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CASE REPORT

ENDODONTIC MANAGEMENT OF FOREIGN BODY IMPACTED IN A LARGE CARIOUS TOOTH: A CASE REPORT

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ABSTRACT

Finding a foreign body in the pulp chambers or root canal of a grossly carious tooth is uncommon and are diagnosed accidently during routine examination or when patient comes with any problem. It is quite challenging for the dentist to remove such foreign objects and treat the tooth successfully. Poking a tooth with foreign bodies can lead to accidental breakage of material within the tooth as we have seen in this case. Breakage of foreign material can also obstruct the path of endodontic instruments and can lead to compromised treatment conditions. Management of these kind of cases with foreign objects can be either to remove the foreign object from the tooth without compromising the tooth structure excessively or to bypass the obstruction and incorporate the foreign body within the obturating material. The following case report describes the non surgical endodontic management of foreign body impacted in a large carious tooth with a chronic apical periodontitis.

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INTRODUCTION

Presence of foreign bodies such as metal screws (Prabhakar *et al.,* 1986), staple pins (Aduri *et al.,* 2009; Macauliffe and Drage, 2005), darning needles (Nernst, 1972), pencil leads (Hall, 1969) and beads (Subba Reddy and Mehta, 1990) lodged in the pulp chambers or root canal of a grossly carious or traumatised teeth have been reported many times earlier. These types of cases are diagnosed accidently on routine examination when patient comes with a problem. It is quite challenging for the dentist to remove such foreign objects and treat the tooth successfully. Management of these kind of cases with foreign objects can be either to remove the foreign object from the tooth without compromising the tooth structure excessively or to bypass the obstruction and incorporate the foreign body within the obturating material (Friedman *et al.,* 1990). The following case describes the non surgical endodontic management of foreign body impacted in a large carious tooth with a chronic apical periodontitis.

CASE REPORT

A 15-year-old boy came with swelling in the upper front tooth region since 1 week when he poked the tooth with a ball pen and accidently tip of the ball pen left within the tooth.

Patient reported a history of trauma 4 years back while playing cricket. On clinical examination large carious lesion with Ellis class 3 fracture was found in relation to upper both central incisors along with a swelling in vestibular region. On pulp vitality testing both central incisors gave negative response. On taking intraoral periapical radiograph of the tooth a radiopaque object was noticed in the canal of left maxillary central incisor along with a periapical radiolucency in relation to both the central incisors (Figure 1). A diagnosis of acute exacerbation in chronic periapical abcess was made and the non surgical management was planned in both the central incisors. After administering local anaesthetic access cavity was made in both upper central incisors under rubber dam isolation. An ISO no. 10 K-file (Mani Inc., Japan) was used to bypass the foreign objects. A H-file(Mani Inc., Japan) was used to successfully retrieve the foreign body lodged within the tooth by pressing the file on foreign body and then pulling it out simultaneously (Figure 2,3). Copious irrigation with 5.2% Sodium hypochlorite (Neelkanth Health Care pvt ltd, Jodhpur) was done during the root canal treatment and retrieval of the foreign body. Calcium hydroxide was used as an intracanal medicament in between the appointments. Obturation was done using cold lateral condensation in upper right central incisor and segmental obturation was done by warm vertical condensation in upper left central incisor as custom fit fibre post was planned in upper left central incisor (Figure 4,5).

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The patient was recalled after six months and intraoral periapical radiograph showed resolution of periapical pathology and bony traberculae formation (Figure 6).

Figure 1. IOPA showing opaque substance lodged within the canal of maxillary left central incisor and Ellis class 3 fracture in relation to both upper central incisors alongwith periapical radiolucency)

