Endodontic Retreatment by Removal of Metallic Post: A Case Report

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Endodontic retreatment is considered a comprehensive field, divided into various categories such as coronal disassembly, removing obturation materials, locating previously missed canals, etc. This field of endodontics has its own technologies and techniques that are required to achieve clinical success. Because the field of non-surgical retreatment is comprehensive, this case report will limit its focus to the removal of the post. Removal of posts from endodontically treated teeth is a major obstacle in the retreatment of teeth having recurrent pathology, which often leads to the extraction of a tooth that might have been saved with endodontic retreatment. This case report shows the non-surgical endodontic retreatment of incompletely obturated maxillary central incisors by removal of metallic posts.

Keywords: Endodontic retreatment, Metallic post, Post, Post removal

INTRODUCTION

The incidence of the need for endodontic retreatment has been estimated at 8-15% of all endodontic procedures. The reason may be that new pathology has developed or the restoration has failed. In such type of cases, the ability to remove the existing post depends on the type of material from which it is made. Metal posts are difficult to remove because of the hardness of the alloy. It is common for clinicians to encounter endodontically treated teeth that contain posts. Frequently, when endodontic treatment is failing, there is a need to remove a post to facilitate successful non-surgical retreatment. In other instances, the endodontic treatment may be judged successful, but the restorative needs require the removal of an existing post to improve the design, mechanics, and esthetics of a new restoration.

CASE REPORT

A 18-year-old male patient reported with the chief complaint in the upper front tooth region of pain since 1 month.
by crown down technique using hand protaper file system. Then the canals were obturated (Figure 4). The endodontic retreatment was found successful, and the patient was asymptomatic.

**DISCUSSION**

Endodontic non-surgical retreatment is a comprehensive field and may be divided into the following categories: Coronal disassembly, locating previously missed canals, removing obturation materials, negotiating blocks, bypassing ledges, managing transportations, repairing perforations, treatment planning fractures, and removing posts and broken instruments.5

There are many factors that influence successful post removal such as operator judgment, training, experience, and utilizing the best technologies and techniques.5,6 Further, clinicians should have knowledge and respect for the anatomy of teeth and be familiar with the typical range of variation associated with each tooth type.7

It is important to know tooth morphology including the length, circumferential dimension, and curvature of any given root including if present, the depth of an external concavity. This information is best appreciated by obtaining three well angulated pre-operative radiographs. Films also assist the clinician in visualizing the length, diameter, and direction of the post and aid in determining if it extends coronally into the pulp chamber.8 Other factors influencing post removal are the post type and cementing agent.9,10 Posts can be cataloged into parallel versus tapered, active versus non-active, and metallic versus new non-metallic compositions.11

Posts retained with the classic cements like zinc phosphate can generally be removed; however, posts bonded into the root canal space with materials like composite resins or glass ionomers are often more difficult to remove.

In addition, other important factors that impact post removal are the available interocclusal space, existing restoration, and whether the coronal most aspect of the post is supra or subcrestal.

The transmetal bur is the bur of choice for cutting metal because the saw tooth configuration of its blades reduces unwanted vibration when cutting various types of precious and non-precious metals.

Surgical length, #2 and #4 carbide round burs provide extended reach which improves access and vision into the pulp chamber. Round burs efficiently remove dentin and the restorative materials that commonly entomb the head of a post.

In this case, two serrated metal posts were entangled in the dentin of the maxillary central incisors. Non-surgical treatment was planned as incomplete obturation was observed in maxillary central incisors.
CONCLUSION

The removal of the post is a simple procedure that can be accomplished when correct technique and instruments are used for post removal.

REFERENCES


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