



# **FRACTURED FRAGMENT REATTACHMENT USING FIBRE POST**

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## **INTRODUCTION**

- Tooth trauma has been a common challenge for dental professionals because many different protocols for treatment are currently available.
- Coronal fractures of the anterior teeth often occur in children and adolescents, and the maxillary central incisors are the most often injured in accidents because of their vulnerable position in the mouth .
- In several countries, the treatment of traumatized teeth has been greatly neglected. However, their treatment is very important for maintaining the quality of life of teenagers and for avoiding other problems arising from long-term trauma.
- Tooth avulsion and coronal fractures with or without pulp exposure often characterize the trauma of maxillary incisors.
- The type of treatment depends on the biological tissues involved in the trauma.
- A conservative option of treatment for fractured incisors is reattachment of the tooth fragment when it is available.
- This technique offers some advantages over conventional prosthetic restorations.
- These advantages include the maintenance of the color and shape of the original tooth, psychological benefits to the patients, the conservative nature of the treatment, and the speed and feasibility of the technique.
- Furthermore, following the clinical and radiographic conditions of teeth with reattached fragment is crucial because some common pathologic changes may occur over time.
- These changes in injured teeth can include fragment detachment, discoloration, radiographic apical radiolucency, root resorption, and pulp canal obliteration
- Resin based restorative materials are frequently used in restoration of the fractured teeth. Because of the poor mechanical resistance of these materials, different approaches developed to strengthening resistance of composite resin such as fiber posts.



## Case of the Month – August 2018

- Tooth-colored fiber posts were introduced in the 1990's and have several advantages, such as esthetic, bond to tooth structure, have a modulus of elasticity similar to that of dentin, but still require dentin preparation to fit into the canal.
- Hence, the purpose of this report is to describe the reattachment of a crown fragment of anterior tooth using a fiber post.

### CASE REPORT

- A 37-year old male patient reported to outpatient department of Conservative Dentistry and Endodontics, AB SHETTY MEMORIAL INSTITUTE OF DENTAL SCIENCES with a chief complaint of coronal fracture of the left maxillary central incisor.



BUCCAL ASPECT



### PALATAL ASPECT

- The patient's medical history was unremarkable.
- Clinical and radiographic examination revealed that a horizontal fracture in the cervical region of the left maxillary incisor and was tender to percussion.
- The coronal fragment was mobile.
- On radiographic examination, the fracture line was at the level of the cemento-enamel junction .
- There was no sign of trauma to the adjacent teeth and showed positive response on pulp testing .



## Case of the Month – August 2018



**Preoperative radiograph**



Buccal aspect of the fragment



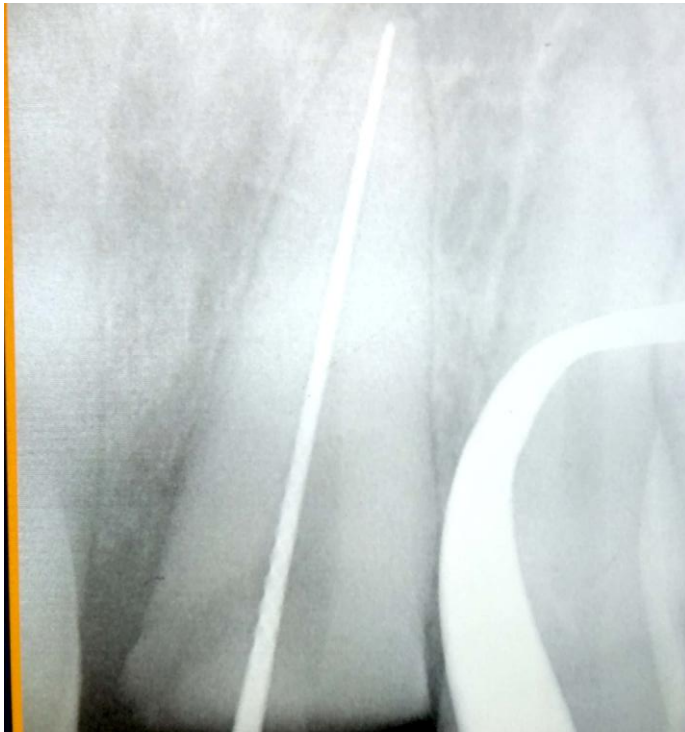
Palatal aspect of the fragment

### **TREATMENT PLANNING**

Endodontic treatment followed by reattachment of the tooth crown with using a fiber post.



