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Trismus- Secondary to Impacted Colossal Complex Odontome

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ABSTRACT
Odontomas are the most common odontogenic tumours which are ectomesenchymal in origin. They are composed of enamel, dentin, pulp and at times cementum also. They develop from the ameloblasts and odontoblasts respectively. There is no gender predilection and is often asymtomatic. They are inadvertently detected in the routine radiographic examination. They are commonly associated with the permanent dentition and also leads to the delayed eruption of the involved tooth. Sometimes they may perforate the mucosa and manifest with the oral infections. Odontomas are atypical, and hence very few cases of complex odontomas have been charted in the literature. Here, we present the case of a 25 year old male patient with an exceptionally large, painless complex odontoma in the right posterior mandible.

Key Words: Odontomas, Odontogenic, Hamartoma, Trismus.

I. INTRODUCTION

[1]Pierre Paul Broca in 1867 was first to coin the term odontoma. Odontomas by itself attribute to any tumour of odontogenic origin. Odontomas represent about 22% of all odontogenic tumours of the oral cavity. [2]Odontomas are commonly evident in the second decade of life, with no gender predilection.[3]Although not associated with any etiological factor but can be integrated with trauma, local infection, impacted tooth, family history and genetic mutation.[4]The first internationally accepted classification system for odontogenic tumours was proposed by World Health Organisation in 1971. According to the classification odontomas can be of two types: Compound Odontoma and Complex Odontoma.

The complex odontoma is a hamartomatousodontogenic tumour of ectomesenchymal origin.The complex odontoma reveals proper differentiation of all the dental tissues but in disorganized pattern. [3]The eruption of this lesion is different from the tooth eruption as it has no periodontal ligament.[4]They are generally asymtomatic, non-aggressive, rare and show cortical expansion with a potential to cause pathological bone fracture.[3]They are usually revealed during routine radiographic examination.[5]Complex odontomas are rarely seen than the compound odontomas with much possibility to occur in the mandibular posterior region and has a female predilection. Sometimes the lesion may present with the features of both compound and complex odontomas. [6] Earlier 11 cases of "giant" complex odontomas have been reported.[5]The treatment includes the surgical removal of the lesion followed by the histopathologicalexamination to affirm the diagnosis.[3]Here, in this case we report a giant impacted complex odontome associated with restricted mouth opening and ulcertion of buccal mucosa.

II. CASE REPORT

A 25- year- old male patient came to the department of Oral Medicine and Radiology, presenting the complain of restricted mouth opening (Fig. 1)with pain and swelling in lower right back region. Initially the swelling was small and asymptomatic and in 2 months duration an evident increase in size of swelling was seen. Patient had been taking medication for the same but there was no relief from the symptoms.

On extraoral examination no facial asymmetry was visible. On intraoral examination solid yellowish brown mass measuring about 4cm (mesiodistally) and 3cm (buccolingually) noticed in the lower right mandibular third molar region. Mesiodistally the mass was extending from region of second molar to the retromolar region. The mass invaded the buccal vestibule including buccal mucosa and hindering with the occlusion. The breach was seen in the buccal mucosa adjacent to the mass. On palpation the mass was bony hard and non -tender.

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Fig. 1 Intraoral swelling and breach in the buccal

On panoramic radiograph, large homogeneous radiopacity was seen along with an impacted third molar. Periphery of the lesion was well defined with irregular surface surrounded by the thick radiolucent shadow in the inferior aspect of lesion. The lesion extended from the distal part of right mandibular second molar(48) to alveolar border of ramus superiorly (Fig. 2).

Fig. 2 Preoperative OPG showing homogenous radiopacity with surrounding radiolucent band at the base distal margin. Shadow of impacted third molar is also visible.

CT mandible shows, well defined homogeneously radiopaque mass was in the right angle region having a multilobular appearance. 48 tooth seen disto-inferiorly to the radiopaque mass and not attached to the boundary of the lesion. Loss of lingual cortex noted upto the inferior border of mandible with the thinning of adjoining buccal cortex noted. Inferior displacement of mandibular canal was seen. Internally homogeneous radiopacity noted with no differentiating morphology (Fig. 3).

