CASE REPORT

Complex Odontoma associated with Dentigerous cyst

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Abstract

Odontomas are most commonly occurring tumors of the jaws. Large odontomas may be associated with local disturbances such as eruption delay of permanent teeth. However, cases of simultaneous pathologies are uncommon. Here we report a case of a complex odontoma associated with dentigerous cyst in relation to mandibular first molar.

Key words : Odontogenic tumor, Dentigerous cyst, Impacted teeth

Introduction

Various factors are responsible for eruption delay of permanent teeth. The causes range from supernumery teeth, neoplasms (E.g Ameloblastic fibroma), hamartomatous lesions (E.g Odontomas), cystic lesions (E.g Dentigerous cyst). It is rare however for two pathological conditions i.e. a hamartoma and cystic lesion to occur in the same site simultaneously.

CASE REPORT

A 14 year old boy reported in Oral and Maxillofacial Surgery department with chief complaint of pain and swelling on his right lower 1/3rd of face since 2 months. His medical history was unremarkable. (Fig 1)

On examination 3x3 cm swelling in the right mandibular body region extending anterior - posteriorly 2cm from the corner of mouth to tragus. Superior-inferiorly 2cm above the lower border of the mandible till lower border of mandible. Mouth opening was adequate. Intra-oral examination of the regions revealed the apparent absence of 45, 46, 47, 48 and over retained 85. Breach in the corresponding mucosa through which pus extruded. Buccal and lingual cortices were expanded. There was no any other abnormality in other teeth in oral cavity. (Fig.2)

A panoramic radiograph showed a uniformly dense rounded radio - opacity (3cm x 3cm) in the 47, 48 region surrounded by radiolucent lining and well demarcated radiolucency (3x3cm) anterior to radio - opacity associated with impacted 46. The right mandibular canal displaced inferiorly. There was no evidence of any root resorption. Clinical and radiological presentations are suggestive of two lesions. (Fig.3, 4)

