

Nonsurgical Endodontic Retreatment: A Case of Dental Quackery

Rajendra Kumar Tewari, Surendra Kumar Mishra, Swati Sharma, Pankaj Kharade

ABSTRACT

Dental quackery is a common practice in India. The poor people who cannot afford for specialty dental treatment prefer to go to unregistered cheap dental practitioners. A case of self-styled fixation of traumatic maxillary anterior teeth reported in Department of Conservative Dentistry, Dental College, AMU, Aligarh and was treated successfully.

Keywords: Dental quackery, Iatrogenic, Nonsurgical endodontic retreatment, Untreated canal.

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INTRODUCTION

There are many causes of failure of initial endodontic therapy which have been described in the literature.¹ These include iatrogenic procedural error, untreated canal, canals that are poorly cleaned and obturated, complication of instrumentation (ledges, perforation, etc.) and overextension of root filling material and sometime by self-styled expert. Such 'failures' are most often caused by microorganisms that have either survived the conventional treatment procedures or invaded the root canal system at later stages via coronal leakage.² In order to combat the infection, the root canal has to be renegotiated using either an orthograde (nonsurgical retreatment) or a retrograde (surgical retreatment) route of entry. The selection of retreatment procedures primarily has to be based on case-specific factors, such as the technical quality of the root filling and the personal evaluation of risks and monetary costs.

The typical indication for nonsurgical retreatment is a case classified as a 'failure' in which the canals are poorly sealed. As soon as it is possible to improve on the quality of the previous instrumentation and obturation, the nonsurgical approach should be considered as the primary choice. In terms of objectives, there are no differences between the primary treatment of the infected root canal system and a retreatment, i.e. microorganisms should be eliminated and the space hermetically sealed with a biocompatible filling material. However, retreatment cases often are technically complicated and require high skill by the dentist. This case report describes a case of malpractice in dentistry and its retreatment nonsurgically.

CASE REPORT

A 38-year-old male reported to our Department of Conservative Dentistry and Endodontics, Dr ZA Dental College, AMU, with pain in upper left front teeth. Patient gave the history of trauma and then treatment in relation to left upper front teeth 2 years back. Patient also gave the history of swelling in relation to left upper front teeth few days before.

On clinical examination, maxillary left central incisor and lateral incisor were found to be discolored and fractured with self-styled prosthesis (Figs 1A and B).



Fig. 1A: Intraoral view from buccal aspect



Fig. 1B: Intraoral view from palatal aspect

On radiographic examination, single cone obturation and a radiopaque wire-like structure was found to be extending from maxillary left central incisor to lateral incisor, periapical pathology was also noticed in relation to maxillary left central incisor (Fig. 2).



Fig. 2: Preoperative IOPA view

Based on clinical and radiographic examination non-surgical endodontic retreatment was planned. Then, faulty prosthesis was removed using needle holder after cutting wire in the middle (Figs 3A and B).

Single cone of gutta percha was removed from the root canal of central incisor and lateral incisor using hedstrom file (Fig. 4).

Biomechanical preparation was performed using copious irrigation of sodium hypochlorite. Calcium hydroxide interappointment dressing was given and patient was recalled after 1 week. On second visit, patient was found to be asymptomatic. Endodontic treatment was then completed in relation to maxillary left central incisor and lateral incisor. After restoring the access cavity and fractured portion with



Fig. 3B: Intraoral view after faulty prosthesis removal



Fig. 4: Single GP cones removed

composite, crown cutting was done and then maxillary left central incisor and lateral incisor were esthetically restored with porcelain fused to metal full coverage restoration (Figs 5A and B). Patient was found to be asymptomatic on follow-up visits.

DISCUSSION

For successful endodontic treatment, thorough chemomechanical preparation followed by 3D obturation of the root canal system is required.^{3,4} Compromise at any of these steps can lead to the failure of the treatment. As in this case, both the teeth were obturated with single GP point thus, not achieving the objective of 3D obturation of root canal system. For such case, the nonsurgical approach should be considered as the primary choice. So, here non-surgical endodontic retreatment approach was opted to improve on the quality of the previous instrumentation and obturation. To gain access to root canal, the faulty prosthesis was first removed by cutting the wire in middle and using needle holder to retrieve the wire from the root canals.

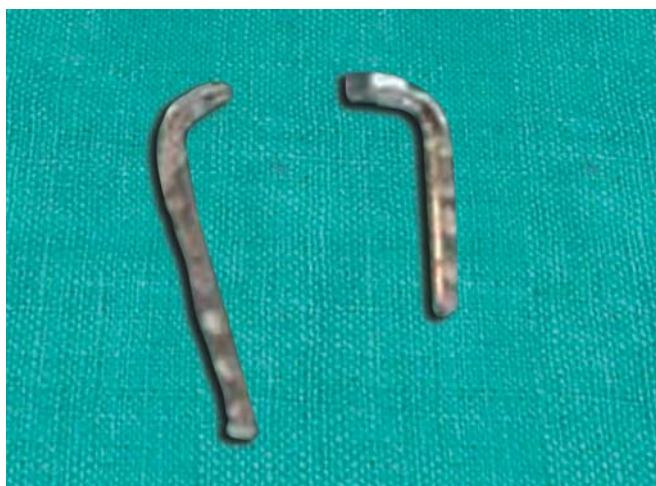


Fig. 3A: Faulty prosthesis



Fig. 5A: Postoperative X-ray



Fig. 5B: Postoperative intraoral view

In this case, GP solvent was not used because it was easy to remove the single cone using hedstrom file. Calcium hydroxide has long-acting antimicrobial and soft-tissue dissolving activity. It is a helpful adjunct in endodontic retreatment. So, interappointment dressing of calcium hydroxide was given to the patient for 1 week. Patient was found to be asymptomatic so, endodontic retreatment was completed on the second visit.

Coronal leakage is one of the another major causes for failure of endodontic treatment.^{5,6} In this case, the teeth were restored with faulty prosthesis resulting in coronal leakage which could be one of the reason for failure of initial treatment. To avoid coronal leakage, teeth should be permanently restored soon after the treatment to increase the chance of success. So, to achieve this objective, soon

after the retreatment, access cavity of maxillary left central and lateral incisor teeth was restored with composite restoration followed by esthetic restoration with porcelain fused to metal full coverage restoration.

CONCLUSION

Nonsurgical root canal retreatment is often the most appropriate means of treating failed root-filled teeth in the first instance and that teeth should be permanently restored soon after retreatment to increase the chance of success.

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ABOUT THE AUTHORS

Rajendra Kumar Tewari (Corresponding Author)

Professor, Department of Conservative Dentistry and Endodontics Ziauddin Ahmad Dental College, Aligarh Muslim University, Aligarh Uttar Pradesh, India, e-mail: rktaligarh@gmail.com

Surendra Kumar Mishra

Associate Professor, Department of Conservative Dentistry and Endodontics, Ziauddin Ahmad Dental College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

Swati Sharma

Junior Resident, Department of Conservative Dentistry and Endodontics, Ziauddin Ahmad Dental College, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

Pankaj Kharade

Junior Resident-3, Department of Prosthodontics, R Ahmed Dental College, Kolkata, West Bengal, India