



**REMOVAL OF WHOLE PULP TISSUE: CASE REPORTS.**

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**ABSTRACT**

The success of the endodontic treatment lies in the total removal of the pulp from the pulp chamber and the pulp canals of the teeth, as it will facilitate the more easier chemomechanical debridement and complete obturation. There are very few case reports describing the techniques for the removal of the total pulp tissue in one shot. This article describes 2 case reports concerning the removal of the whole pulp tissue in teeth.

**KEYWORDS:** Endodontics, Pulp, pulpitis.

**INTRODUCTION**

Root canal treatment or pulpectomy is used in patients with symptoms of irreversible pulpitis, pulp necrosis with or without swelling.<sup>[1]</sup>

The treatment involves the removal of the pulp followed by the cleaning and shaping of the root canal system.<sup>[2]</sup> Each of these steps are important for the success of the root canal treatment. The removal of the pulp in total or whole can be beneficial in decreasing the failure of the endodontic treatment.

This article describes two case reports concerning the removal of the whole pulp tissue in teeth.

**CASE REPORT**

**Case 1**

A 56 year old female patient came with a complaint of pain in the maxillary right anterior region since 2 to 3 months. Radiographical examination showed deep proximal caries in the permanent maxillary canine of right side. (Fig. 1A) As the extension of the caries is near the pulp chamber, root canal treatment of the tooth was decided. The tooth was isolated with the help of rubber dam (Fig. 1B) and access cavity preparation was done. After getting access to the pulp chamber a 30 number H file was inserted carefully into the root canal and slightly rotated. After removal of the file from the root canal, the whole of the pulp was seen to be attached to the H file. (Fig. 1C) Then working length was determined, complete cleaning and shaping of the root canal was done and canal was obturated. (Fig. 1D)

**Case 2**

A 37 year old male patient came with a complaint of fractured tooth in the maxillary anterior region. IOPA shown fractured crown of the permanent maxillary left central incisor at the cervical level. (Fig. 2A) As the tooth was fractured at cervical level and the pulp of the tooth was exposed, endodontic treatment of the tooth was planned. The tooth was isolated using rubber dam (2B) and access cavity preparation was done. Then 20 numbered K file was inserted carefully into the root canal and slightly rotated. After removal of the file from the root canal, the whole of the pulp was seen to be attached to the H file. (Fig. 2C) Then working length was determined, thorough cleaning and shaping of the root canal was done and tooth was obturated. (2D).

In both patients, follow-up was done after 3 months, 6 months and 1 year and both the patients were free of any complaints.

**Figure legends**

**Fig.1**

- 1A: IOPA showing deep carious lesion.
- 1B: Isolation of the tooth using rubber dam.
- 1C: Removal of the pulp tissue in total using H file.
- 1D: Completely obturated root canal of tooth.

**Fig. 2**

- 2A: IOPA showing deep carious lesion.
- 2B: Isolation of the tooth using rubber dam.
- 2C: Removal of the pulp tissue in total using K file.
- 2D: Completely obturated root canal of tooth.

