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CASE STUDY

ASSOCIATION OF ODONTOMES WITH IMPACTED CANINE

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ABSTRACT

In this paper a case of compound odontome is reported wherein it was associated with an impacted canine in the left anterior maxilla region. An 18 year old female came to the Department of Oral and Maxillofacial Surgery of K D Dental College, Mathura with a chief complaint of swelling and dull pain in the upper left front tooth region since one month. The compound odontome was surgically removed along with left impacted canine and the patient was followed up for 3 months.

INTRODUCTION

Odontomas generally appear as small, solitary or multiple radio-opaque lesions found on routine radiographic examinations. Odontomas are classified as benign odontogenic tumors and are subdivided into complex or compound odontomas morphologically. Compound odontomas commonly occur in the incisor-canine region of the maxilla and complex odontomas are frequently located in the premolar and molar region of both jaws (Yildirimet al., 2007). Odontomas are developmental anomalies resulting from the growth of completely differentiated epithelial and mesenchymal cells which give rise to functional ameloblast and odontoblast (Kramaret al., 1992). Odontomas are classified as benign odontogenic tumors and are subdivided into complex or compound odontomas morphologically (Stajcic, 1988). Compound odontomas commonly occur in the incisor-canine region of the maxilla and complex odontomas are frequently located in the premolar and molar region of both jaws (Snawder, 1974). In general, odontomas occur more often in the permanent dentition and are very rarely associated with the primary teeth. (De Oliveira et al., 2001; Litsas, 2011) Maxillary canines are the most commonly impacted teeth,

second only to third molars (Bishara, 1992). Maxillary canine impaction occurs in approximately 2% of the population and is twice common in females as compared to males. The incidence of canine impaction in the maxilla is more than twice than in the mandible. Among all patients who have impacted maxillary canines, 8% have bilateral impactions (Ericson and Kurol, 1988). Approximately one-third of impacted maxillary canines are located labially and two-thirds are located palatally (Mitchell, 2007).

Case report

An 18 year old patient came to the Department of Oral and Maxillofacial Surgery of K D Dental College, Mathura with the chief complaint of swelling and dull pain at the upper left front tooth region since one month. Extraoral examination revealed a slight facial asymmetry with mild swelling in left infraorbital region (Fig.1). On palpation the swelling was hard in consistency with tender on palpation. On intraoral examination there was a mild obliteration of upper left labial sulcus with tenderness (Fig.2). Radiographic examination revealed an impacted canine with multiple radio-opaque lesions in premolar region (Fig. 3) (Fig. 4). A degloving incision (Fig. 5) was given at upper left labial sulcus extending from the central incisor to first molar region. Blunt dissection was done till the lesion and impacted canine was exposed with periosteal

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elevator (Fig. 6). Bone guttering was done to detach the canine and lesion from the surrounding bone under copious saline irrigation (Fig. 7). Retrieval of the impacted canine and odontome was done (Fig. 8) (Fig. 9).



Fig.1. Facial profile



Fig.2. Intraoral view

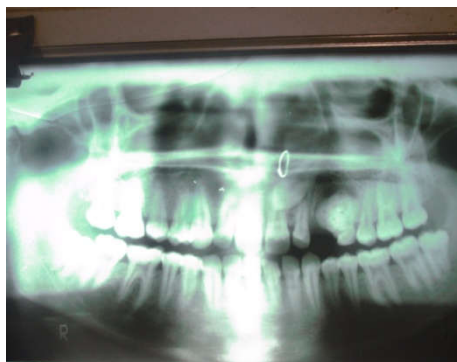


Fig.3. Orthopantomogram



Fig.4. Occlusal View



Fig.5. Incision given



Fig.6. Dissection and exposure done



Fig.7. Bone guttering done under saline irrigation



Fig.8. Retrieval of impacted canine

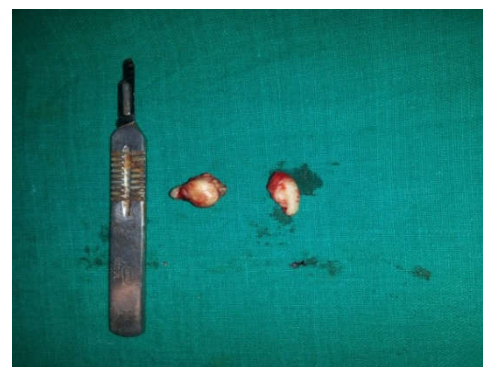


Fig.9. Harvested canine and odontome



Fig.10. Suturing done

The surgical site was then sutured with the help of 3-0 mersilk sutures (Fig. 10). The patient was then followed up for the next 3 months for any surgical complications.

DISCUSSION

The term "odontoma" was coined by Paul Broca in 1867 (Sreedharan and Krishnan, 2012). Odontomas are relatively common, asymptomatic odontogenic lesions, rarely diagnosed before the second decade of life. The most frequent clinical signs are delayed eruption, and the presence of a tumor (Hidalgo-Sánchez *et al.*, 2008; Waldron, 2002). Odontomas are the most common odontogenic tumours. They are considered to be hamartomas rather than neoplasms and are composed of the tissues native to teeth: enamel, dentin, cementum and pulp tissue. They develop from epithelial and mesenchymal components of the dental apparatus, producing enamel and dentin. They can occur at any age, but are most common in the first two decades of life, with an average age of 14–18 years. Dentists often encounter the problem of impacted teeth. However, these are mainly permanent teeth and rarely primary teeth. "Tooth impaction" refers to situations where failure to erupt appears to be due to a mechanical blocking and the tooth remains unerupted beyond the normal time of eruption. The condition is caused by systemic or local etiologic factors (Otsuka *et al.*, 2001). Factors contributing to impaction include developmental anomalies such as malposition, dilaceration, ankylosis, tumours, odontoma, dentigerous cysts, presence of supernumerary teeth and systemic-genetic inter-relation such as cleidocranial dysostosis and hypopituitarism (Motokawa *et al.*, 1990). Impaction of an anterior primary tooth is very rare. When it occurs it is most often associated with the presence of a supernumerary tooth or odontoma (Brunetto *et al.*, 1991). Differential diagnosis must be established with ameloblastic fibroma, ameloblastic fibroodontoma, and odontameloblastoma.

Conclusion

Variations in the normal eruption of teeth are a common finding. If deviations are seen in the eruption of teeth then established norms should alert the clinician to further investigate the patient's health and development. A radiographic examination should be performed

for any pediatric patient who presents with clinical evidence of delayed permanent tooth eruption or temporary tooth displacement or retained deciduous teeth with or without a history of previous dental trauma. Early diagnosis facilitates the clinician to adopt a simpler and less complex approach of treatment and ensures better prognosis for the condition. Low frequency of this lesion and most of the cases are surgically removed, so it requires a proper close follow-up.

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