

A rare case of odontome in a 65-year-old lady

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DOI: 10.4103/0975-5950.69163
www.njms.in

ABSTRACT

Odontomes are considered to be hamartomas rather than a true neoplasm. They are comparatively common odontogenic tumors, and may lead to interference with eruption of associated tooth. Compound odontomes are commonly seen in young adults, but if they occur in children they are usually associated with permanent dentition and prevent eruption of the associated tooth. We hereby report a case of large compound odontome in the mandibular body region of a 65-year-old woman. Because of difficulty in denture fabrication and associated pain on mastication, surgical removal of the lesion was done.

Key words: Compound odontome, odontome, rare case

INTRODUCTION

The term odontome, in true sense, refers to any tumor of odontogenic origin.^[1] It is a growth in which both epithelial and ectomesenchymal cells exhibit complete or incomplete differentiation of tooth formation. It may be soft, calcified or mixed tissues distributed in numerous combinations and different patterns. Odontomas are hamartomas composed of various dental tissues, i.e., enamel, dentin, cementum and sometimes pulp. They are slow-growing, benign tumors showing nonaggressive behavior. They can be classified as complex, when the calcified tissue presents as an irregular mass composed mainly of mature tubular dentin, and compound, if there is superficial anatomic similarity to even rudimentary teeth.^[2] Complex odontomas are less common than the compound variety, the ratio being 1:2.^[3] Eruption of an odontoma in the oral cavity is rare. We report a case of compound odontome, in which apparent eruption had occurred in the area of the right mandibular body region of an otherwise edentulous patient.

CASE REPORT

A 65-year-old female reported to our department with the chief complaint of pain in the right lower

back teeth (premolar) region. She also complained of pain during mastication and experienced difficulty in denture fabrication, as there was a tooth like structure, which was preventing the fabrication of the denture by impingement and causing pain. On examination, a diffuse smooth swelling was found in the right mandibular body area with an impacted tooth like structure [Figure 1], which was tender on palpation. Expansion of both the buccal and lingual cortices was observed and the area was firm and nontender. The mouth opening was within normal limits. Orthopantomogram (OPG) revealed a radiopaque mass in the right mandibular premolar area measuring 10 × 15 mm with well-defined borders and a radiolucent lining in the body region of the mandible associated with an impacted tooth [Figure 2]. The lesion was provisionally diagnosed as an odontome. Surgery was planned under local anesthesia after routine hematological investigations. A crestal incision was given and mucoperiosteal flap was retracted [Figure 3], the lesion was exposed [Figure 4] and was taken out after sectioning [Figure 5]. Wound was closed with 3-0 silk after achieving hemostasis. The excised lesion was reassembled [Figure 6], which revealed a bony mass with a tooth like structure. A provisional diagnosis of compound odontome was made. Post operatively, antibiotic and analgesic were prescribed and the post operative period was uneventful. Histopathologic examination of the

