Benign Cementoblastoma: A Case Report

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ABSTRACT

Benign cementoblastoma is a rare odontogenic tumour. It usually affects young adults below 30 years of age and not having any sex predilection. Mandible is involved more frequently than maxilla and premolar, molar region is common site of occurrence. It is usually asymptomatic but may present with pain, swelling and facial asymmetry. The treatment of choice is complete removal of tumour with extraction of affected tooth. Recurrence is very rare. The case reported here is of a 15 year old girl having benign cementoblastoma in relation to lower left second molar which was managed successfully.

Keywrds: Odontogenic Tumour, Cementoblastoma, Lower Second Molar

INTRODUCTION

Cementoblastoma is a benign odontogenic tumour of mesenchymal origin. It is actually a hamartomatous proliferation of cementoblasts resulting in disorganised formation of cementum around the apical half of a tooth root[1]. These tumours are generally found in the premolar and molar region of either jaw. Mostly it is found in the teenagers or adult younger than 30 years with predilection for mandible.

Cementoblastoma are generally asymptomatic but symptoms like pain and swelling are reported in literature review in many cases[2-4]. The diagnosis is confirmed on histopathological examination and clinico-radiological findings. No recurrences have been reported after complete enucleation of tumour with extraction of involved tooth[4-6].

The present case report describes a benign cementoblastoma in relation to the mesial surface of root of lower left second molar. The case was managed by surgical enucleation of lesion along with extraction of 37 transorally.

CASE REPORT

A 15 year old girl reported to our center with complaints of progressively increasing swelling in the left cheek and occasional pain in the lower left back teeth since last three months. Her medical and family history was noncontributory. There was no history of trauma or other dental problem. On clinical examination no abnormality was detected on upper and middle third of the face. A diffuse fullness on left masseter region was obvious. TMJ moments were within normal limit with satisfactory mouth opening. Oral hygiene was fair, carious 37 with vestibular obliteration in 36, 37 area was found (Fig-1). On palpation a 1.5 X 1.5 cm nontender, nonpulsatile bony hard swelling buccal to 36, 37 was palpable. There was no pain on percussion on 36, 37. No discharging sinus or neurosensory deficit was elicited. Radiographs PA mandible, 30° lateral oblique view of left mandible and intraral periapical view 36, 37 region depicted a radiopaque mass of 1.5 X 1.5 cm dimension in relation to roots of 37 starting from CE junction till the apex with radiolucent margin all around the radio-opacity (Fig-2). Slight depression on distal root of 36 was also observed on IOPA radiograph. On the basis of clinicoradiological presentation, a diagnosis of cementoblastoma in relation to 37 was made. Surgical removal of the lesion under local anaesthesia through intraoral approach was planned. Routine haemogram and urine examination were within normal limit.

Operating Procedure

Extended third molar incision was used to expose the lesion after achieving local anaesthesia. The lesion with 37 was removed in toto with rotary instruments (Fig-3 &4). The lining all around the lesion was curetted out without tear and the specimen was sent for HPE. Bone smoothening and wound toileting was done using saline irrigation, hemostasis achieved and primary closure of wound was done using 3-0 vicryl. Amoxicillin 500mg, paracetamol 500 mg with ibuprofen 400 mg and trypsin chymotrypsin (100000AU) were prescribed every 8 hourly through oral route for three days. The girl was followed up periodically on 7th post op day, one month, 3 months and 6 months interval. Healing was uneventful with complete regenerated bone fill was evident on IOPA X-ray (Fig-5). Histopathological examination report revealed vascular stroma with sheets of proliferating lamellated cementum like material and lack of insterstitial tissue (Fig -6). A diagnosis of benign cementoblastoma was made.

DISCUSSION

Cemtoblastoma is relatively a rare tumour of odontogenic cementomesenchyme. WHO in the classification of odontogenic tumour has mentioned it as cementoma neoplasias[3]. The etiology of its origin is still not certain but the lesion derives from mesenchymal tissue[4,5].