## Case of the Month – August 2018

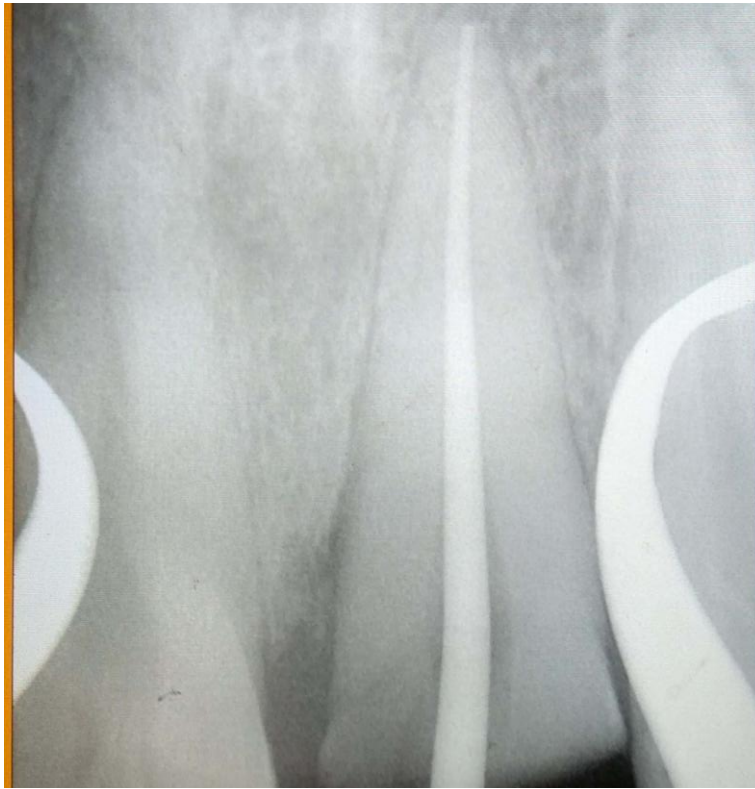


**WORKING LENGTH**

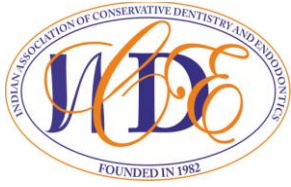




## Case of the Month – August 2018



**MASTER CONE**

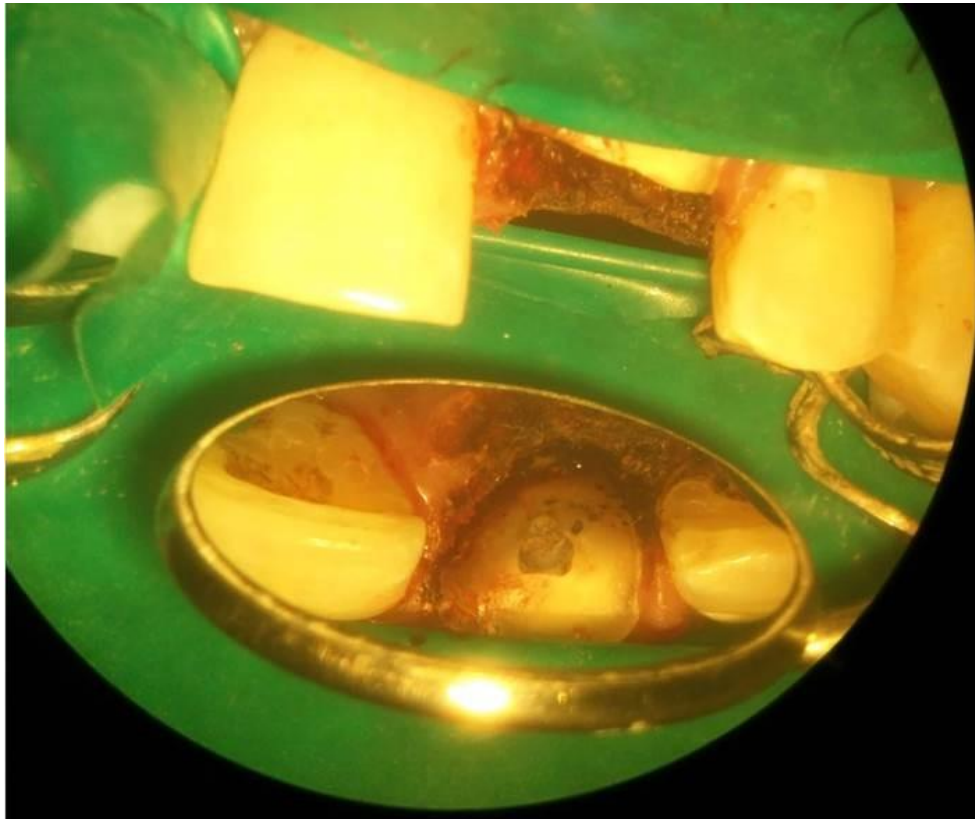


## Case of the Month – August 2018



**OBTURATION**





**GINGIVECTOMY OF THE PALATAL GINGIVA, USING DIODE LASER TECHNOLOGY TO ACHIEVE THE FERRULE**



**MINERAL TRIOXIDE AGGREGATE(MTA) APPLICATION**

**TO ACHIEVE FLUID FREE SEAL ON THE FERRULE PRESENT ON THE