



LINGUALLY PLACED COMPLEX ODONTOME IN THE MANDIBULAR POSTERIOR REGION: A CASE REPORT

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ABSTRACT

The odontomas are developmental malformations of dental tissue, usually referred to as hamartomas. Patients are usually asymptomatic and it is an accidental finding. The case reported here is a case of 42 year old male who was diagnosed with lingually placed odontome of right mandible associated with an 1st and 2nd molar. The Odontome removal was done under LA.

KEYWORDS : Odontoma, Tooth eruption, Molars, inferior alveolar nerve.

1. INTRODUCTION

Odontomes are considered as hamartomatous developmental anomaly. According to WHO (2005) there are two types of odontomas: complex composite odontome and compound Composite odontome [1]. The term is now used to denote lesions that contain all dental tissues and include two types, complex and compound odontoma, which contains tooth like structures. Most of these tissues does not resemble any morphological similarity with normal tooth structures; however enamel, dentin, pulp, cementum are arranged as in normal tooth structure. Compound odontome is more common in anterior maxilla, While complex odontome are usually found in posterior mandibular region. Compound Composite odontome are more commonly found as compared to complex odontome [1]. They are usually found until 2nd decade of life. The etiologies of the odontomas were elusive and may be contributed by various factors such as growth pressure, local trauma, infection, Developmental and hereditary influences [2]. Odontome found in 3rd and 4th decade of life are usually rare. Patient usually present for routine dental problems like pain, swelling and pus discharge.

2. CASE REPORT

A patient named Mr. Shivanna. R. aged 42yrs, reported to dental OPD in Rajarajeswari Dental College and hospital, Bangalore with the complain of pain in the right lower back tooth region. Extraorally, no gross facial asymmetry present. Left submandibular lymph nodes was palpable, non-tender and not fixed. There was grade I mobility and periodontal pocket present irt 46 which was also tender on percussion. On palpation, a bulge was felt irt the lingual aspect of the mandible in the region of 46 and 47 (FIG 1). Radiographic examination revealed a radiopaque mass in the periapex of the distal root of 46 and mesial root of 47. No periodontal space widening was seen (FIG 2). Further CBCT was done to locate the exact position of the mass which revealed it to be near the apical third of the 46 and 47 (FIG 3).

Differential diagnosis was made on the basis of clinical and radiographical examination as:

- 1) Ameloblastic fibro-odontoma
- 2) Calcified odontogenic cyst
- 3) Pindborg's tumor
- 4) Complex odontoma.

A gingival crevicular incision was given on the lingual aspect from the mesial of 48 to distal of 43 and subperiosteal

elevation was done to expose the odontome which was removed with the help of dental bur (702) and handpiece in 3 parts. The wound was closed after placing Ab-GEL by 3-0 silk sutures (FIG 4, 5, 6, 7).



Fig 1: Clinical presentation of the odontome in the 4th quadrant.



Fig 2: Radiograph showing the radiopaque mass in the periapex of 46 and 47



Fig 3: A CBCT was done and the extent of the radiopacity was confirmed.



Fig 4: lingual flap elevation



Fig 5: Exposure of the Odontome



Fig 6: After removal of the odontome



Fig 7: Final closure

3. Discussion

The term odontoma was coined by Paul Braco in 1867. He defined the term as tumors formed by the overgrowth or transition of complete dental tissue. It is a growth in which both the epithelial and mesenchymal cells exhibit complete differentiation which results in formation of enamel and dentin by the functional ameloblasts and odontoblasts. These odontogenic cells are usually disorganized, and the enamel, Dentine, and pulpal tissue are laid down in an abnormal pattern [3]. The etiology of ODC is not known clearly. Many theories have been put forth which associate it with infection, trauma and even syndromes [3]. Odontomes show a female predilection in their occurrence. The relative frequency of occurrence varies between 5 and 30%. They can occur at any age but it usually occurs within 3rd Decade of life. With peak in the second decade of life, less than 10% are only found in the patients over 40 years of age. In our case the age of the patient was 42 years. Unerupted teeth are associated with 10–44% of complex odontome and Delayed eruption of at least one permanent tooth, mostly being canines account to 74% [4]. The odontomes are broadly classified by WHO as complex and compound odontomes. The compound odontomes resemble structures involved in tooth formation while the Complex odontomes on the other hand bear little or no resemblance to the teeth [5].

H.M. Worth in 1937 classified odontomas as:

- A) epithelial odontomas arising from dental epithelium, e.g., dentigerous cyst, adamantinoma.
- B) composite odontomas arising from the dental epithelium and dental mesoblastic tissues, e.g., Complex, compound, geminated and dilated.

Thoma and Goldman in 1946, gave a classification as:

- A) Geminated composite odontomas: nearly well-developed fused teeth.
- B) Compound composite odontomas: made up rudimentary teeth.
- C) Complex composite odontomas: calcified structures not resembling normal anatomical arrangement of dental tissues.
- D) Dilated odontomas: enlarged crown or root portion of tooth.
- E) Cystic odontomas: odontoma encapsulated by fibrous connective tissue in a cyst or in the wall of a cyst [5].

Complex odontomas are more common in the posterior segment (59%), with higher occurrence in the right than in the left side [3]. In our case complex odontome was present in the right mandibular posterior region. Due to the lack of

periodontal ligament their eruption varies from the eruption of anormal tooth. Odontomes have no roots and hence, when the size of the odontome increases, it exerts pressure on the overlying bone. This in turn leads to the bone to undergo resorption. The occlusal movements then causes it to erupt. The odontome is usually detected accidentally on a routine radiograph. The common signs and symptoms include impacted permanent teeth and swelling. Complex odontomas appear as an ill-defined radiopacity surrounded by radiolucency which may or may not be associated with any bony expansion [6]. Radiographical appearance also depends on the stage of the calcification. In the first stage, no calcification occurs and hence only radiolucency is seen. In the second stage, calcification occurs partly so radioopacity is seen. In the third stage, calcification is complete and hence, it appears as a radiopacity surrounded by a radiolucent rim [4]. Odontome appears to be in the final stage in our case which is a radiopacity surrounded by a radiolucent rim. If the lesion is located at pericoronal level, presenting as mixed radiolucencies, it should be differentiated from adenomatoid Odontogenic tumors, calcifying epithelial odontogenic tumors, Ameloblastic fibrodentinoma or odontoameloblastoma [4]. Odontoma bears resemblance to other pathologies like Ameloblastic fibroodontomas and odonto-ameloblastomas. Hence, the diagnosis is confirmed with the help of histological Examination of the specimens [4]. Histologically, odontomas comprise varying amount of Enamel, pulp tissue, enamel organ and cementum. The Connective tissue capsule is similar to that of dental follicle. Ghost cells are often seen along with spherical dystrophic Calcification, enamel concretions and sheets of dysplastic Dentin [7].

4. CONCLUSION

Although odontomas are rare but they can be formed in association with impacted and missing teeth [8]. The authors stress upon the importance of routine use of panoramic radiography for early detection of such dental abnormalities and prevention of adverse effects [9].

5. REFERENCES

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