

## Aesthetic Management Of Fractured Endodontically Treated Tooth - Case Report

### Abstract

Healthy oral cavity is primary requisite for beautiful looks. Aesthetic requirement of severely mutilated teeth has been a challenge to dentist. This paper presents endodontic treatment of grossly decayed tooth followed by the placement of a fibre-reinforced composite resin post. The crown reconstruction was done with full ceramic crown. Resin fibre post has best properties in elasticity, translucency, adaptability and resistance to traction.

### Key Words

Aesthetic restoration, Post and core, Fibre resin post

### Introduction

Aesthetic requirement of severely mutilated teeth has always been a challenge for a dentist. Endodontically treated teeth fractures more often than the vital teeth. Fracture occurrence is more in posterior teeth than anterior teeth as the masticatory forces are higher and teeth are weaker<sup>[1]</sup>. In cases where the teeth are severely decayed, endodontic treatment and placement of intracanal post or retainers become necessary before crown restoration. Posts maybe constructed of various materials including resins, composites, metals and biologic materials<sup>[2]</sup>. Recent years various types of fibre reinforcement have come into wide spread use as an alternative to cast or prefabricated metal posts in a restoration of endodontically treated teeth<sup>[3]</sup>. The advantages of using fibre post to construct an intracanal post include resin composite crown reinforcement, translucency, and relative ease of manipulation<sup>[4]</sup>. A post and core is a dental restoration used to sufficiently build up tooth structure for further restoration with a crown when there is not enough tooth structure to properly retain the crown due to loss of tooth structure to either decay or fracture. An anchor placed in the tooth root following a root canal to strengthen the tooth and help hold a crown in place<sup>[5]</sup>.

### Case Report

A male patient aged 48 years reported to the Department of Conservative and

Endodontics with fractured mandibular right first premolar tooth for which root canal was done one year back without post endodontic restoration. The treatment plan was divided into two steps;



Figure 1 : Crown fracture of 44

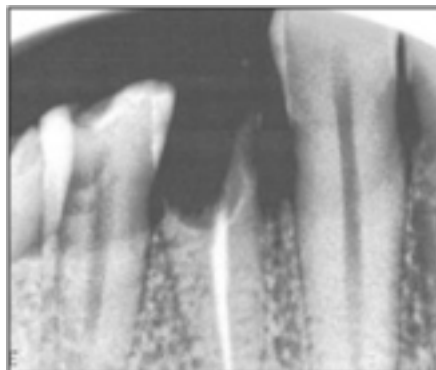


Figure 2 : IOPA of 44

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### Step 1:- Clinical Examination:

Crown fracture was seen with 44 (Fig1). IOPA were taken in relation to 44 (Fig2). On radiographic examination the obturation was found to be intact and as the tooth was asymptomatic.

### Step 2:- Construction of Restoration

On the basis of clinical and radiographic findings following treatment plan was made, restoration of the tooth with pre fabricated post, core build up and a porcelain jacket crown. For Post space preparation 4mm of guttapercha was removed from the pulp chamber using a thin straight fissure bur. Post space was prepared with size no.2 piezo reamer supplied by manufacturer. FRC post of sizes number 2 (TANEX- fibre trans esthetic post system, Coltene Whaledent, Fig 3) with its diameter 1.06 was selected. The prepared space was cleaned with normal saline, air dried and para bond non rinse conditioner (Fig 3) was applied with help of an applicator tip for

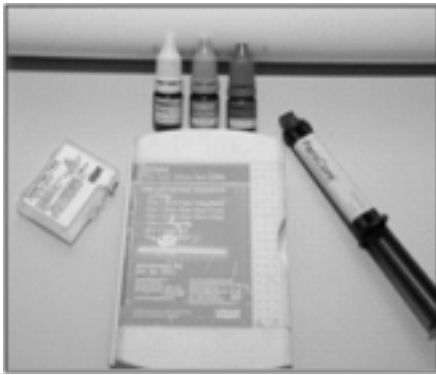


Figure 3 : Fibre esthetic post system

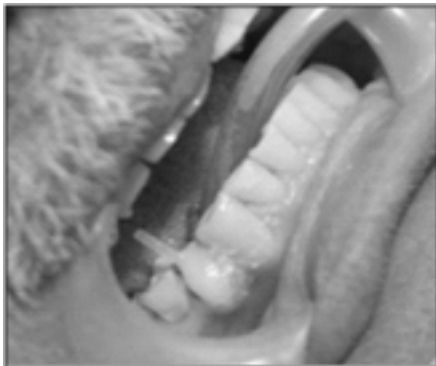


Figure 4 : Fibre post and composite were cured



Figure 5 : Crown preparation of 44



Figure 6 : Porcelain jacket crown cemented.

20 seconds. After that two drops of each para bond adhesive A and adhesive B (**fig 3**) were mixed in dispenser with help of applicator tip. It was uniformly applied in the prepared post space. It was then light cured for 20 seconds. Dual cure flowable composite resin cement (Para Core) was inserted into the post space after which the fibre post was inserted (**Fig 4**). The fibre post and composite were cured together for 60 seconds. The excess coronal portion of the fibre post was cut with the help of a diamond bur. Final finishing and polishing was done with finishing burs and crown preparation for porcelain jacket crown was done (**Fig 5**). The crown was finally cemented with tooth using GIC luting cement (**Fig 6**).

### Conclusion

If certain basic principles are followed in restoration of endodontically treated teeth, it is possible to achieve high levels of clinical success with. Therefore, restoration of teeth after endodontic treatment is becoming an integral part of restorative dentistry. The treatment described in case report is simple and effective and represents a promising alternative for rehabilitation of grossly destructed or fractured teeth.

### References

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