

COMPOUND COMPOSITE ODONTOMA ASSOCIATED WITH MAXILLARY PERMANENT CENTRAL INCISOR TOOTH : A CASE REPORT

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Introduction

Odontome are the most common type of odontogenic tumors. They are believed to be developmental anomalies (hamartomatous growth) resulting from growth of completely differentiated epithelial and mesenchymal cells that give rise to ameloblasts and odontoblasts. Like teeth, once formed they cease to grow and the calcification stops. Even when they are grossly distorted morphologically, the enamel, dentin, pulp and cementum are in normal anatomic relation with each other. An odontome looks like a bunch of rosette made of numerous teeth like structures. Although odontomas are generally included in the calcified odontogenic tumors, most authorities will concede that these lesions are more properly considered to be malformations rather than true neoplasms.

The etiology of odontoma is not clear. Some attribute it to certain trauma during the developmental stage which might lead to fragmentation of the enamel epithelium.

Case Report

In the clinical examination of an 08-year-old female patient visiting our clinic with the complaint of non emergence of left upper front tooth, a lesion covered with gingival and normal mucosa was found above the left maxillary central incisor, expanding the bone outwards.

The right permanent central incisor, left deciduous lateral incisor and both the canine teeth were present and were tested for vitality.

An Intra Oral Periapical X-ray was taken which revealed a radiopaque mass over the root of the lateral incisor.

In the panoramic radiogram of the patient, a radiopaque mass was found in the crown region of the right central maxillary incisor tooth apical to the root of the deciduous lateral incisor, preventing the eruption of the right central incisor tooth.

The lesion was provisionally diagnosed as a "compound odontoma". Surgical excision and enucleation of the radiopaque mass was planned under general anaesthesia, as the child was very apprehensive about the surgery under local anaesthesia.

Upon complete removal of the tumor mass, the permanent central incisor was visible deeply embedded in the defect formed in the maxilla. An orthodontic bracket was bonded on to the labial surface of the tooth for orthodontic extrusion of the tooth later. The post-

operative recovery was uneventful and the child and her parents were absolutely relaxed with no signs of apprehension related to any further treatment required.



Fig. 1. OPG Showing the Odontome in relation to Left maxillary Central Incisor

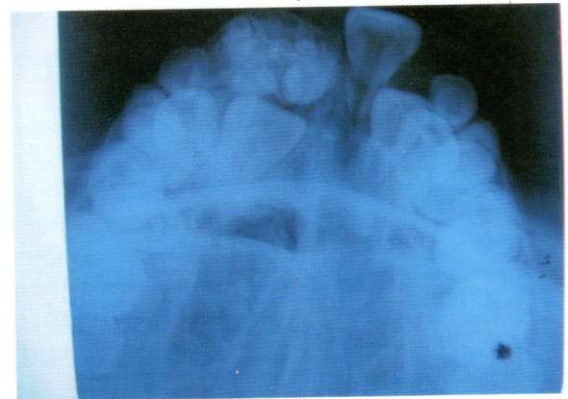


Fig. 2. Maxillary Occlusal Xray Showing Labial presentation of odontome

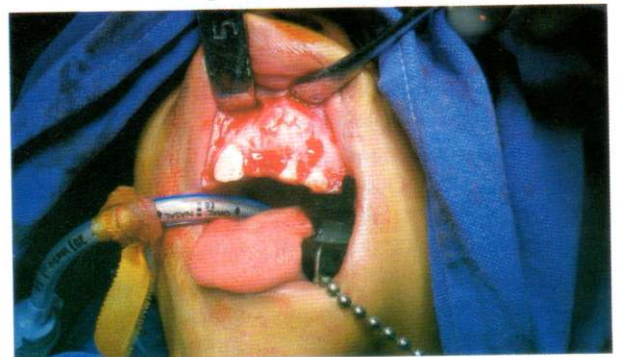


Fig. 3. Photograph of the site of Odontome (Presurgical)

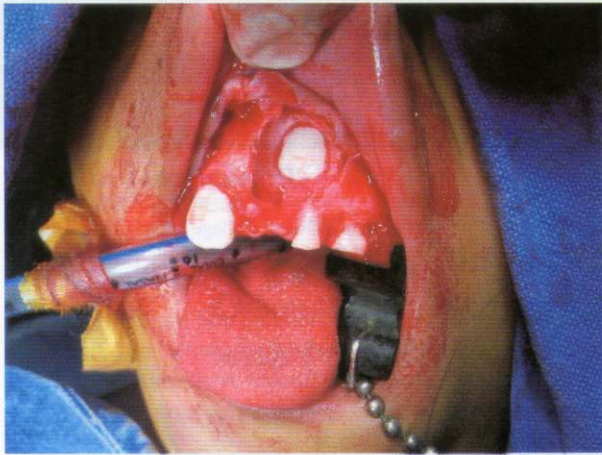


Fig. 4. Photograph of surgical site after enucleation of odontome mass.



Fig. 5. Tumor Mass (Odontome) comprising of multiple teeth like structures

Discussion

An odontome looks like a bunch of rosette made of numerous teeth like structures

These tumors account for 22% of all odontogenic tumors of the jaws. Odontoma are the commonest type of odontogenic tumors and are generally asymptomatic. Frequently they interfere with the eruption of the succedaneous permanent tooth.

An Odontome may form as a result of continued budding of the primary or permanent tooth germ or as a result of an abnormal proliferation of the cells of the tooth

germ, in which case an Odontome replaces the normal tooth. Odontomes are mixed odontogenic tumors in which the epithelial as well as mesenchymal components undergo functional differentiation to the point that both enamel and dentin are formed.

Compound odontomas are in forms of clusters of tooth-like structures of different sizes and volumes that are surrounded by a narrow radiolucent zone, while complex odontomas display irregular and disorganized radio-opacity. Odontomas are frequently accompanied by a yet non-erupted tooth, and prevent tooth eruption.

Compound Odontomes more frequently occur in younger generation as compared to the late occurrence of the complex Odontomes (Slootweg), possibly because the odontogenic tissue in the anterior jaws where the compound odontoma predominantly occurs has finished its differentiation earlier than the tissues in the posterior part of the jaw.

Both types of odontomas are located within the bone tissue. Compound odontomas are encountered about 2 folds more frequently than complex odontomas, and most frequently between the maxillary incisor and canine teeth, while the complex odontomas are most commonly found in the mandibular molar regions.^{5, 11} In our case of compound odontoma, the location was in the region of maxillary incisors. This was in accordance with literature. Although compound odontomas are distributed equally among sexes, complex odontomas are more frequently found in women.

Budnick, in his review had reported that compound odontomas had a propensity for occurrence in the incisor and canine region, being found more often in the maxilla than in the mandible, whereas the complex odontomas showed a predilection for occurrence in the posterior jaws.

In 70% of the odontomas, pathologic alterations are observed in the neighboring teeth such as devitalization, malformation, aplasia, malposition and remaining embedded.¹¹ In our case, only the central incisor was embedded and all other teeth were vital

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