CASE REPORT

# Benign Cementoblastoma: A Case Report

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**Abstract**

Cementoblastoma is the abnormal growth of tissue resembling cementum of the tooth root, rarely endangering any surrounding vital structures. In this article, a case is presented in which pre-operatively the patient had paresthesia of the inferior alveolar nerve which gradually resolved post-operatively.

## Introduction

Cementoblastoma is a benign neoplasm of mesenchymal origin that affects the jaws but is encountered rarely[1]. According to the World Health Organization, it is defined as a neoplasm characterized by formation of sheets of cementum like tissue, which may contain a very large number of reversal lines as well asunmineralized tissue at the periphery of the mass or in more active growth areas. In 1966, in the Classification of Odontogenic Tumors, it was sub-divided into four categories including benign cementoblastoma, cementifying fibroma, peripheral cemental dysplasia and gigantiformcementoma.

Benign cementoblastoma is more common in males under the age of 25 years, and occurs in premolars or molars region. Radiographically, it appears to be a mottled dense mass with radiolucent periphery and attached to the roots[2]. Cementifying fibroma differs from the benign variant as it usually occurs in middle aged patients with an appearance of well-demarcated radiolucent area containing varying amounts of dense material radiographically. Peripheral cemental dysplasia mainly involves the anterior mandible in post-menupausal women, and has a radiolucent appearance in the early stages but becomes dense in final stages. Histologically, it differs from the other two varieties as it contains a mixture of cementicles and woven bone. The fourth variant occurs as dense mass with no radiolucent zone in middle-aged women, and has a racial predilection towards Negros.

The first case ever reported of a true benign cementoblastoma was in 1930 by Norberg. In this case report, a case of a 15 year old patient with a benign cementoblastoma of left mandibular molar is presented.

## Case Report

A 15 year old girl presented to our hospital with complaint of swelling on left mandible for the last 2 months. There was no associated pain present and the patient's concern was the extra-oral swelling and paresthesia of lower left jaw. Her past medical and dental history was unremarkable. On examination, a firm to hard swelling with mild expansion of buccal and lingual cortices was found in left mandibular first molar region. The teeth appeared sound with no clinical signs of periodontal involvement or any caries. A panoramic radiograph was performed and

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the left mandibular first molar was found to have a radio-dense lesion of about 4cm starting from its furcation region and the cemento-enamel junction and involving it uptotheperiapical region (fig.1). The dense mass was surrounded by a radio-lucent rim. There was no resorption of the adjacent teeth. The lesion appears to be encroaching the mandibular canal as well.

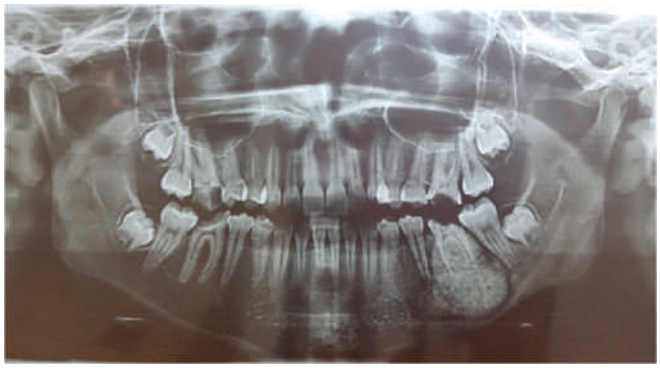

**Fig.1:** *Pre-operative radiograph of the patient showing the radio-opaque lesion associated with the first molar*

It was decided to remove the lesion under general anesthesia. A sulcular incision was planned with the exposure of the adjacent teeth as well and the lesion along with the involved tooth was removed. Inferior alveolar nerve was found to be pushed towards the lower border of the mandible but remained intact. After removal of the lesion, reconstruction of the mandible was indicated, but it was decided not to augment it as the lingual cortex was intact. To avoid unnecessary forces on the lower border, the patient was decided to be kept under maxilla-mandibular fixation for 4 weeks. The wound was closed and irrigated and the specimen was sent for histopathology. The patient was referred for the endodontic treatment of the adjacent teeth as the bone distal to the second pre-molar and the mesial to the second molar was removed along with the lesion.

On histopathological examination, the features of the tissue were found to be compatible with benign cementoblastoma. The patient was closely followed up and the maxilla-mandibular fixation (MMF) was released after 4 weeks. Successive radiographs were performed to evaluate the healing of the lower border of the mandible and it was found to be adequate. Paresthesia of the lower lip was resolved within 6 weeks post-operatively.

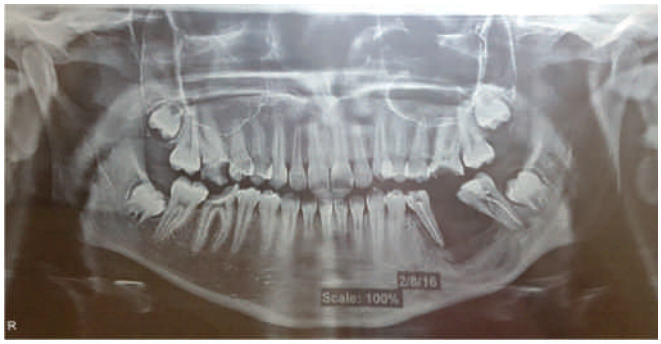


**Fig.2:** *post-operative radiograph after 1 month*

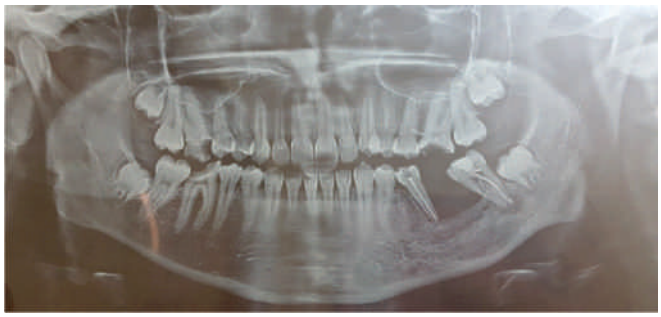

**Fig 3:** *6 months after removal of the lesion; note the bone formation post-operatively*

## Discussion

Cementoblastomais a rare odontogenic tumor, mainly involving the posterior mandible. Usually it affects patients under the age of 25 years but the age range reported in literature is between 8 years to 72 years[1]. In the literature, the right side was involved more commonly than the left side but in our case, there was involvement of the left side of mandible. First molars are the most commonly involved teeth.

The clinical and radiographic picture of the lesion mimic the presentation of osteoblastoma, giant osteoid osteoma, ossifying fibroma, hypercementosis, focal sclerosing osteomyelitis, osteitisdeformans, fibrous dysplasia and osteosarcoma. It has been seen in the literature that the benign cementoblastoma never involves the inferior alveolar nerve, but paresthesia of the nerve was found in our case and the nerve was intact but pushed towards the

lower border of the mandible leading to paresthesia of the region[3]. Paresthesia was subsequently relieved after removal of the lesion.

On his to pathological evaluation, the lesion appears to have sheets of cementum like tissue with reversal lines and active cementoblasts may be found along with irregularly mineralized trabeculae of cementum. In some lesions, a band of fibrous connective tissue is present as a capsule surrounding the mineralized part. The tumor seems to have an active growth at the periphery with mineralization occurring from the center of the lesion but it does not recur and has never been found to metastasize. To confirm the diagnosis and rule out the more severe forms of differentials, the tumor must be enucleated along with the associated tooth and sent for pathological assessment. The prognosis of the lesion is excellent.

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