

Case Report

Internal Resorption and Management with Thermoplastisized Obturation

Neelam Mittal, Vijay Prashar, Prasad Patel

Department of Conservative Dentistry and Endodontics, Faculty of Dental Science, IMS, BHU, Varanasi, Uttar Pradesh, India.

ABSTRACT:

Internal root resorption is uncommon and involve resorption defect of the pulp cavity resulting in loss of dental hard tissues. The prognosis for treatment of small lesions of internal resorption is good. However, if the tooth structure is greatly weakened and perforation has occurred, the prognosis is poor and tooth extraction must be considered. In this article we report a case of internal resorption in a 26-year-old male patient managed with endo-restorative procedure.

Key words: Root resorption, tooth resorption, trauma, pink tooth, obturation.

Received: 4 February, 2019

Revised: 25 February, 2019

Accepted: 26 February, 2019

Corresponding author: Dr. Prasad patel, Department of Conservative Dentistry and Endodontics, Faculty of Dental Science, IMS, BHU, Varanasi, Uttar Pradesh, India.

This article may be cited as: Mittal N, Prashar V, Patel P. Internal Resorption and Management with Thermoplastisized Obturation. J Adv Med Dent Scie Res 2019;7(3): 59-61.

INTRODUCTION:

According to American association of endodontics, resorption is defined as “a condition associated with either physiologic or a pathologic process resulting in loss of dentin, cementum or bone¹. Physiologic tooth resorption is a natural process during exfoliation of deciduous tooth, while pathologic process is seen in orthodontic movement, traumatic injuries, chronic infection of pulp and periodontal structure¹.

Root resorption can be external or internal. Internal root resorption is described as a resorptive defect within internal aspect of the root due to necrosis of odontoblasts resulting from chronic inflammation and bacterial invasion of the pulp tissue². Internal resorption is further classified as internal inflammatory resorption and internal replacement resorption. Complex interaction between inflammatory and resorbing cells and formation of multinucleated giant cells lead to resorption of internal root surface³.

It is a rare lesion with prevalence reported ranging from 0.01% to 1%⁴. Males are more affected than females and most commonly affected teeth are upper incisors⁵. Most cases of root resorption are asymptomatic, often detected as routine radiographic finding. However management of should be started as soon as possible to limit the progression of resorption.

The defect seen on radiograph is usually circumscribed and oval in shape. Clinically the tooth may be discoloured. Presence of “Pink spot” is also reported seen clinically over the crown of the affected tooth⁶.

This paper reports case of maxillary lateral incisor with internal resorption and its management with conventional nonsurgical endodontic therapy combined with calcium hydroxide medication, irrigation with ultrasonic (Endoactivator) and obturation with calcium hydroxide based sealer (sealapex) and thermoplasticised gutta-percha (BeeFill) with regular follow up for one year.

CASE REPORT:

A 26 year old Patient reported to department of conservative dentistry and endodontics with chief complain of recurrent pain since last 15 day with respect to upper front tooth. Patient also gave history of trauma to anterior teeth during childhood in a road accident. Clinical examination revealed discoloration with maxillary right central incisor. IOPA radiograph of 11 showed periapical radiolucency with 11 with apical third calcified and well defined ballooned out radiolucency in the root canal at middle third region with 12. Thus Root canal treatment (RCT) with themoplasticized obturation of the root canal was planned as a suitable treatment modality for lateral incisor and RCT For central incisor.



Figure 1: pre-operative IOPA



Figure 2: pre operative clinical view: discoloured central incisor



Figure 3: pre operative palatal view

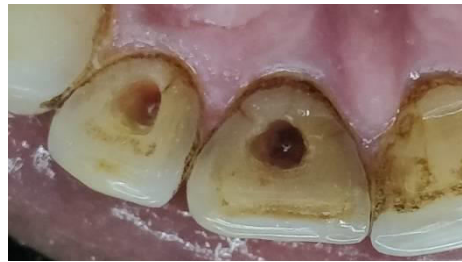


Figure 4: access opening: notice bleeding from 12 suggesting pulp is still vital with active resorption