SUBGINGIVAL AREA**



## **Case of the Month – August 2018**

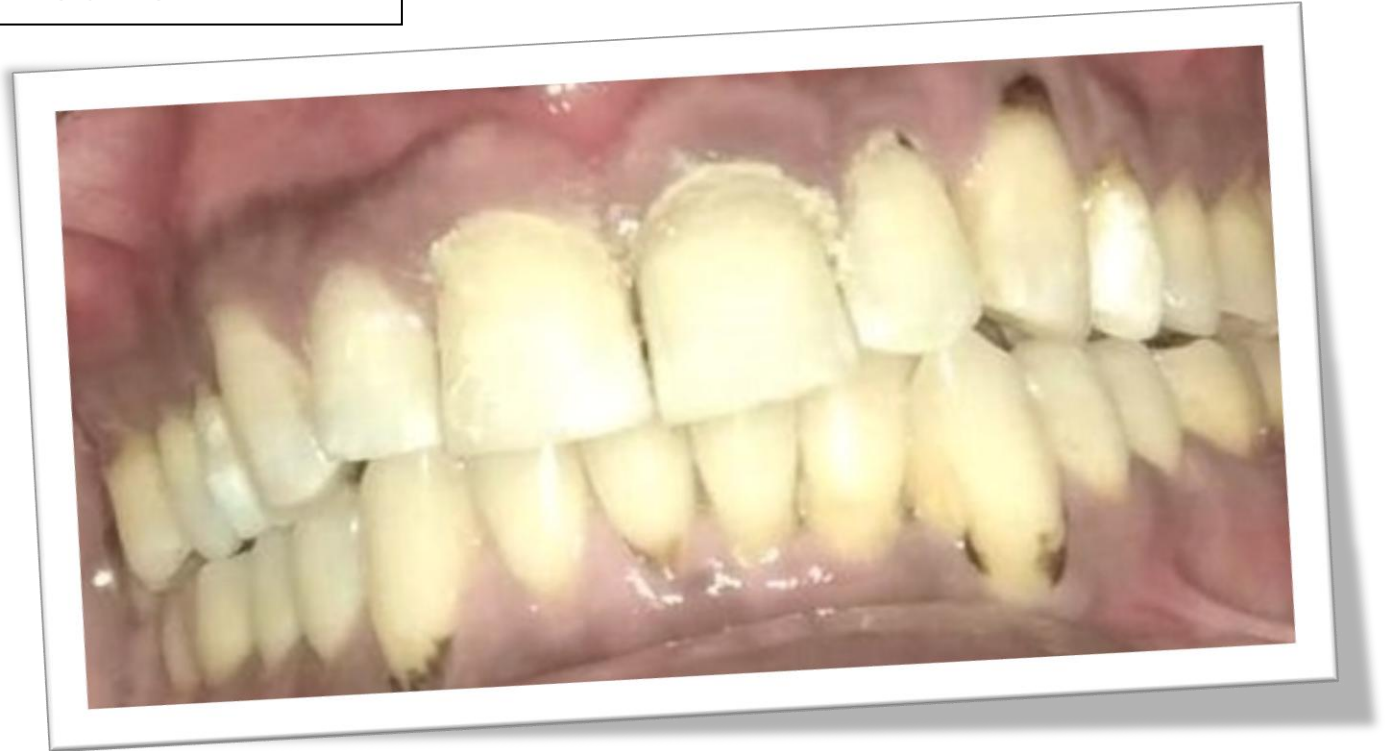


**POST OPERATIVE RADIOGRAPH**

**POST SPACE PREPARATION**

**FOLLOWED BY CEMENTATION OF FIBER REINFORCED COMPOSITE POST,  
FOLLOWED BY FRAGMENT REATTACHMENT**

**POST OPERATIVE**



**CONCLUSION**

- ✓ ultraconservative approach to preserve the fragment intraorally.
- ✓ Fiber reinforced resins allow not only creation esthetic restoration but also for the preservation and reinforcement to tooth structure.