

Compound Odontoma Associated with Impacted Maxillary Anterior Teeth: A Case Report

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Abstract:- Odontomas are the most common odontogenic tumors. They are usually asymptomatic, discovered on routine radiographic examination. It may be associated with impacted or retained teeth or may be a cause of delayed teeth eruption. Here we discuss a case report of 19 year old female patient who had a impacted central incisor associated with odontome

Keywords:- Complex odontome, compound odontome, impacted teeth.

I. INTRODUCTION

Odontoma is a benign odontogenic tumor slow growing asymptomatic mass which is diagnosed during routine radiographic examination.^[1] This lesion considered to be a hamartoma and not a true tumor. It can be vary from non descript masses of dental tissue referred to as a complex odontoma to multiple well formed teeth of a compound odontoma. The lesion does not shows sex predilection and most begin while during development of dentition. Most of the times found during investigation of delayed eruption or retained primary teeth teeth. Compound odontoma are about more common as compared to complex type. Compound type occur in the anterior maxilla in association with the crown of an unerupted canine. Complex odontomas are found in the mandibular posterior area.^[2]

II. CASE REPORT

A 19 year old girl visited the Department of Oral Medicine and Radiology, K D Dental College and Hospital Mathura with the chief complaint of missing upper anterior teeth since 12 years (figure.1). Her medical history was non-contributory. On palpation, there was no pain and no swelling present. She was examined clinically and had all teeth erupted except right and left lower second molar .

Intraoral Periapical Radiograph(IOPAR) was advised for edentulous area . IOPAR shows impacted 11 associated with calcified radio-opaque mass which was located near the incisal aspect of impacted central incisor(figure.2).

On cone beam computed tomography (CBCT) examination, 11 appears to be horizontally impacted with the crown directed buccally and root palatally . The crown directed buccally and root palatally , involving the mid palatal suture . Palatal cortical perforation can be seen along with thinning of labial cortical plate .Well defined hyperdense calcific mass seen anterior to crown of impacted 11 , within the nasopalatine canal(figure.3) . Surgical resection of the mass was planned with extraction of 11. Calcified mass was sent for histopathological examination which shows an odontogenic tumor composed of odontogenic epithelium admixed with mineralised matrix. Basaloid enameloid material is distributed haphazardly admixed with dentin and enamel(figure.4).



Fig. 1: Shows edentulous area in maxillary anterior region



Fig. 2: IOPAR shows impacted 11 with 2 calcified mass surrounded by radiolucent lining



Fig. 3: CBCT Shows well defined hyperdense calcific mas seen anterior to crown of impacted 11 the crown directed buccally and root palatally , involving the mid palatal suture.

