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CASE REPORT

Erupting Complex Odontoma – A Rare Case Report

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ABSTRACT:

The odontoma is a benign tumor containing all the various component tissues of the teeth. It is the most common odontogenic tumor representing 67% of all odontogenic tumors. Odontomas are considered to be developmental anomalies (hamartomas) rather than true neoplasms. Based on the degree of morphodifferentiation or on the basis of their resemblance to normal teeth, they are divided into compound and complex odontomas. The complex odontoma consists of a conglomerate mass of enamel and dentin, which bears no anatomic resemblance to a tooth. They are usually diagnosed on routine radiological examinations in the second decade of life and are often slow growing and non-aggressive in nature. Here, I report a case of large complex odontoma, located in the right back posterior region of a 13-year-old male patient and excision of pathological in toto.

Keywords: Complex odontoma, hamartoma, odontogenic tumor, radiopacities

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INTRODUCTION

Odontomas are hamartomas of aborted tooth formation which account for 22% of the odontogenic tumors.⁽¹⁾ They are the most common benign odontogenic tumors of epithelial and mesenchymal origin.⁽²⁾

About 70% of odontomas are associated with pathologic changes such as impaction, malpositioning, aplasia, malformation, and devitalization of adjacent teeth. Compound odontoma is twice as common when compared to complex odontoma. Complex odontomas occur in mandibular 1st and 2nd molar region with slight or marked bony expansion.⁽³⁾ Treatment of odontomas consists of simple enucleation and curettage. Care should be taken, not to harm adjacent teeth or damage the adjacent vital structures. The impacted tooth can be extracted or repositioned, orthodontic treatment or the tooth can be left for spontaneous eruption and postsurgical clinical and radiological evaluation is done to know the course of these teeth.

We present a case of a large complex odontoma with mandibular 2rd molar impacted.

A complete surgical excision of the lesion was done in toto and tooth was left for eruption and to prevent mandible fracture patient was treated with closed reduction (ivy eyelet placed)

CASE REPORT

A 13 old male patient was referred to our department with chief complaint swelling in lower right back tooth region of jaw since 3 months. The patient had no relevant medical and dental history. On intra oral examination slight buccal cortical expansion w.r.t. to right 2rd molar tooth region. There was no pus discharge and sinus tract formation.



Preoperative profile view with swelling in right lower back tooth region.



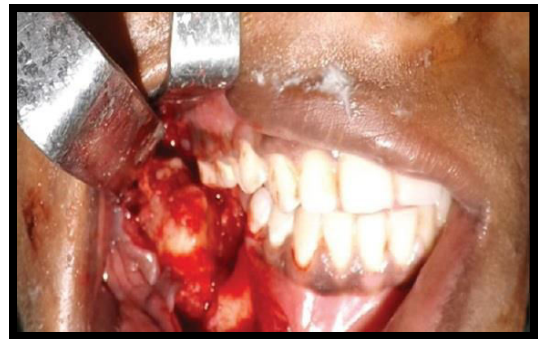
Intra oral view with slight buccal cortical expansion

A panoramic radiograph was done which showed a well-circumscribed radiopaque lesion with density similar to calcified dental tissues, present coronal to impacted 48 . Based on clinical and radiographic presentations, a provisional diagnosis of complex odontoma was made. Surgical excision of the lesion and plan to left the tooth for eruption under general anesthesia. Panoramic radiograph showing a well circumscribed radiopaque lesion .

After intubation, the patient was prepared as per routine surgical protocol. An intraoral incision was taken and the flap was raised to expose the angle and the body of mandible. As the mandibular 3rd molar was close to the lower border of mandible, to prevent mandible fracture patient was treated with closed reduction (ivy eyelet) placed.



