



## Cementoblastoma of Maxilla: A Rare Case Report

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### Abstract

Cementoblastoma comprises of <1% of all odontogenic tumors. In the head and neck region, cementoblastoma involving the mandible bone is more common than maxillary involvement. This case report presents a rare case of cementoblastoma involving the anterior wall of maxilla in a young female patient. The clinicoradiological and surgical aspect along with histopathological features of the tumor are discussed in this unique case report.

**Keywords:** Cementoblastoma; Cementoma; Maxilla; Mandible; Facial Swelling; Tumor

### Introduction

Cementoblastoma is an uncommon benign odontogenic tumour derived from ectomesenchyme. It comprises less than 0.69 % - 8% of all odontogenic tumour [1,2]. It is considered as the only true neoplasm of cementum origin. Mostly cementoblastomas are radioopaque but radiolucent cementoblastoma tumour are also present in rare instances [2]. Histologically it comprises of cementum-like substance surrounded by fibrous capsule. In 1930 the lesion was first recognized by Noeberg [3]. The tumor consists of a rounded or nodular mass attached to one or more tooth roots that differentiate the cementoblastoma from an osteoblastoma [4]. Surgical enucleation is the treatment of choice and recurrence rate is rare [5]. In this report we present a rare case of cementoblastoma involving the maxilla.

### Case Report

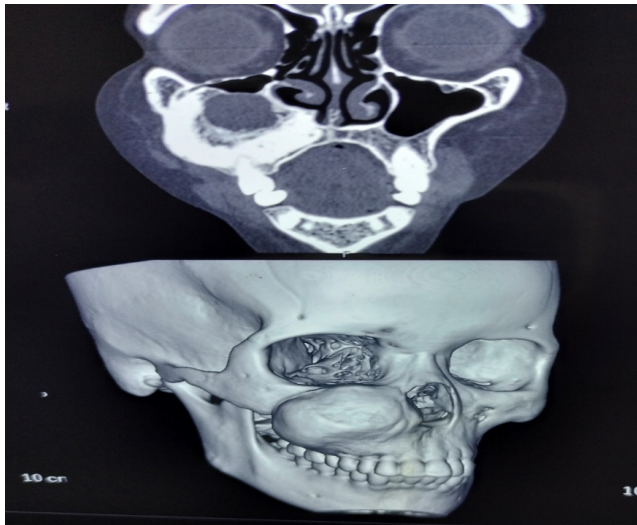
A 23-year-old female presented with a swelling overlying the right cheek area for 8 years (Figure 1). As per the patient, the swelling has slowly and progressively increased in size to reach the current size. There was no associated history of trauma to face, facial pain, fever or weight loss. On examination a



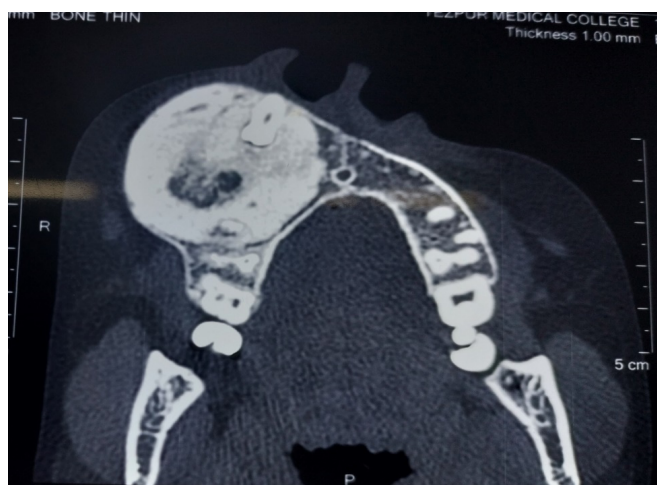
**Figure 1:** Clinical photograph of patient showing facial dysmorphism due to maxillary cementoblastoma.

single swelling of size (4\*3\*2) cm approximately was visualized over the right malar area leading to a gross facial deformity. The swelling extends superiorly till the inferior orbital rim, inferiorly it extends till the upper alveolus, medially it obliterated the nasolabial fold and laterally it extends up to the level of zygomatic arch. There was no overlying venous engorgement, scar sinus, fistula or any other skin changes. The swelling was non tender ,immobile ,non fluctuant, non transilluminant and non-pulsatile computerized tomography of face, nose and paranasal sinus was performed; which revealed a relatively well defined densely sclerotic bony lesion with central lucency arising from right anterior maxilla probably at level of upper canine causing an exophytic growth which was seen effacing the anterior wall of right maxillary sinus leading to its deformity (Figure 2). Two unerupted supernumerary tooth along with displacement of adjacent teeth were also

