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### Abstract

Odontomas are benign odontogenic tumours composed of enamel dentin, cementum and pulp tissue. They are usually clinically asymptomatic, but are often associated with disturbances in tooth eruption and cystic changes. The present study reports an unusual case report of bilateral compound odontomas in mandible in 14 yrs old boy with unerupted second premolar bilaterally. Radiograph reveals a dense radio-opaque lesion associated to impacted premolar. The histological examination revealed compound odontomas.

## INTRODUCTION

Odontomas are the most frequently occurring benign odontogenic tumours in oral cavity. They are generally asymptomatic and usually associated with complaint of unerupted primary and permanent teeth.<sup>1</sup> These mixed tumours consist of both epithelial and mesenchymal tissues.<sup>1,2</sup> Paul Broca first used the term “odontoma”, who termed it as tumours formed by the overgrowth of transitory or complete dental tissue.<sup>3</sup> Compound odontomas usually occur in the anterior region of maxilla, whereas great majority of odontomas located in the posterior area of mandible are complex odontomas.<sup>4,5,6</sup>

According to latest classification by WHO (2005) two types of odontomas can be found. Complex odontomas (a conglomeration of dentin, enamel and cementum and compound odontomas (small tooth like structures). Compound odontomas are twice as common than complex one. They are usually located in anterior region of the maxilla, over the crowns of unerupted tooth, or between roots of erupted teeth the lesions are unilocular and contain multiple radioopaque, miniature tooth like structure known as denticle.<sup>7</sup> Complex odontomas in terms are formed in the posterior mandibular segment, over impacted teeth manifests as a radioopaque solid mass with occasional nodular mass and surrounded by a well defined corticalization zone from a normal bone.<sup>8</sup>

The diagnosis is usually established on routine radiographic examination or on evaluating the cause of delayed tooth eruption. The treatment of choice is surgical removal of the lesions. A histopathological study is done to confirm the diagnosis. This report describes a case of bilateral compound odontoma in mandible with impaction of premolars.

## CASE REPORT

A 14 year old boy reported to the department of Pedodontics and preventive dentistry, Dr. R. Ahmed Dental college with a complaint of absence of tooth in lower back region of the jaw. Patient gave no history of any major medical problems. Extra orally there was no swelling or tenderness, asymmetry or palpable lymph nodes. Intra oral

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## After One Month



Pre Operative Radiograph



Pre Operative (Left Side)



Odontome Surgically Removed (Left Side)



Pre Operative (Right Side)



Surgically Removed Odontome (Right Side)



Post Operative



Post Operative Radiograph

examination reveal absence of both lower premolar (34, 44). Other oral structures show no abnormality, a carious 84 was present which was removed under local anaesthesia.

**Investigation:-** Patient was referred for a panoramic radiograph which disclosed a well defined radio opaque mass with radioluscent bands surrounding it coronal to the unerupted second lower premolars. The radio opaque mass had greater density than the bone and equivalent radio opacity to that of the teeth. It resembles a tooth like structure. Radiographic diagnosis was in favour of compound odontome with a differential diagnosis of a cementifying or ossifying fibroma.

**Treatment:-** The mass were removed under local anesthesia.. A mucoperiosteal flap was raised from canine to first molar. The layer of bone was further removed to expose the crown of impacted premolar. A carious 84 was removed under local anesthesia. A window was created in the bone from 33 to 35 and 43 to 45 to access the calcified mass. The mass over the crown of 34 and 44 were excised and curettage was done. The mass were submitted for histopathologic examination.

**Outcome and follow up:** The histopathologic report confirmed the specimen to be compound odontome. The patient was kept under observation for 6 months. The healing was uneventful.

## DISCUSSION

The most common clinical presentation for an odontome is the association with impacted or retained primary or permanent teeth.<sup>9</sup> The compound odontome is known to occur more commonly in maxilla(67%) as compared to mandible (33%) with a marked predilection for the anterior maxillary region, 61%, prevalence in males are 59% compared to females 41%.<sup>10,11,12</sup> Etiology of odontome may be local trauma, infection, mutant gene. There are different types of classification of odontomes. Thoma and Goldman classification 1946:

- 1) **Geminated composite odontomes:-** Two or more, more or less well developed teeth fused together.
- 2) **Compound composite odontomes:-** Made up of more or less rudimentary teeth .
- 3) **Complex composite odontomes:-** Calcified structure bearing no great resemblance to the normal anatomical arrangement of dental tissues.
- 4) **Dilated odontomes:-** The crown or root part of tooth shows marked enlargement.
- 5) **Cystic odontomes:-** An odontome that is normally encapsulated by fibrous connective tissues in a cyst or in the wall of cyst

## WHO classification :-

**Complex odontomes:-** when the calcified dental tissues are simply arranged in an irregular mass bearing no morphological similarity to rudimentary tooth.

**Compound odontomes:-** Composed of all odontogenic tissues in an orderly pattern which result in many teeth-like structures, but without morphologic resemblance to normal tooth.

**Ameloblastic fibro odontomes:-** Consists of varying amounts of calcified dental tissues and dental papilla-like tissues, the later component resembles an ameloblastic fibroma. The ameloblastic fibro odontomes is considered as an immature precursor of compound odontomes.<sup>13</sup>

Differential diagnosis includes hypercementosis which is attached to the part of root and is usually separated from the periapical bone by a radioluscent periodontal ligament space, which surrounds the entire roots. Condensing osteitis may usually be ruled out because it usually occurs at the periapex of non vital tooth and does not have a radioluscent rim. periapical osteosclerosis is usually quite irregular in shape with absence of radioluscent border.

The radiographic findings of odontome depends on the stage of development and degree of mineralization. The first stage is characterized by radioluscent due to the lack of calcification. Partial calcification seen in the intermediate stage, while in the third it is radioopaque mass surrounded by radioluscent areas corresponding to the connective tissue histologically.<sup>14</sup>

The treatment is most of the time surgical excision and curettage as it is surrounded by connective tissues.

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