Panoramic radiograph showing a well circumscribed radiopaque lesion

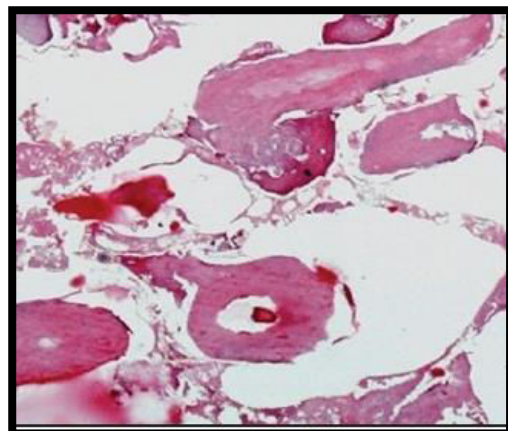


Intraoral view to expose the lesion

Excision of the lesion was done in toto and was separated from mandibular 3rd molar. Sharp bony spicules were nibbled and primary closure of the surgical site was done using 3-0 mersilk suture without any bone grafting. A 2 cm × 4 cm calcified lesion was sent for histopathology examination which confirmed that the lesion was complex odontoma. Postoperative panoramic radiograph was done showing intact lower border of mandible.



Post operative view showing intact lower border of mandible



Histopathologic photograph

On histopathological examination composed of enamel, dentin, cementum but these tissues are arranged in a random manner that bear no morphological resemblance to a tooth, finds which will confirm finally complex odontoma and patient on regular follow up. Post operative 6 months showing eruption of 2nd molar into oral cavity.



Post operative view showing eruption of 2nd molar

DISCUSSION

Odontomas are benign odontogenic tumors, characterized by their slow growth and nonaggressive behavior.⁽⁴⁾ The complex odontomas are usually located in the posterior mandible, while composite odontomas are more often found in the anterior maxilla.⁽⁵⁾ Most odontomas appear as small intraosseous lesions of calcified odontogenic tissues. Their growth is accomplished by gradual mineralization of the odontogenic tissue reaching a so-called mature stage when they are totally calcified. From that point, new episodes of growing are improbable. Because of this, odontomas are recognized as nonaggressive lesions with a limited growth potential.⁽⁶⁾⁽⁷⁾

Complex odontoma is usually a hard painless mass. Most of these lesions are discovered accidentally on radiographic examination. The common signs and symptoms include missing 3rd molar teeth and swelling as seen in our case, the patient had swelling and missing mandibular 3rd molar impacted 2nd molar. The presence of odontomas may also lead to malpositioning or displacement of adjacent teeth, aplasia, malformation, and devitalization of adjacent teeth. Budnick found that 61% of cases are associated with impacted teeth.⁽²⁾

Surgical removal with or without denudation of the impacted teeth has been usually performed for treatment of odontoma. The treatment options comprise surgical extraction, and surgical repositioning, orthodontic treatment or leaving the tooth for spontaneous eruption and

postsurgical clinical and radiological controls to evaluate the course of these teeth.

Iatrou *et al.* in 2010⁽⁸⁾ did a retrospective analysis of the characteristics, treatment, and follow-up of 26 odontomas in Greek children. All the odontomas were surgically removed, and related impacted permanent teeth were either left to erupt spontaneously, orthodontically guided into occlusion or were removed. They concluded that the impacted posterior teeth, the decision to maintain or remove them should depend entirely on the case; in their study, a majority of the posterior teeth were heavily involved with the tumor or severely malpositioned and had to be removed. In our case, the impacted 2nd molar tooth was left for eruption to prevent mandible fracture.

CONCLUSION

Cases of large complex odontomas erupting into the oral cavity and also infected complex odontomas have been reported. Early diagnosis will facilitate removal of the cause of eruption disturbances, which is important in the developing dental arch. For early detection of odontomas, panoramic radiography and a proper clinical examination are important. Complications can be prevented by surgical excision followed by histopathological analysis. A careful follow-up of the case, both clinically and radiographically is necessary to assess the eruption of the unerupted or impacted teeth.

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