Fig 1. Extraoral Photograph

Fig 2. Intraoral Photograph

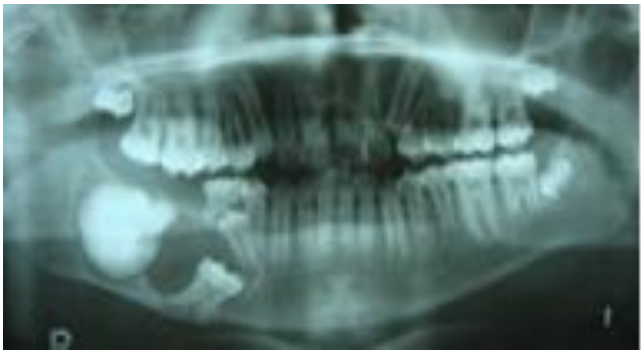

Fig 3. Pre-Operative OPG

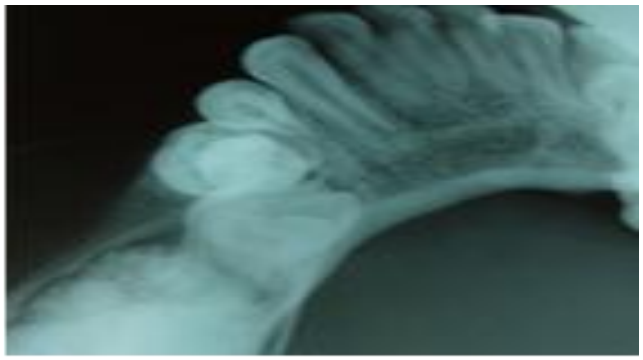

Fig 4. Occlusal radiograph

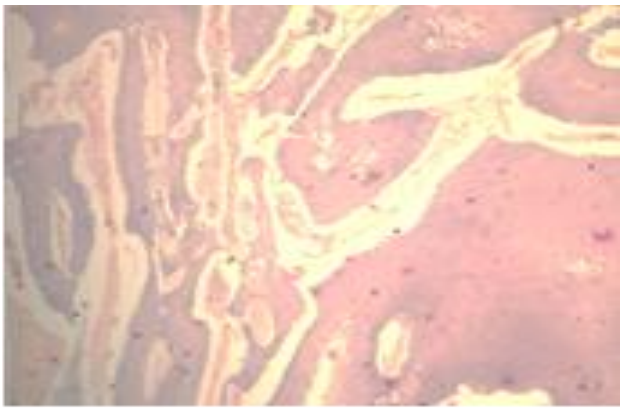

Fig 5.Complex Odontoma

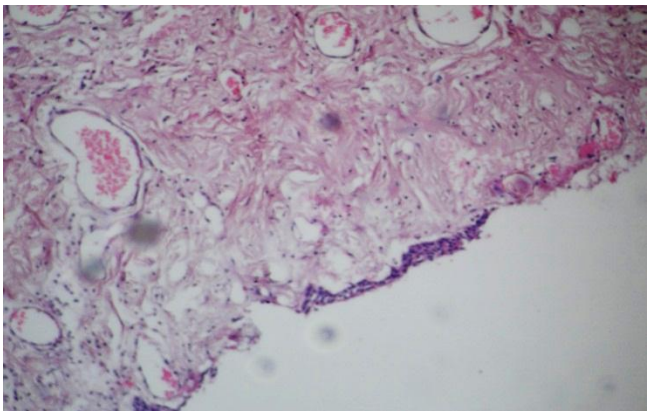

Fig 6. Dentigerous cyst

Fig 7. Specimen arrowed – Complex odontoma
Non - arrowed – Dentigerous cyst

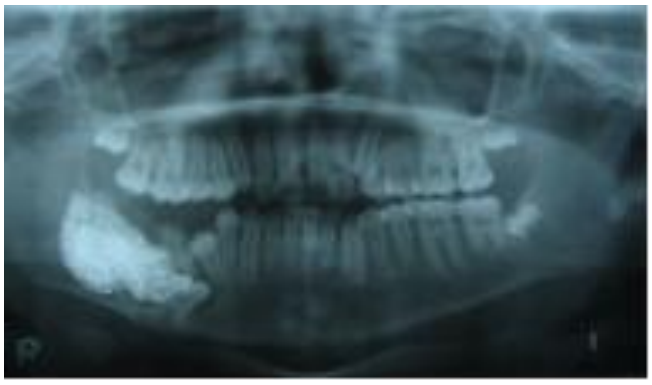

Fig 8. Post Operative OPG

Differential diagnosis made on the basis of clinical and radiological examination :

1) Ameloblastic Fibro-odontoma
2) Calcified Odontogenic cyst
3) Pindborg's tumor

4) Complex Odontoma with Dentigerous cyst.

Definitive diagnosis i.e Complex Odontoma and Dentigerous Cyst made on the basis of histopathological. (Fig 5, 6)

Under GA intra-oral incision taken from the 43 to ascending ramus. Inferior alveolar nerve was identified. 85 was extracted. Cystic lining was excised leaving behind 46 to erupt. Surgical excision of odontoma was done. The cavity was packed with ribbon gauge soaked with Bismuth Iodoform Paste. (Fig. 7, 8)

DISCUSSION

According to 1992 WHO classification of odontogenic tumors. These are four odontogenic tumors with mixed tissue i.e. Ameloblastic fibroma, Complex odontoma, Compound odontoma and Ameloblastic Fibro - odontoma.

In this regard, odontomas are hamartomas composed of various dental tissues enamel, dentin, cementum and sometimes pulp. They are slow growing benign tumors showing non- aggressive behavior. They are classified as complex, when the calcified tissue present as an irregular mass composed mainly of mature tubular dentin or compound if there is superficial anatomic similarity to even rudimentary teeth. Complex odontomas are less common than compound in the ratio of 1:2. Complex odontomas are tend to occur in the posterior region of jaw and compound odontomas are more common in the anterior maxilla. They may be discovered at any age, although less than 10% are found in patients over 40 years of age. Although they are commonly asymptomatic, clinical indicators of odontomas are retention of deciduous teeth, non eruption of permanent teeth. Pain, expansion of cortical bone and tooth displacement. Other symptoms include anesthesia in the lower lip and swelling in the affected area.

Clinically odontomas are either complex or compound and are classified as :

a) **Intra - osseous** : odontomas occur inside the bone and may erupt (erupted odontomas) into the oral cavity.

b) **Extra - osseous** : odontomas occurring in the soft tissue covering the tooth bearing portion of the jaws.

Odontomas presents as a well defined radio-opacity situated in bone, but with a density that is greater than bone and equal to or greater than that of tooth. It contains foci of variable density. A radiolucent halo, typically surrounded by thin sclerotic line, surrounds the radio-opacity. The radiolucent zone is the connective tissue capsule of a normal tooth follicle.

Hitchin suggested that odontomas are inherited through a mutant gene or interference, possibly post natal, with genetic control of tooth development. Surgical removal of odontomas is included in the absence of any contraindication.

As a result of there odontogenic nature, including epithelial and mesenchymal tissue odontomas can develop cystic transformation into dentigerous cyst. This cyst results from the cystic degeneration of enamel organ after partial or total development of the crown, cystic transformation of the follicle associated with the unerupted tooth may also occur when its eruption is impeded by the odontoma.

In our patient the radiographic and histological findings when correlated, suggests that the origin of the dentigerous cyst was from the impacted 46.

Surgical management– Enucleation of the cyst and excision of odontoma and packing the cavity open. Reasons

a) Prevent nerve damage.

b) Decrease risk of pathological fracture.

c) Allow eruption of 46.

CONCLUSION

A case of swelling on the right posterior region of mandible, unusual in that two pathological lesion occurred simultaneously like cyst with odontoma.

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