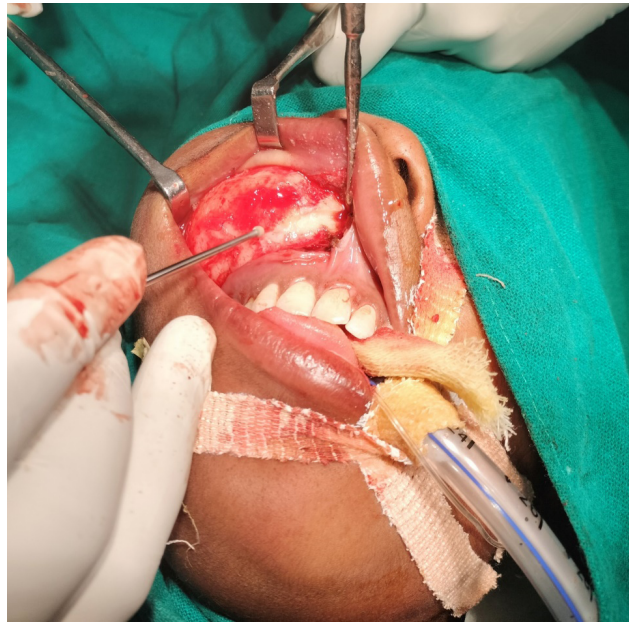
visualized on CT scan (Figure 3). No aggressive surrounding bony destruction was noted. These CT scan features indicated a differential diagnosis of either a cementoma or odontoma. A surgical excision of the mass was carried out via a sublabial approach under general anaesthesia. A horizontal incision was made on the upper alveolus just below the gingival sulcus extending from the level above the upper lateral incisor to the second molar. Mucoperiosteal flap is then raised superiorly till the level of infra orbital rim. The bony mass was also exposed to its medial and lateral extent (Figure 4). The mass was found overlying the anterior wall of maxillary sinus. By doing a gentle dissection, the mass was freed from its soft tissue attachments. The margins of the mass were drilled out to free it out from the surrounding bone. The bony mass was delivered in toto along supernumerary teeth (Figure 5). Hemostasis was achieved. An antibiotic soaked ribbon gauze was placed.



**Figure 2:** Axial and 3D Reconstruction of CT face showing the tumor mass (cementoblastoma) abutting the anterior wall of maxilla.



**Figure 3:** Axial CT showing supernumerary tooth embedded within the tumor mass.



**Figure 4:** Showing the exposed tumor mass via sublabial approach.



**Figure 5:** Showing the delivered specimen along with the supernumerary tooth.

In the maxillary sinus through the defect created along the anterior wall of maxillary sinus and one end of the pack was taken out through an inferior meatal opening. The mucoperiosteal flap was then repositioned and the sublabial incision closed in two layers with absorbable sutures. A pressure dressing was applied over cheek area. Post operatively IV Antibiotics and analgesics were administered along with local ice pack applications. Maxillary sinus pack was removed on the second post-operative day and

patient was discharged from ward subsequently. Patient was reviewed after 1 week with histopathology report. Histopathology revealed a mass composed of anastomosing trabeculae of dense mostly cellular as well as acellular cemental tissue lined by plump cementoblasts at places in a vascular fibroadipose loose stroma. Abundant reversal lines were also noted. These features were consistent with cementoblastoma. Patients were followed up again after a period of 6 months. Apart from occasional mild facial

pain, patient didn't have any other fresh complaints. On examination, there were no signs suggestive of recurrence of the disease.

## Discussion

Cementoblastoma, originally reported by Dewey in 1927, is a benign tumor of cementoblast origin in which the cementoblast forms disorganized cementum around a tooth root, or very rarely, several teeth [6]. By World Health Organization cementoblastomas are classified as a true cemental neoplasm [7]. Males and females under the age of thirty who complain of asymptomatic swelling in the mandibular premolar-molar region are more likely to present with a cementoblastoma [8]. In the present case tumor occurred in the right anterior maxilla in a 23-year-old female. Cementoma arising from long bones is a rare bony lesion [9].

Ulmansky M, et al. in their review found that most of the patients were below 30 years of age [10]. Some authors found male are affected more than female and others found that no sex predilection exist [11,12]. In majority of cases mandible is affected [7,12]. The tumor is asymptomatic and grows slowly; however, in few cases it is associated with mild pain [12]. In this case, the patient complained of a slowly growing swelling over right cheek not associated with pain. Radiographically the tumor usually shows a radiopaque mass fused with roots of teeth and surrounded peripherally by a radiolucent halo [10]. In this case CT scan of face showed a well-defined dense sclerotic bony mass with central lucency, involving the right anterior wall of maxilla extending inferiorly till the level of canine teeth of upper alveolus and contained unerupted supernumerary tooth with displacement of adjacent tooth. Macroscopically, the tumor consists of rounded mass attached to one or more tooth roots [12]. Histopathologically cementum like tissue with reversal line is seen as like paget's disease of bone. Between mineralised and trabecular hard tissue, the cementoblast like cells with fibrovascular tissue is present. As the lesion is benign, tooth removal along with complete surgical excision of tumor is curative with reduced risk of recurrence [13]. This is a rare case which demonstrated classical presentation in terms of age, sex, clinical presentation, radiographical and histological findings. The patient has fully recovered and on follow up no recurrence was seen.

## Conclusion

This paper reports a rare case of cementoblastoma overlying the anterior wall of maxilla. The case is unique because of its presentation as cheek swelling along with unerupted supernumerary teeth and displacement of adjacent teeth as visualized in CT scan. Accurate diagnosis of these lesions is crucial for clinicians to ensure timely and effective

management. If not addressed, cementoblastomas can grow unchecked, leading to gross facial dysmorphism, significant damage to the maxillary sinus and associated complications.

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