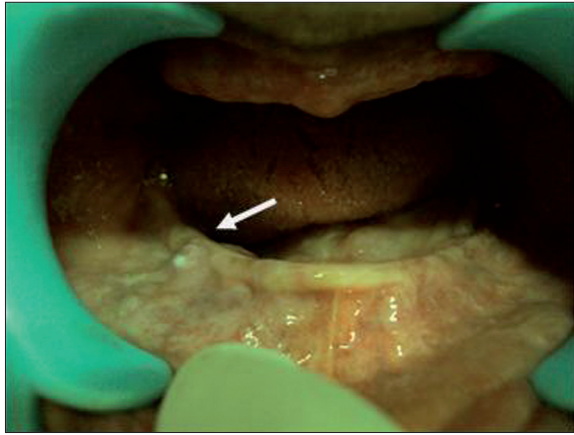


Figure 1: Pre operative picture; arrow points the lesion

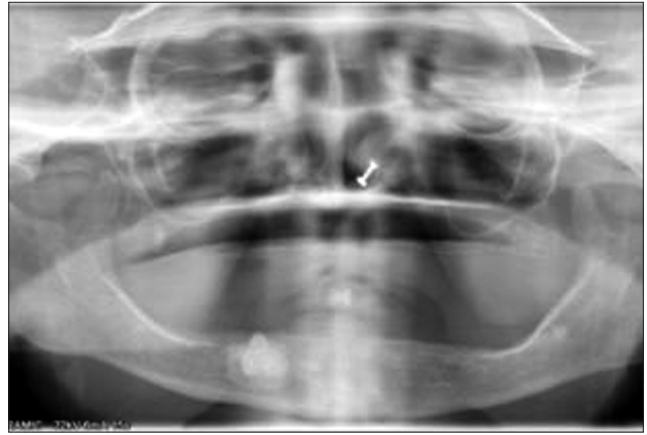


Figure 2: OPG revealing the lesion

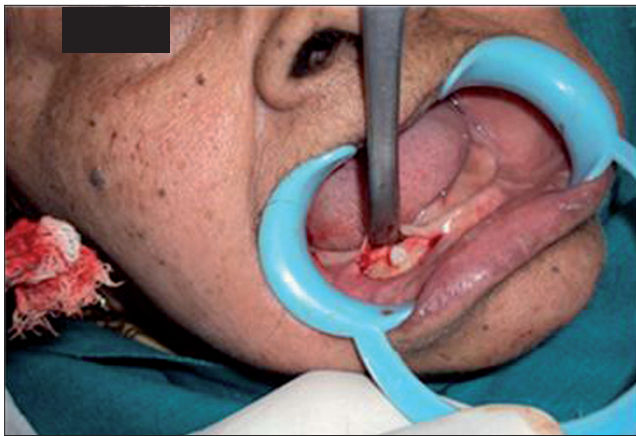


Figure 3: Intra operative picture revealing the tooth like structure



Figure 4: Intra operative – entire lesion

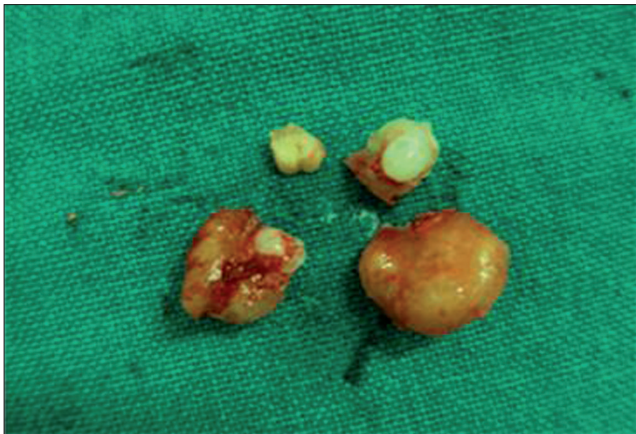


Figure 5: Excised lesion



Figure 6: Excised lesion (reassembled)

excised mass confirmed the diagnosis of compound composite odontome.

DISCUSSION

The term odontoma was coined by Paul Broca in 1867. He defined the term as tumors formed by the overgrowth of transitory or complete dental tissues.^[4]

The odontoma is the most common odontogenic tumor in maxilla, and investigators reported the incidence to be 22–67% of all odontogenic maxillary neoplasms.^[5,6]

Clinically, odontomas^[7] are either complex or compound, which can be further classified as follows.

Intraosseous: These odontomas occur inside the bone and may erupt (erupted odontoma) into oral cavity. Till

date, 12 cases of the erupted variety have been described in the literature.

Extrasosseous or peripheral: These odontomas occur in the soft tissue in the tooth-bearing areas of the jaws. Our case was similar to the intraosseous type.

Most compound odontomes are found in the maxillary anterior area, whereas complex odontomas are commonly found in the posterior mandible.^[1,5,6] An increased prevalence of these tumors is observed in children and adolescents, with little significance in relation to patient sex. However, in our case, the patient was a 65-year-old female who was otherwise edentulous. In most children, these tumors are associated with tooth eruption disturbances such as delayed eruption of the primary and permanent teeth or overretained primary teeth.^[8]

These lesions are normally diagnosed by routine radiological investigations, by second and third decades of life.

Several hypotheses propose etiologic factors. Some odontomas are associated with a history of trauma during primary dentition, inflammatory and infectious processes, hereditary (Gardner's syndrome, Hermann's syndrome), odontoblastic hyperactivity and alterations of the genetic components responsible for controlling tooth development.^[6,9]

In general, radiological features show that odontomas manifest as a dense radiopaque lesion surrounded by a thin radiolucent halo corresponding to the connective capsule.^[8] In our case, we found a radiopaque mass measuring approximately 1.5 cm × 1.5 cm, which was surrounded by a thin radiolucent halo.

The mechanism of odontome eruption appears to be different from tooth eruption because of the lack of the periodontal ligament in odontome. Therefore, the force required for the eruption of odontomas is not linked to the contractility of fibroblasts, as is the case for teeth. Although there is no root formation in odontome, its increasing size may lead to the sequestration of the overlying bone and, hence, leads to eruption. The increase in size of the odontoma over time produces a force sufficient to cause bone resorption.^[10] Three developmental stages can be identified based on the radiological features and degree of calcification of the lesion at the time of diagnosis. The first stage is characterized by radio transparency due to the absence of dental tissue calcification.

The second or intermediate stage presents partial calcification, and the third or classically radiopaque

stage exhibits significant calcification surrounded by a radiolucent halo.^[11]

The treatment of choice is surgical excision followed by histopathologic study to confirm the diagnosis of odontoma. Histologically, the compound odontoma often is seen to have normal appearing enamel, dentin, cementum and pulp.^[12,13] Microscopic features show that the denticles of compound odontomas comprise a central core, similar to pulp tissue, surrounded by primary dentin and covered with partially demineralized enamel and primary cementum.^[14,15]

In our case, histopathologically we noticed the presence of uniformly arranged normal appearing enamel with underlying dentin and cementum covering the majority of the area. The enamel was brownish yellow in color with prominence of incremental lines of Retzius. Underneath the scalloped Dentino-enamel Junction (DEJ) was primary and secondary dentin with significant evidence of pulp space. The hard tissues were arranged in a uniform pattern depicting tooth like structures. Ideally, the recommended treatment is removal of the lesion *in toto*. However, in our case, as the patient was old and edentulous, considering the size of the lesion, we removed it by sectioning.

CONCLUSION

Odontomas are benign tumors frequently seen in the oral cavity, are usually asymptomatic and are diagnosed as incidental findings on routine radiological studies. Odontomas usually cause delayed eruption. If no signs or symptoms appear, the lesions go undetected and can remain as such for many years without clinical manifestations. Ideally, the recommended treatment is removal of the lesion *in toto*; however, in our case, as the patient was old and edentulous, considering the size of the lesion, we removed it by sectioning.

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Source of Support: Nil. **Conflict of Interest:** None declared.