



ORIGINAL RESEARCH PAPER

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BENIGN CEMENTOBLASTOMA OF MANDIBULAR PREMOLAR

KEY WORDS:

Cementoblastoma, radio-opaque mass, cementoblasts

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ABSTRACT

Benign cementoblastoma is a rare odontogenic tumour characterized by the formation of a mass of cementum or cementum like tissue attached to the roots of the tooth. It is probably a true neoplasm of functional cementoblasts that usually occurs around the root of a mandibular premolar or molar tooth. They are slow growing lesions and are usually asymptomatic; pain and swelling may occur. This report presents a cementoblastoma of mandibular premolar near the first premolar in a 42-years-old male patient which was surgical excised under local anesthesia.

CASE REPORT

A 42-year-old male presented to the department of dental surgery with a chief complaint of a swelling in the lower left back tooth region since one year. Patient gave history of painless swelling which was not increasing in size instead remained the same. His medical and family history was non contributory.

Intra oral clinical examination, a small buccal swelling in the left mandibular first premolar region could be appreciated. It was roughly oval in shape, with well defined borders, measuring approx 0.5cms in diameter; no other secondary changes were seen. The teeth in the affected region were non-carious. On palpation the swelling was hard in consistency, non tender, not movable. The involved tooth was vital and non tender. The remainder of the examination was within normal limits and oral hygiene was excellent.

Intraoral Periapical radiograph and orthopantamogram showed a circular radio-opaque mass, approximately 0.5 cms in diameter, associated with the left mandibular first premolar. The lesion was well demarcated by a radiolucent halo.

The analysis of the clinical and radiographic findings points to the preliminary diagnosis of cementoblastoma. Periapical cemento-osseous dysplasia, ossifying fibroma and odontoma were discussed as differential diagnosis. The patient was informed about the nature of the disease, the proposed treatment and after obtaining informed consent surgical excision under local anesthesia was scheduled. Post-operative period was uneventful.

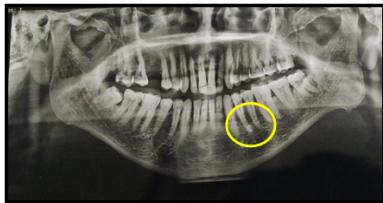


Fig 1 orthopantamogram

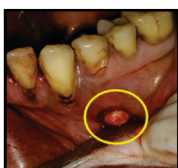


Fig 2 preoperative image



Fig 3 post operative image



Fig 4 sutures placed

DISCUSSION

A benign cementoblastoma, which is another name for a true cementoma, is a rare neoplasm that develops from odontogenic ectomesenchyme.[1,2,3] Norberg reported first cementoblastoma in the year 1930.[4] It is classified as a tumor of ectomesenchymal origin, with or without inclusion of epithelium by WHO classification of 2005.[5] It has three stages during its course of development such as periapical osteolysis stage, cementoblastic stage and maturation and calcification stage.[6]

They usually occur in the second or third decade of life. Males are affected slightly more than females and there is no significant sex predilection, mandible is involved more often than the maxilla. Typically, the lesion is seen on the posterior region of the mandible and commonly involves a first molar. The neoplasm exhibits a slow growth pattern, and the lesions vary in size between 0.5 and 5.5 cm .[7,8]

Differential diagnosis includes condensing osteitis, osteoblastoma, odontoma, cementoossifying fibroma, periapical cemental dysplasia, and hypercementosis .[9]

Pain, tenderness, and swelling are present in most patients with cementoblastoma, although the lesion can be asymptomatic. The involved tooth is vital and often exhibits pain. Radiographically, cementoblastoma appears as a welldefined circumscribed radiopaque or mixed mineralized mass fused to one or more tooth roots of the involved tooth and has a radiolucent rim. [10]

Histologically, the tumor tissue consists of acellular and irregular layers of a calcified cementum-like mass attached to the root of the tooth, with trabecular calcified bone-like areas and cementoblasts observed in the calcified matrix and fibrovascular stroma. The periphery of the tumor is less mineralized and includes cementoblasts. The histopathologic presentation of cementoblastoma closely resembles that of osteoblastoma, but

can be distinguished by fusion of the tumor with the involved tooth. [11]

Due to the benign neoplastic nature of the lesion, the treatment of choice is complete removal of the lesion with extraction of the associated tooth. A more conservative technique, to retain the involved tooth and remove the lesion using a surgical endodontic approach, has been reported [12].

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