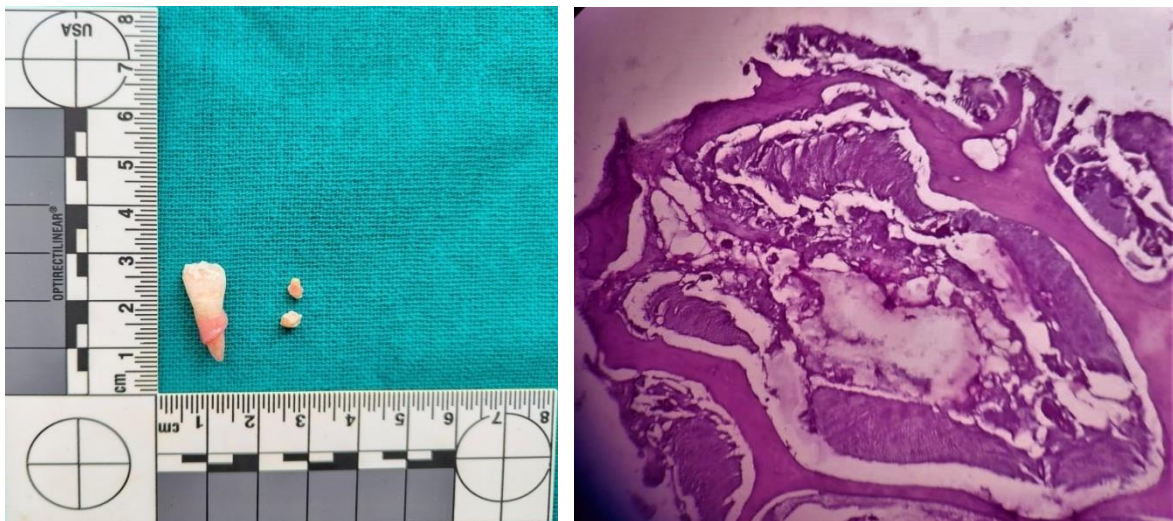


Fig. 4: Excision of odontomas with impacted 11 and its histological examination of odontoma

III. DISCUSSION

The term “Odontoma” was given by Paul Broca in 1867.^[3] Odontomas are most common, asymptomatic odontogenic tumor, commonly diagnosed in second decade of life. Compound odontomas are commonly located in the anterior region of the maxilla, whereas Complex odontomas are located in mandibular posterior region.^[7]

2022 World Health Organization(WHO) classification of odontogenic tumors of the jaws.^[6]

A. ODONTOGENIC TUMORS

- *Benign epithelial odontogenic tumors*
 - Adenomatoid odontogenic tumour
 - Squamous odontogenic tumour
 - Calcifying epithelial odontogenic tumour
 - Ameloblastoma, unicystic
 - Ameloblastoma, extraosseous/peripheral
 - Ameloblastoma, conventional
 - Adenoid ameloblastoma
 - Metastasizing ameloblastoma
- *Benign mixed epithelial & mesenchymal odontogenic tumours*
 - Odontoma
 - Primordial odontogenic tumour
 - Ameloblastic fibroma
 - Dentinogenic ghost cell tumour
- *Benign mesenchymal odontogenic tumours*
 - Odontogenic fibroma
 - Cementoblastoma
 - Cemento-ossifying fibroma
 - Odontogenic myxoma
- *Malignant odontogenic tumours*
 - Sclerosing odontogenic carcinoma
 - Ameloblastic carcinoma
 - Clear cell odontogenic carcinoma
 - Ghost cell odontogenic carcinoma
 - Primary intraosseous carcinoma, NOS
 - Odontogenic carcinosarcoma
 - Odontogenic sarcomas

B. CLASSIFICATION OF ODONTOMES^[8]

- *Of ectodermal origin*
 - Enameloma(enamel pearl;enamel nodule)
- *Of mesodermal origin*
 - Dentinoma
 - Cementoma
- *Of mixed ectodermal and mesodermal origin, or mixed mesodermal origin*
 - Complex composite odontome
 - Compound composite odontome
 - Geminated odontome
 - Dilated odontome, including dens in dente

Differential diagnosis can be ameloblastic fibroma, ameloblastic fibroodontoma, and odonto ameloblastoma. Odontomas can also manifest as part of syndromes, like basal cell nevus syndrome, Gardner syndrome, familial colonic adenomatosis, Tangier disease, or Hermann syndrome.^[4]

It is necessary in every case of delayed eruption or impacted teeth radiographic examination of that region are to be made. If odontomes are not to be diagnosed earlier they may enlarge in size which cause boney expansion of the bone with facial asymmetry. Odontomes must be surgically removed, in order to prevent cyst formation and possible conversion to odonto-ameloblastoma.^[12] This paper describes compound odontoma, final diagnosis was confirmed by histological examination of the lesions after their surgical resection. compound odontoma is most commonly found in maxillary anterior region respectively.

IV. CONCLUSION

Diagnosis has to be made with radiographic as well as histological examination. Clinically, they are asymptomatic, diagnosed during incidental radiographic examination. Early diagnosis of odontomas allows normal eruption of teeth which may otherwise become a reason of impacted, malpositioning of teeth or delayed eruption of the teeth.

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