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RESEARCH ARTICLE

ENDODONTIC MANAGEMENT OF GROSSLY MUTILATED TEETH- A CASE REPORT OF TWO CASES

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ABSTRACT

Aims and objectives Comprehensive treatment plan is required before the start of endodontic treatment. Grossly mutilated teeth pose assess problems and restorative boundaries. This paper includes two clinical cases which were reffered to department of conservative dentistry and endodontics. Endodontic treatment was achieved for the tooth and restorative management with composite buildup without post was planned and further porcelain fused to metal crown was given in both cases and futhur follow up was carried on for eight months in respective teeth. This paper describes a simpler, easily available and economic and yet effective alternative to the endodontic management and restorative rehabilitation of grossly mutilated teeth.

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INTRODUCTION

Comprehensive treatment plan is required before the start of endodontic treatment. When the decision is made to treat the teeth endodontically consideration must be given to the placement of the subsequent restoration. Posterior teeth are often mutilated due to caries and access requirement, sometimes to the extent that all the walls of coronal structure are missing and only the radicular portion is present. In this paper, we have described 2 clinical cases for the management of grossly carious teeth with broken/ lost two or more coronal walls which have been restored with proper endodontic treatment and restoration with porcelain fused metal crown without the use of post and core.

Case Report

CASE 1: A 35 year old female reported to department of Conservative dentistry and Endodontics, Daswani dental college, kota with the complaint of pain in the lower left posterior tooth region since 10 days. Clinical examination revealed a grossly carious and mutilated left mandibular first molar with pulpal exposure.

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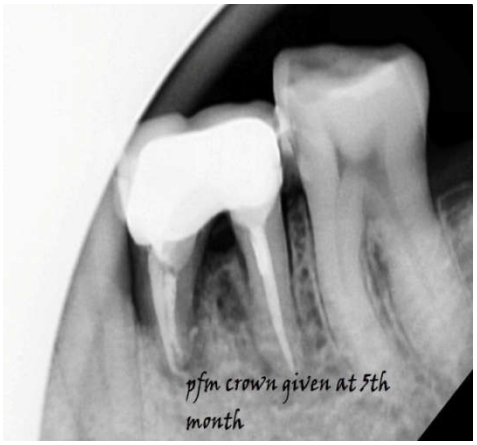
Radiograph revealed caries approaching pulp with excessive loss of tooth structure, complete loss of buccal wall anddistal wall with just remaining root stumps.

Access opening was done and pulp extirpated and glide path created using 15, 20 no. K files, orifices were enlarged using Sx file (hand protaper).The canals were cleaned and shaped using crown down technique using rotary files (20-4% taper).

The canals were obturated using cold lateral condensation of gutta-percha with resin-based root canal sealer. The canals were sealed off at the orifices.

Core build up was planned with glass ionomer cement (GC-high strength gic). After 4 months follow up porcelain fused metal crown was planned.



CASE 2: In this case report a 28 year old male reported to dental section with the complaint of pain in the lower right posterior tooth region since 1month. Clinical examination revealed a grossly carious right mandibular second molar with pulpal exposure. Vitality tests conducted on the tooth gave a lingering pain response. A diagnosis of irreversible pulpitis was established.

Preoperative radiograph

Access opening was done under local anesthetic cover, pulp extirpated and glide path created using 15, 20 no. K files, orifices were enlarged using Sx file (hand protaper).The canals were cleaned and shaped using crown down technique using rotary files (20-6% taper).The canals were obturated using cold lateral condensation of gutta-percha with resin-based root canal sealer. The canals were sealed off at the orifices.

Obturation done and metal coping for porcelain fused to metal crown trail

Composite core build up was planned and crown preparation for porcelain fused to metal crown was initiated.Finally after 3-4 days of crown preparation pfm crown was luted with GC luting cement.

Post obturation porcelain fused to metal crown given

DISCUSSION

Teeth that have been endodontically treated often have little coronal tooth tissue remaining and as such require a post to retain the core and restoration. It was thought that the dentin in endodontically treated was more brittle because of water loss (Helfer, 1972) and loss of collagen cross linking (Rivera, 1993). Huang et al. (1972), compared the physical and mechanical properties of dentin specimens from teeth with and without endodontic treatment at different levels of hydration. They concluded that neither dehydration nor endodontic treatment caused degradation of the physical or mechanical properties of dentin.

These and other studies support the interpretation that it is the loss of structural integrity associate with access preparation, that lead to a higher occurrence of fractures in endodontically treated teeth compared with "vital" teeth (Reeh, 1989). Access preparation results in increased cuspal deflection during function (Panitvisai, 1995) and increase the possibility of cusp fracture and micro leakage at the margins of restoration. Currently composite resin is most popular core material and has characteristics of an ideal buildup material. It has high tensile strength and the tooth can be prepared for a crown immediately after polymerization. Some authors showed that composite cores have fracture resistance comparable to amalgam and cast posts and cores (Pilo, 2002). It is tooth colored and can be used under translucent restorations without affecting the esthetic results.

Conclusion

Preservation of grossly destructed tooth by endodontic treatment is a universally preferred mode of treatment to tooth extraction and replacement with prosthesis. This clinical case describes a simpler, easily available and economical yet effective alternative to the endodontic management and restorative rehabilitation of grossly mutilated teeth.

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