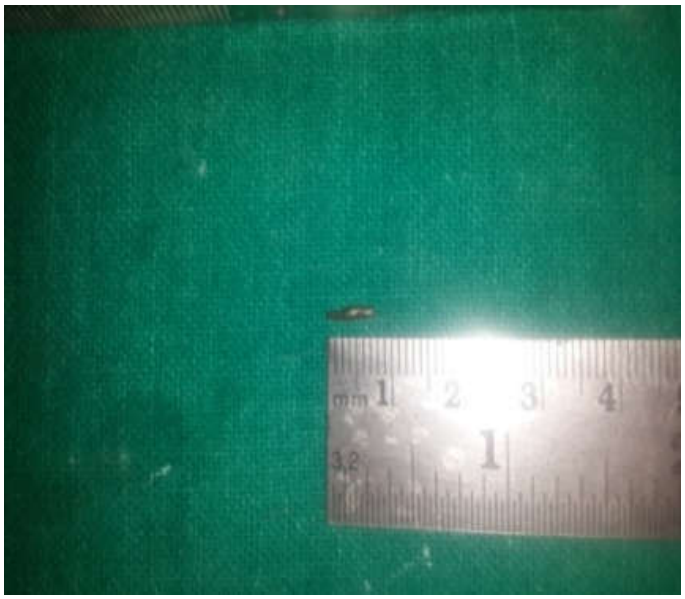

Figure 2. Retrieved Foreign Object (Ball Pen tip)

DISCUSSION

Habit of putting foreign bodies in the mouth can be very dangerous. It can lead to accidental ingestion and aspiration of foreign bodies which can be fatal.

Figure 3. Radiograph after removal of foreign body

Figure 4. Immediate post obturation

Poking a tooth with foreign bodies can lead to accidental breakage of material within the tooth as we have seen in this case. Breakage of foreign material can also obstruct the path of endodontic instruments and can lead to compromised treatment conditions. Cases of chronic maxillary sinusitis have been reported after the material present in canal is pushed beyond the tooth in the maxillary sinus (Costa *et al.,* 2006). Even Actinomycosis is found in a case where a piece of gold ornament is impacted in the tooth (Goldstein *et al.,* 1972). To locate a radio opaque foreign object various radiographic methods has been suggested such as Parallax views, vertex