## Figures

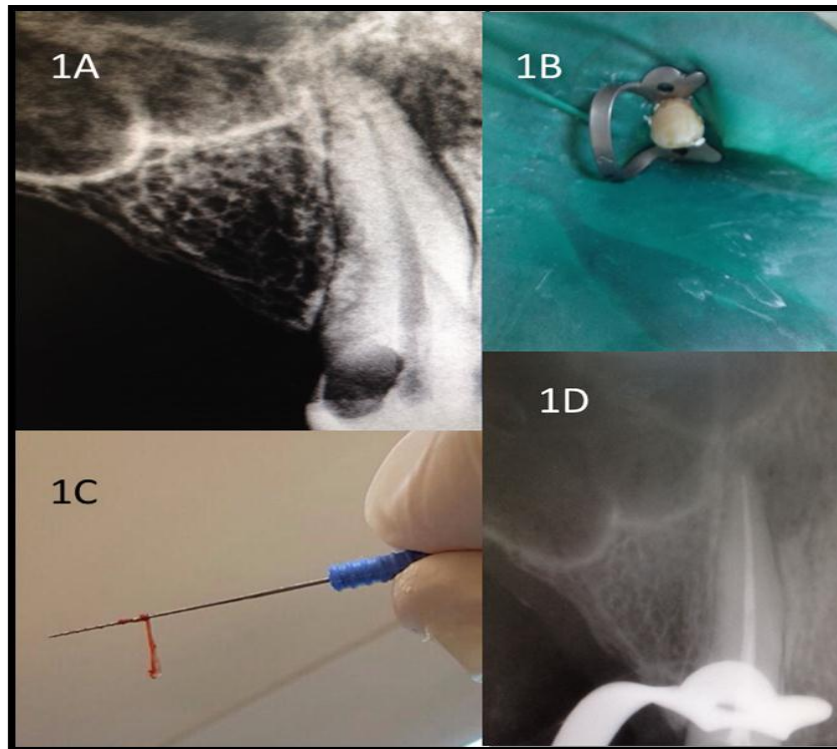


Fig. 1

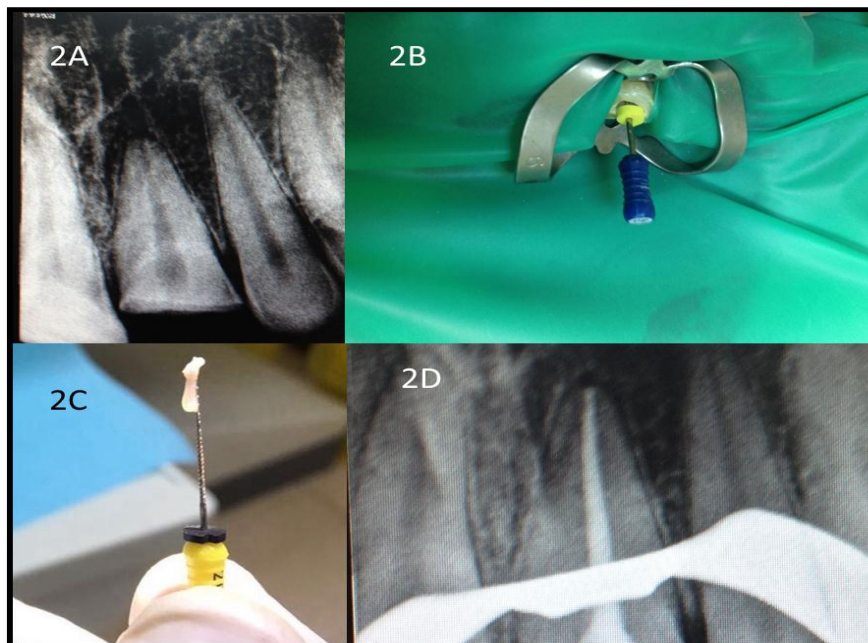


Fig. 2

**DISCUSSION**

In root canal treatment, this pulp tissue is removed and replaced by the guttapercha filling after cleaning and shaping of the root canal system.<sup>[3]</sup>

Preparation of the access cavity can be divided into the following four stages<sup>[4]</sup>

1. Pre-treatment assessment.
2. Tooth preparation for the root canal treatment.

3. Removal of the roof of the pulp chamber and removal of the pulp tissue.
4. Forming straight line access.

The pulp chamber and the root canals are the physical hollows present within the teeth and they are naturally inhabited by the blood vessels, nerve tissue and other cellular entities.<sup>[3]</sup>

Numerous researchers agree that total removal of the pulp tissue from the root canals of teeth cannot be achieved due to presence of complex and variable morphology.<sup>[3]</sup>

In the present cases we removed the total pulp from the teeth with the help of K or H file and done successful endodontic treatment.

Clinical studies showed increased incidence of the post-operative pain in patients with partial pulpectomy.<sup>[4]</sup> Extirpation of the pulp in whole or pulp extirpation is made to the apex of the tooth can be beneficial in patients undergoing root canal treatment as often less hemorrhage results.<sup>[5]</sup>

### CONCLUSION

This type of technique of removal of the pulp in total can be beneficial for the success of the endodontic treatment. Future studies consisting of total pulp removal in large number of cases should be done.

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