

Cementoblastoma Associated with the Primary Second Molar: A Rare Case Report

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Introduction

Cementoblastoma or benign cementoblastoma is the only true benign neoplasm of cementum origin derived from Mesenchyme or odontogenic ectomesenchyme, with or without odontogenic epithelium [1, 2]. The cementoblastoma is a relatively rare odontogenic neoplasm of the jaws comprises 1% to 6.2% of all odontogenic tumors [3]. It is characterized as a large mass of cementum or cementum-like tissue attached to the roots of an erupted permanent tooth and very rarely being attached to the primary tooth [4, 5].

We are presenting here an incidental finding of cementoblastoma in a 10 year old male patient attached to the root of primary second molar.

Case report

A 10-year old male patient came to the Dental Unit with the chief complaint of pain and swelling over lower left back tooth region since 2 months. The pain was a dull, not radiating and intermittent in nature. On examination, a small single, bony hard, non tender swelling was found in the mandibular first molar region with obliteration of the buccal vestibule. The teeth in the affected region were non-carious. The involved tooth was vital and non-tender. The remainder of the examination was within normal limits and oral hygiene was excellent. The extra oral radiographic examination revealed an approximately 1-1.5 cm radio-opaque mass attached to the mesial root of the primary left mandibular second molar and well demarcated by a radiolucent halo (Figure 1).

The observed clinical and radiographic finding led to the provisional diagnosis of benign cementoblastoma and the patient was planned for surgical removal of the tumor along with extraction of the associated molar under local anaesthesia. At the time of surgery, the lesion could be easily differentiated from normal bone (Figure 2). and was removed along with the tooth and the specimen was sent for a histopathological examination for confirmed diagnosis.

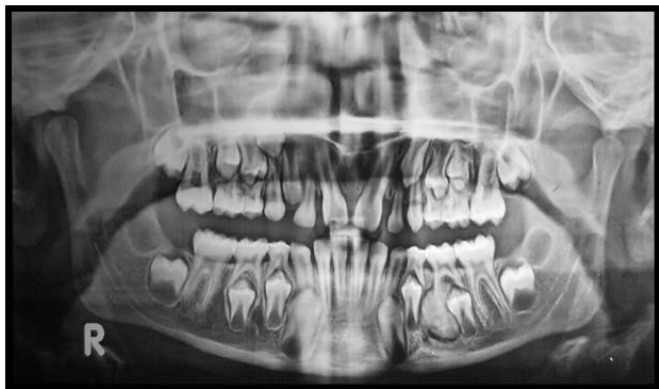


Figure 1: Preoperative X ray OPG revealed a single well defined radio-opaque mass attached to the mesial root of the primary left mandibular second molar with surrounding radiolucent halo.

On histopathology examination, surgical specimen revealed broad trabeculae of sparsely cellular cementum with supporting fibrocellular connective tissue (Figure 3). A final diagnosis of benign cementoblastoma was confirmed and the patient was recalled for regular follow up. On regular follow up, patient was normal with satisfactory results (Figure 4).

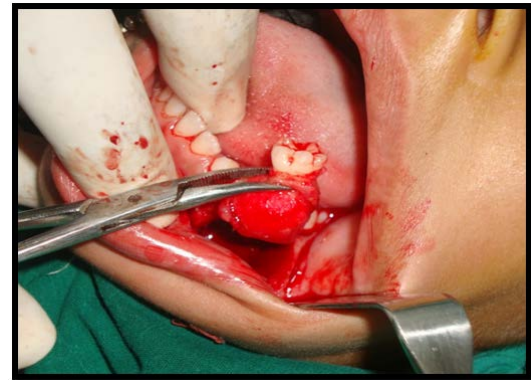


Figure 2: Intraoperative photograph revealed tumor mass along with associated primary second molar.



Figure 3: Postoperative X ray OPG after 6 month revealed erupting second premolar.