Benign cemtoblastomas are seen in young individuals and equally distributed between both sexes[6-9]. As per literature review by Ulmanskyet et al, 73% of these lesions occurrs under the age of 30 yrs[2]. The mandible is seen to be involved frequently than maxilla[8-10]. It is more commonly seen

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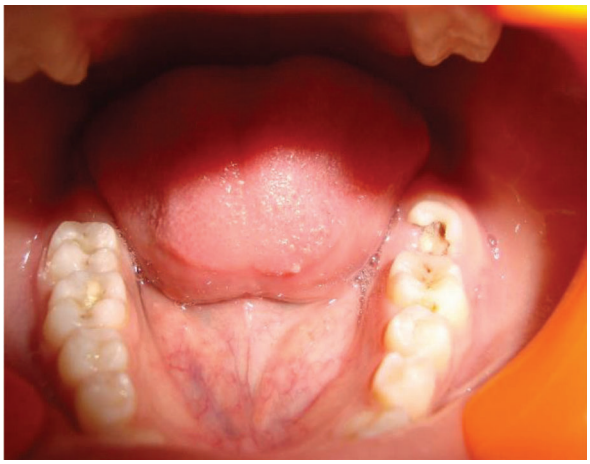

Figure-1: Intraoral presentation

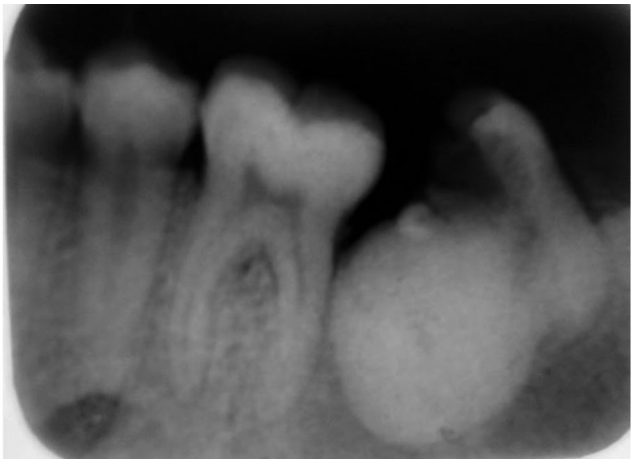

Figure-2: IOPA radiograph depicting radiopaque mass

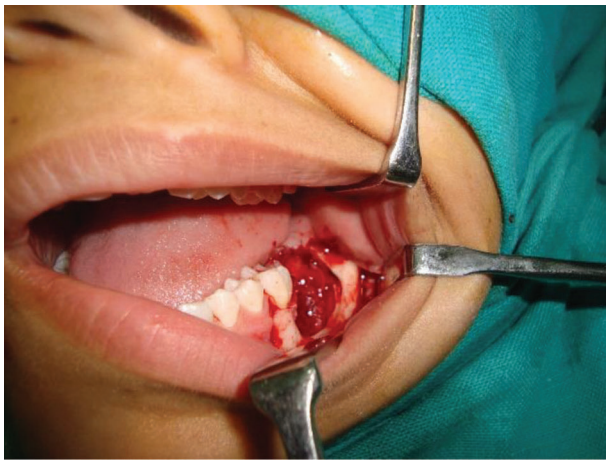

Figure-3: Bony defect after enucleation

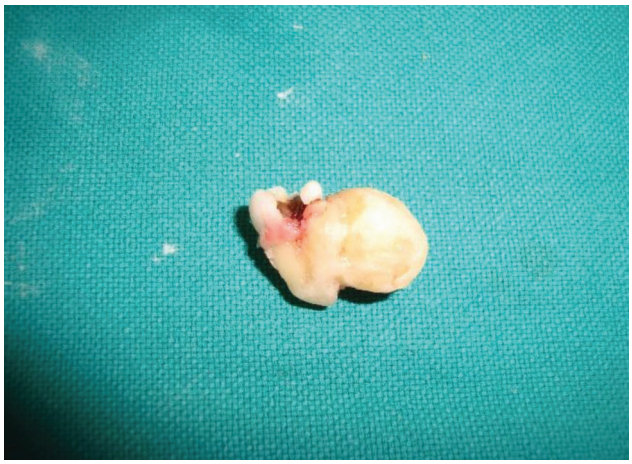

Figure-4: Specimen with involved tooth

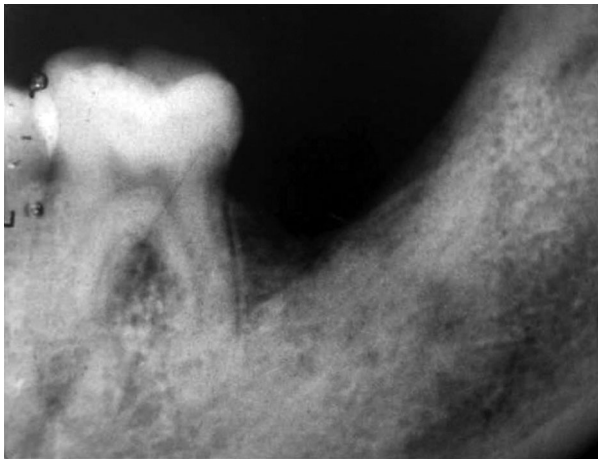

Figure-5: IOPA radiograph depicting bone fill

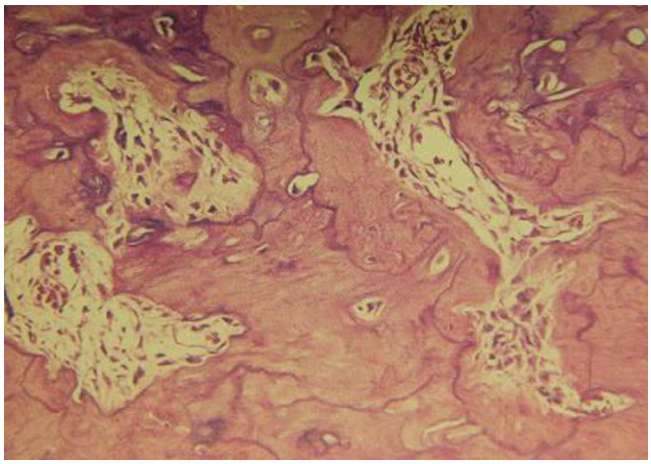

Figure-6: HPE depicting vascular stroma with proliferating cementoblasts

proximal to mental foramen in the premolar molar region and usually affected tooth is first molar[2].

Cementoblastoma has got unlimited dysmorphic growth potential. Because of this nature it is recommended to be enucleated with extraction of affected tooth. The fibrous capsule around the lesion helps in delineation from adjacent bone and facilitates complete removal[1]. This is usually performed transorally by removal of thinned outer cortical plate at the buccal aspect and the resultant bone cavity is closed primarily without any drain or graft placement which was followed in the present case.

Histopathology of cemtoblastoma is very pathognomonic. The fibrous capsule lining is usually the continuation of periodontal ligament. The tumour consists of osteocementum like material arranged in sheets which is continuous with the tooth root. The proliferating cementum is lined by numerous plump cell with occasional presence of cementoclasts and the fibrous stroma is highly vascular . These characteristic features were present in the case reported here (Fig 6).

