (Dr. R Ahmed Dental College and Hospital), West Bengal University of Health Sciences, India.

Received: February 22, 2022; **Published:** March 07, 2022

Introduction

Direct foundation restorations have been fairly successful in reducing invasiveness to a fairly significant extent. It is generally indicated in cases where a substantial amount of tissue exists at the periphery of the prepared tooth. By employing this technique, a prefabricated post is cemented inside the root canal, and the core is built directly on the prepared tooth.

The two main factors influencing a post selection are: Retention and Resistance.

While the Retention of a post refers to its ability to withstand vertical forces without fracture; Resistance on the other hand deals with its ability to resist lateral and rotational forces without fracture.

Resistance is influenced by certain parameters like- presence of a ferrule, length of the post along with its rigidity, presence/absence of anti rotational features, etc. Regardless of the post retention, a restoration without a proper resistance form is unlikely to be a long term success.

Different types of posts include prefabricated metallic posts, fiber posts, Zirconia posts.

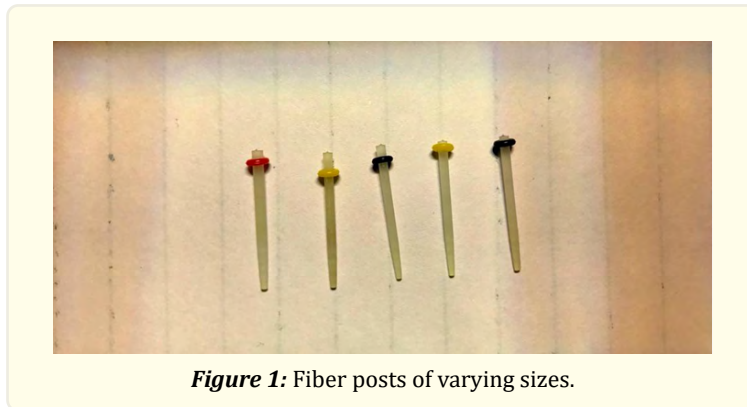


Figure 1: Fiber posts of varying sizes.

Case Presentation

A middle aged lady visited the clinic a few weeks back. She was reluctant and unwilling to smile because of the blackening of her upper anterior teeth (as seen in Fig-2). She was advised by her earlier dentists to get the anterior teeth extracted and go for implant prosthesis. But she was unwilling to get her teeth extracted. Hence the decision was taken to perform RCT followed by Fiber posts and then eventually full coverage zirconia crowns would be placed. RCT (Root Canal Treatment) was done in the right maxillary central incisor; the right maxillary lateral incisor; the right maxillary canine and the left maxillary lateral incisor (because the left maxillary lateral incisor was completely decayed on the palatal side that is not being visible in the Fig-2). After obturation, PeesoReamers (seen in

Fig-3) were used to remove Gutta Percha from the canals of right maxillary canine and the left lateral incisor. The gutta percha was removed in such a way that only 5-6mm of gutta percha was left in the canal apically. The peeso reamers were used cautiously to remove the gutta percha and enlarge the canals keeping in mind not to sacrifice any more of the remaining dentinal structure. The Fiber Optic light transmitting posts (as seen in Fig-1) of the desired size were selected. The posts were first coated with Te-EconomBond (Universal dental adhesive by Ivoclar Vivadent as seen in Fig-4) and then light cured for 10 seconds. Coltene SoloCem Dual Cure resin cement (as seen in Fig-4) was then placed inside the canals. The posts were also adhered with the Coltene resin cement prior to their placement inside the root canals. Fiber optic posts were then placed in the right maxillary canine and the left lateral incisor (that is visible in the IOPA, Fig-3) followed by light curing from all sides for 30 seconds. Full ceramic zirconia crowns were fabricated and cemented with Coltene dual cure resin cement. The patient was very happy with the final result (as seen in Fig-8) and she got her smile back again.

N.B-The IOPA posted here was during the master cone selection of the right maxillary central incisor after the completion of the RCT of the other 3 teeth and placement of fiber optic post but prior to final core build up.



Figure 2: Pre treatment photograph.

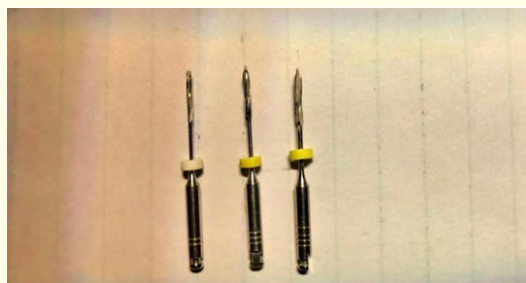


Figure 3: Peeso Reamers used for the removal of gutta percha.



Figure 4: Luting (as well as core build up) Cement and bonding agent used.



Figure 5: The IOPA posted here was during the master cone selection of the right maxillary central incisor after the completion of the RCT of the other 3 teeth and placement of fibre optic post but prior to final core build up.



Figure 6: Labial view of the full ceramic Zirconia crowns.



Figure 7: Lingual view of the full ceramic Zirconia crowns.



Figure 8: Post treatment photograph after crown cementations.



Figure 9: Final photograph of the patient comparing the pre and post treatment photographs.

Conclusion

Fiber posts play a very significant role in successful endodontic restorations of structurally compromised teeth. It has successfully helped to evade various cases where a few years ago extractions followed by prosthesis, may have been the only feasible choice or option. The use of fiber posts have now become a major part of successful endodontic restorations in structurally compromised anterior as well as posterior teeth. Besides, "Why sacrifice a tooth when you can save it!"

Volume 1 Issue 2 March 2022

© All rights are reserved by Ratul Chatterjee.