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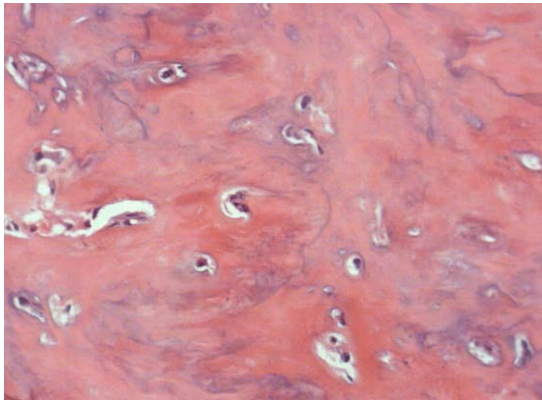


Figure 4: Haematoxylin eosin (20 xs) stained section shows broad trabeculae of sparsely cellular cementum with supporting fibrocellular connective tissue.

Discussion

Benign Cementoblastoma is also called as true cementoma. The benign cementoblastoma was first described by the Dewey in 1927, is a slow-growing, benign odontogenic tumor arising from cementoblasts although there have been reports of aggressive behaviour [6]. It usually presents as a distinct lesion with characteristic radiographic and histopathologic features [5].

Benign cementoblastoma are predominantly seen in young persons in the second and third decades of their lives. Ulmansky et al. [5] reported that close to three quarters of the patients (73%) are under the age of 30. These tumors exhibit a slightly higher predilection for females but the present reported case was of a 10 year old male patient. Cementoblastoma is relatively very uncommon lesion associated with the permanent tooth and even more uncommon with primary tooth, only eight cases associated with primary dentition have thus far been reported in the literature previously [7]. It is most commonly occurred in the mandibular molar area followed by the mandibular premolar area [3, 4]. In 50% of the cases, the mandibular first permanent molar is affected [5, 6] whereas in this case, lesion was associated with primary mandibular second molar which is very rare and unusual. Clinically patients may have complain of pain and swelling but it may be asymptomatic [4, 5]. In addition, it may also cause jaw deformity and displacement of the adjacent teeth [8]. But in present case patient presented with complain of pain and swelling. Radiographically most of the cases of cementoblastoma appear as a well-defined circumscribed radiopaque mass which is confluent with the partially resorbed root of the involved tooth and encircled by a thin radiolucent periphery [5, 9]. This radiographic feature could also be well correlated with the present case which showed a radio-opaque mass attached to the mesial root of primary left mandibular second molar. The clinical and radiographic findings led to the diagnosis of cementoblastoma. Radiographically it should be distinguished from non-neoplastic processes that may also produce a radiopaque lesion around the root apex, such as periapical cemental dysplasia, hypercementosis or condensing osteitis [10]. As compared to cementoblastoma, periapical cemental dysplasia usually produces a smaller lesion without cortical expansion and shows a progressive change in radiographic appearance over time, from radiolucent to mixed to radio-opaque. The radiopaque lesion of hypercementosis is usually small, and there is no associated pain or jaw swelling. Condensing osteitis lacks a peripheral radiolucent halo.

Other radiographic differential diagnosis includes juvenile ossifying fibroma, osteoma, osteoblastoma and odontoma [4, 10]. A diagnosis of cementoblastoma can be established if the lesion is attached to the roots of a tooth. Juvenile ossifying fibroma founds in a similar age group with a predilection for the maxilla and is not attached to the roots. The cementoblastoma is distinguished from the osteoblastoma by its location in intimate association with a tooth root. The odontome is generally not fused with the adjacent tooth and it does not appear as a homogeneous radiopacity.

Since the radiopaque lesions vary in their local aggressiveness and therefore need to be treated accordingly. As cementoblastoma is true benign neoplasm with unlimited growth potential, the treatment should be complete removal of the lesion along with the extraction of the associated tooth followed by thorough curettage or peripheral osteotomy [5, 6]. Cementoblastoma has good prognosis if complete excision and removal of the associated tooth is performed. With incomplete removal, recurrence is common and it appears to be highest for those who are treated with curettage alone [11]. In the present case tumor mass was surgically excised along with the extraction of associated tooth and satisfactory results with no recurrence were found on regular follow up of the patient.

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Conflicts of interest

There are no conflicts of interest.

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