The cementoblastoma rarely involve third molars, in the present case tooth involved was second molar. The lesion is slow growing and usually asymptomatic. Pain and swelling with cortical expansion develop on due course of time due to pressure effect and secondary infection through gingival crevices of the involved tooth. In the present case pain and swelling with facial asymmetry was reported by the patient which is well supported in literature[6,7]. On radiograph, the lesion characteristically depict as spherical, radiopaque mass fused with the root of tooth and often replacing the apical half of the root. This mass is not periapical per se but arises from and obliterates the outline of the root's apical half instead. There is characteristic radiolucent margin around the lesion mimicking periodontal ligament space[1]. Intraoral periapical radiograph of the present case depicted the same features as supported in literature (Fig-2). This distinguishing features of cementoblastoma helps in differentiating it from other radiopaque lesion in relation to tooth roots such as osteoblastoma, ossifying fibroma, odontoma, chronic sclerosing osteitis, osteomyelitis and osteosarcoma[7].

CONCLUSION

Benign cementoblastoma is a rare odontogenic tumour of young adult. It needs thorough investigation and precise surgical planning to avoid complications in growing individuals. The case reported here is a 15 years old girl with cementoblastoma in relation to lower left second molar which was managed successfully without any complication. The patient is on long term follow up and after one year of review no recurrence was reported.

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