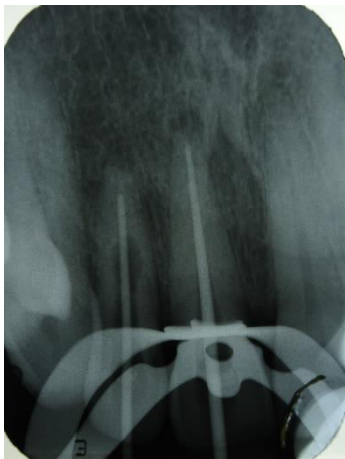


Figure 5: Working Length IOPA of 12 and negotiation of canal with 11



Figure 6: master cone IOPA



Figure 7: obturation of 12 with backfill technique and obturation with 11

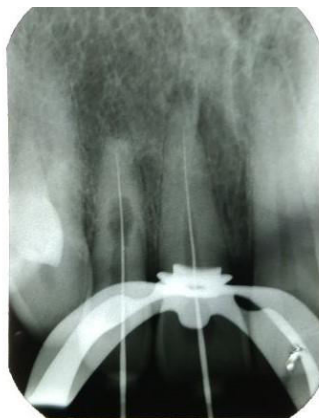


Figure 8 : follow up IOPA

Local anesthesia was administered and tooth was isolated using rubber dam. Access cavity preparation was done with tooth 11 and 12. Canal was negotiated with tooth 11 to its full working length. WL was determined using CanalPro apex locator (coltene) and confirmed with 20 no k file and IOPA radiograph. Mechanical preparation upto 55 no k file was done. More attention was kept on lateral filling to reduce the size of internal resorption defect. Due to presence of defect more attention was kept towards chemical disinfectant over mechanical. Canal was irrigated regularly during filing using 2% chlorhexidine solution and sodium hypochlorite activated with endoactivator (dentply). Final irrigation using 17% EDTA was done. After thorough cleaning and shaping, calcium hydroxide was placed as intra canal medicament and patient was recalled after one week. High ph of calcium hydroxide is known to limit the progression of resorption defect.

Canal was re-entered and irrigated to flush out calcium hydroxide from the canal and then obturated using downpack technique (beefill). IOPA radiograph was done to confirm the sealing of internal resorption defect. Cavity was then sealed with GIC and composite restoration. Patient was kept for follow up at 6 and 12 month. Patient was symptom free for the follow up visit.

REFERENCES:

1. Ne RF, Witherspoon DE, Gutmann JL. Tooth resorption. Quintessence Int. 1999 Jan;30(1):9-25. Review. PubMed PMID: 10323155.
2. Nilsson E, Bonte E, Bayet F, Lasfargues JJ. Management of internal root resorption on permanent teeth. Int J Dent 2013;2013:929486.
3. Patel S, Ricucci D, Durak C, Tay F. Internal root resorption: A review. J Endod. 2010;36:1107-21
4. Haapasalo M, Endal U. Internal inflammatory root resorption: the unknown resorption of the tooth. Endod Topics 2008;14:60-79.
5. Goultschn J, Nitzan D, Azaz B. Root resorption: review and discussion. Oral Surg Oral Med Oral Pathol 1982;54(5):586-90.
6. GS Heithersay: Management of tooth resorption. Aust Dent J. 2007;52(1 Suppl): S105-21.
7. Fachin EVF, Salles AA, Fachin GF. Reaction of the pulp tissue: co-occurrence of pulp stone and internal resorption. Rev Fac Odontol Porto Alegre. 2007 Jan;48(1):92-4.
8. Soares IJ, Goldberg F. Endodontia técnica e fundamentos. Porto Alegre: Artmed; 2001. p. 339-68.
9. Martos J, Silveira LFM, Souza JM, et al. Internal root resorption in the maxillary central incisor. Rev Sul-Bras Odontol 2010;7:239-43.
10. Ozdabak N, Akgul N, Karaoglanoglu S, et al. Pink spot in internal resorption (a case report). J Dent Fac Ataturk Uni 2011;4:99-102.
11. Araujo LCG, Lins CV, Lima GA, et al. Study of prevalence of internal resorption in periapical radiography of anterior permanent teeth. Int J Morphol 2009;27:227-30.

Source of support: Nil

Conflict of interest: None declared

This work is licensed under CC BY: **Creative Commons Attribution 3.0 License.**