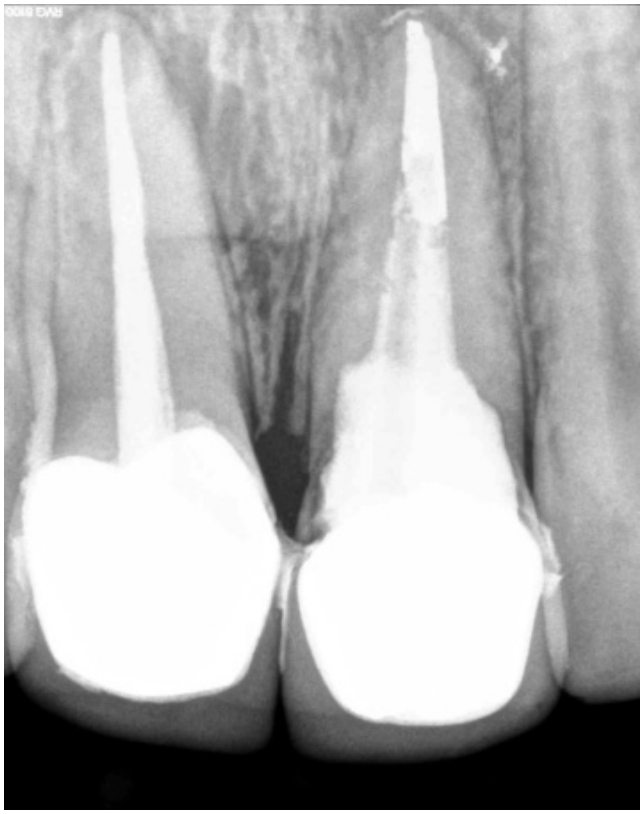

Figure 5. After cementation of crown

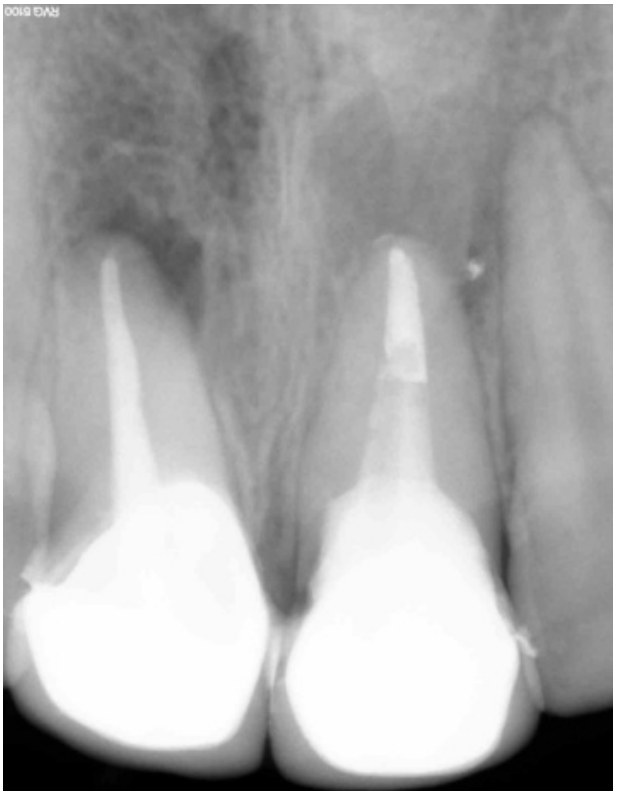

Figure 6. 6 months recall showing signs of healing

occlusal views, triangulation techniques, stereo radiography and tomography (Macauliffe *et al.,* 2005). CBCT is best for locating the position of foreign body. Retrieval of foreign object can be attempted using Masserann's kit (Williams and Bjorndal, 1983), Ultrasonic tips (Meidinger and Kabes, 1985), Stieglitz pliers (Lumley and Walmsley, 1990) and modified Castroviejo needle holders (Fros and Berg, 1983), tweezers, H-files etc. Ethylenediaminetetraacetic acid (EDTA) should be used as a lubricating agent in the canal all the time while removing the foreign object (Lumley and Walmsley, 1990). Sometimes removal of foreign object is difficult if it is present in the periapical area. In these types of cases Periradicular surgery and Intentional reimplantation has been successfully attempted (Srivastava and Vineeta, 2001).

Conclusion

In our case the treatment of the tooth in question is done successfully as we have seen with the follow up radiograph at the six months. However, it is not always possible for the clinician to treat the tooth effectively depending upon the point at which foreign body is present and several other complications which prevent proper cleaning and shaping of the tooth and further sealing of the radicular space with proper obturation. We may need to extract the tooth in some cases. So these types of cases require patience and proper care of the dentist as well as patients to avoid the surgical intervention or extraction.

REFERENCES

Prabhakar AR, Basappa N, Raju OS. 1998. Foreign body in a mandibular permanent molar: A case report. *J Ind Soc Pedod Prev Dent.,* 16:120-1.

Aduri R, Reddy RE, Kiran K. 2009. Foreign objects in teeth: Retrieval and management. *J Ind Soc Pedod Prev.,* 27:179-83.

Macauliffe N, Drage NA, Hunter B. 2005. Staple diet: A foreign body in a tooth. *Int J Paediatr Dent.,* 15:468-71.

Nernst H. 1972. Foreign body in the root canal. Quintessence, 23:26.

Hall JB. 1969. Endodontics - Patient performed. *J Dent Child,* 36:213-6.

Subba Reddy VV, Mehta DS. Beads, 1990. *Oral Surg Oral Med Oral Pathol.,* 69:769-70.

Friedman S, Stabholtz A, Tamse A. 1990. Endodontic retreatment-case selection and techniques: 3 retreatment techniques. *J Endod.,* 16:543-9.

Costa F, Robiomy M, Toro C, Sembronio S, Politi M. 2006. Endoscopically assisted procedure for the removal of a foreign body from the maxillary sinus and contemporary endodontic surgical treatment of the tooth. *Head Face Med,* 8:37.

Goldstein BH, Scuibba JJ, Laskin DM. 1972. Actinomycosis of the maxilla: A review of literature and report of a case. *J Oral Surg.,* 3:362–6.

Macauliffe N, Drage NA, Hunter B. 2005. Staple diet: A foreign body in a tooth. *Int J Paediatr Dent.,* 15:468-71.

Williams VD, Bjorndal AM. 1983. The Masserann technique for the removal of fractured posts in endodontically treated teeth. *J Prosthet Dent.,* 49:46-8.

Meidinger DL, Kabes BJ. 1985. Foreign object removal utilizing the cavi-endoultrasonic instrument. J Endod., 11: 301-4.

Lumley PJ, Walmsley AD. 1990. The removal of foreign objects from rootcanals. Dent update, 17:420-3.

Fros UG, Berg JO. 1983. A method for the removal of broken endodontic instruments from root canals. *J Endod.,* 9:156-9.

Srivastava N, Vineeta N. 2001. Foreign body in the periradicular area. *J Endod.,* 27:593–4.