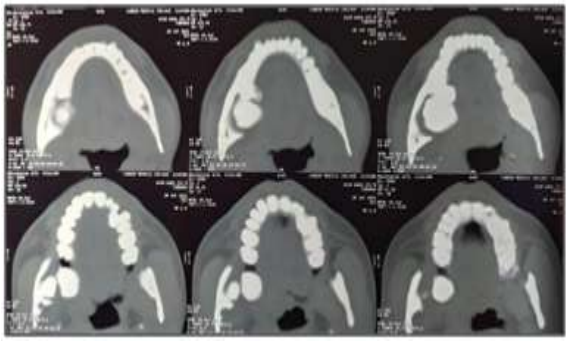

Fig. 3. Axial view of Computed tomography showing lingual cortex performation.

On the basis of radiographic and clinical findings the diagnosis of complex odontome was given, and differential diagnosis of calcifying cystic odontogenic tumour and osteoid osteoma were contemplated.

The patient was then referred to the Department of Oral and Maxillofacial Surgery for the surgical management. The procedure was performed under general anaesthesia, via the intraoral approach (Fig. 4). The mass was elevated by the periosteal elevator and the margins were curetted. The mass was separated as a single mass which was irregular in shape (Fig 5). The patient was kept under observation for 5 days after surgery. The post-operative radiograph revealed proper enucleation of the mass (Fig 6).

The specimen was send to the histopathological examination which revealed decalcfiedirreularly organized structures of enamel, dentin and pulp and islands of odontogenic tissue in fibrous capsule.

Fig. 4 Photograph showing intraoral approach

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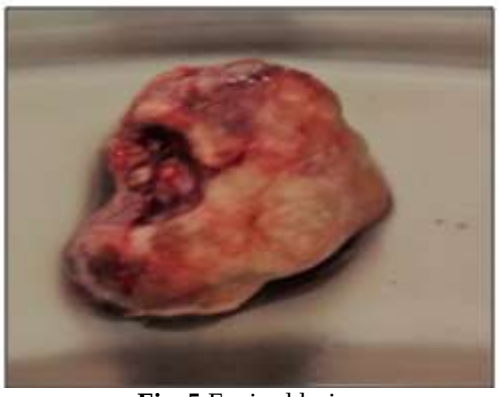

Fig. 5 Excised lesion

Fig. 6 Postoperative OPG showing complete enucleation of the lesion.

III. DISCUSSION

[1]Odontomas are considered as tumours of odontogenic origin, and about 22% of odontogenic tumours are reported as odontomas.[3] They are slow growing and painless tumours. [6]They mature after the development of the permanent teeth.[2]These tumours are of unknown aetiology. These tumours are often related to conditions like trauma, infections and some inherited conditions like Gardeners syndrome, Tangier disease, Herman syndrome, which interfere with the development of tooth. [3]Odontomas exhibit with a mean age of 20-30 years. Males are more affected than females.The common site of occurence of compound odotomas is the anterior maxilla and contrarily complex odontomas are seen in the posterior mandibular region. [6]The radiographic appearance of complex odonto,mas is percieved as radiopaque masses with irregular shape.[7]On the basis of calcification the odontomas are divided into three stages. The first stage shows the radiolucent appearance due to lack of calcification, there is slight radiopacity in the intermediate stage and in the third stage tumour appears radiopaque sorrounded by a radiolucent rim.[4]The impacted third molars are rarely associated with the development of odontomas yet in the clinical case reported in this study the complex odontoma was associated with the impacted third molar.[3]The lesion involved the right mandibular posterior region with relatively uncommon size. Till now such colossal impacted odontomas are not described in the literature and is now new contributary factor for the causation of trismus. The case presented with breach in the adjacent buccal mucosa due the rugged surface of the lesion.
[6]The precise diagnosis is important and the conservative surgery is the felicitous treatment. Recurrence is seen rarely with excellent prognosis.

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