

**CASE REPORT**

# Complex Odontome : A Case Report

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**Abstract:**

*Odontomas are the most common odontogenic tumours. Odontomas are hamartomas composed of various dental tissues enamel, dentin, cementum and sometimes pulp. They are slow growing benign tumors showing non-aggressive behavior. Odontomas have been associated with trauma during primary dentition, inflammation, infection, hereditary anomalies. They are usually asymptomatic and are often discovered during routine radiography. This case is significant as there are few reports of complex odontoma located in anterior region of maxilla.*

**Keywords:** Odontogenic Tumours, complex odontoma, Maxilla.

**Introduction:**

Various factors are responsible for eruption delay of permanent teeth. The causes range from supernumerary teeth, neoplasms (E.g. Ameloblastic fibroma), hamartomatous lesions (E.g. Odontomas), and cystic lesions (E.g. Dentigerous cyst) [1]. Odontomas are hamartomas composed of various dental tissues enamel, dentin, cementum and sometimes pulp. They are slow growing benign tumors showing non-aggressive behavior [2]. odontomas have been associated with trauma during primary dentition, inflammation, infection, hereditary anomalies (Gardner syndrome) [1].

**Case Report:**

A 23 years old Male patients came for replacement of missing right central incisor with history of extraction of deciduous tooth many years ago. Patient was addressed IOPA (Fig: 1) & OPG (Fig: 2) in the site of missing tooth. It was found calcified radio-opaque mass on OPG (Fig: 2) with the presence of displaced permanent tooth. Pt was having pain in same region 5-6 month back. No medications taken. Medical history non remarkable. Patient had habit of chewing tobacco 1 pack per week for 2 years. Quitted habit since 1 year.

On palpation intraoral hard bony swelling on labial & palatal mucosa in region of 11. Palpable fibrous bands on right & left buccal mucosa suggestive of OSMF.

Occlusal view (Fig: 3) & IOPA (Tube shift technique) were ordered which showed radio-opaque irregular mass with peripheral radiolucency in anterior right maxilla. It was palpable on both side so incision taken on labial mucosa & removal of hard tissue done (Fig: 4). It was well circumscribed yellow calcified mass leaving behind a huge cavity which we filled with bone graft material (DM Bone, METABIOMED CO.LTD, KOREA) followed by closure with 3-0 black silk suture [Fig: 5,6, 7].

Patient recalled after 1 day of surgery. Swelling was noted, on prescribing higher antibiotics it subsided on 5<sup>th</sup> day. Patient recalled on 7<sup>th</sup> day for suture removal. Area was absolutely clean without any infection, swelling, and complications.

Histopathological findings confirmed it as complex odontome. It was found structure with enamel, dentine, and pulp tissue.

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Figure 1 : Intra-oral periapical radiograph



Figure 2 : Orthopantomogram

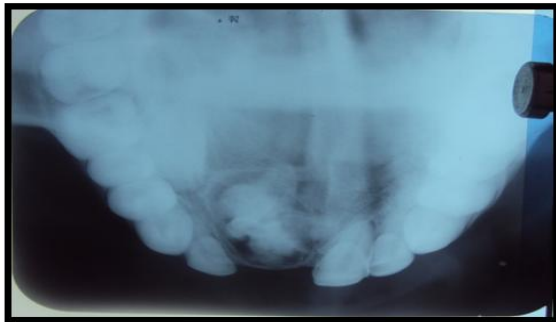


Figure 3: Occlusal view radiograph



Figure 4 : Incision & exposure of surgical site



Figure 5: Exposed calcified odontome



Figure 6: Large empty cavity



Figure 7 : Suturing done 3-0 black silk suture



Figure 8 : Pieces of odontome after removal.

### Discussion:

According to 1992 WHO classification of odontogenic tumors. There are four odontogenic tumors with mixed tissue i.e. Ameloblastic fibroma, Complex odontoma, Compound odontoma and Ameloblastic Fibro - odontoma [1,2].

The term odontoma was first coined by Broca in 1866, who defined it as a tumor of overgrowth of complete dental tissue [3].

In this regard, odontomas are hamartomas composed of various dental tissues enamel, dentin, cementum and sometimes pulp [4]. They are slow growing benign tumors showing non-aggressive behaviour. They are classified as:

**Complex:** calcified tissue present as an irregular mass composed mainly of mature tubular dentin [1,5].

**Compound:** superficial anatomic similarity to even rudimentary teeth [5].

Complex odontomas are less common than compound in the ratio of 1:22. Complex odontomas are tending to occur in the posterior region of jaw and compound odontomas are more common in the anterior maxilla [6]. They may be discovered at any age, although less than 10% are found in patients over 40 years of age [1,5]. Although they are commonly asymptomatic, clinical indicators of odontomas are retention of deciduous teeth, non eruption of permanent teeth. Pain expansion of cortical bone and tooth displacement. Clinically odontomas are either complex or compound and are classified as:

a) **Intra - osseous:** odontomas occur inside the bone and may erupt (erupted odontomas) into the oral cavity.

b) **Extra - osseous:** odontomas occurring in the soft tissue covering the tooth bearing portion of the jaws [1,5].

Odontomas presents as a well defined radio-opacity situated in bone, but with a density that is greater than bone and equal to or greater than that of tooth. It contains foci of variable density. A radiolucent halo, typically surrounded by thin sclerotic line, surrounds the radio-opacity [6]. The radiolucent zone is the connective tissue capsule of a normal tooth follicle [1,5].

**Hitchin** suggested that odontomas are inherited through a mutant gene or interference, possibly post natal, with genetic control of tooth development. Surgical removal of odontomas is included in the absence of any contraindication [7].

As a result of there odontogenic nature, including epithelial and mesenchymal tissue odontomas can develop cystic transformation into dentigerous cyst. This cyst results from the cystic degeneration of

enamel organ after partial or total development of the crown, cystic transformation of the follicle associated with the unerupted tooth may also occur when its eruption is impeded by the odontoma [1].

### Conclusion:

Odontomes are usually asymptomatic and are often discovered during routine radiography. This case is significant as there are few reports of complex odontoma located in anterior region of maxilla. Also this case shows surgical treatment modalities gives best results.

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