



Lingual Osteoma: A Case Report

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Abstract

Osteomas are benign osteogenic lesions with very slow growth, which may arise from proliferation of either cancellous or compact bone. These lesions are uncommon in jaw. A 49-year-old female patient reported to our department with a complaint of painless swelling in inner gum of lower right back teeth region since 20 years. A well-defined radiopaque lesion was evident in occlusal radiograph. In this case report, we discuss about diagnosis and the possible treatment modality of this entity.

Keywords: Benign tumor, osteoma.

Introduction

Osteoma is a benign tumor composed of mature compact or cancellous bone that increases in size by continuous formation of bone. It is a slow-growing, asymptomatic usually solitary lesion, which commonly affects the young adults. Osteoma is essentially restricted to craniofacial skeleton and rarely, if ever, diagnosed in other bone. The lesion is found more in the mandible rather than in the maxilla with the lingual aspect of the body of mandible and lower border in the region of angle and can be managed by osteo contouring surgery.

Case Report

A 49 year-old female patient reported to our department with a complaint of painless swelling in inner gum of lower right back teeth region since

20 years. Patient was apparently normal before 20 years, according to patient it was spontaneously painless observation which she ignored earlier as it was smaller in size and was not creating any functional limitations. However since 2 months she felt that swelling had increased in size and now it is interfering in tongue movements. Intraorally, on local examination, a well-defined, well-circumscribed swelling of about 2*1*1 cm is seen on lingual gingiva from 43 to 46 region. It is extending from mesial side of 43 to region of root of 46. Bucco-lingually it extends from lingual gingiva to 1 cm toward floor of mouth. Superior-inferiorly it extends front 1-2 mm below gingival margin to 1 cm deep into floor of mouth.

Periphery is well defined, lesion is non-tender and hard. Overlying mucosa is light pink, lesion shows sessile base towards its attachment to

lingual gingiva. Lesion is free from rest of floor of mouth or tongue. buccal gingiva of these teeth appear normal. mobility or tenderness on percussion are absent. teeth are vital except 46. [Figure 1].



Figure 1: Lesion of the lingual aspect of the mandibular right region



Figure 2 : Occlusal Radiograph

A occlusal radiograph showing a well defined, well circumscribed oval radiopacity of about 2*1 cm in size is seen lingual to lingual cortex adjacent to 43 to 46 root pieces region. Periphery is well defined thin radiopaque corticated continuous outline. Internal structure shows homogenous indistinct trabeculae interspersed with radiolucent areas equivalent to medullary bone. Regional alveolus bone appears unremarkable. [Figure 2].

Blood and serum investigations were within normal limits. Based on history and clinical examination, Differential diagnosis of osteoma, periphery ossifying fibroma, tori, exostoses was made.

The patient underwent surgical intervention under conscious sedation, where osseous contouring surgery was planned. A crevicular incision was placed from 41 to 47 region, following it a full thickness mucoperiosteal flap was raised with help of periosteal elevator, the lesion was exposed

and excised with help of surgical hand piece and 702 bur. Also extraction of 46 root piece done [Figure 5,6].

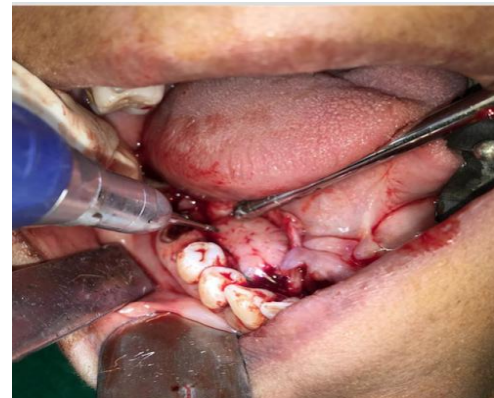


Figure 3: Flap reflected and surgical excision of the lesion was done.

The decalcified Hematoxylin and Eosin stained histopathological section showed an eosinophilic, compact, mature lamellar bone with few dispersed lacunae along with osteocytes within it and also Few vascular channels were present within the haversian canals surrounded by concentric lamellae's, which were also evident (Fig 6).



Figure 4: excised lesion



Figure 5: Osteoplasty Done

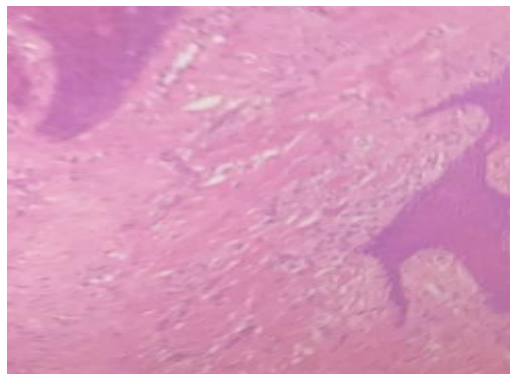


Figure 6: Photomicrograph shows haversian canal & osteocyte in the lacunae, mature lamellar bone (H&E stain, ×40).

Lingual cortical plate smoothen by Acrylic trimmer bur. Final closure was done with 3-0 silk. Hemostasis achieved. The specimen is subjected to oral pathology department for the histopathology report.



Figure 7: Post Operative healing after 1 month. The post operative recovery was uneventful. (Fig 7)

Discussion

Osteomas are benign osteogenic lesions with very slow growth^[4] They may arise from proliferation of either cancellous or compact bone. They can be central, peripheral, or extra skeletal, Usually asymptomatic. These lesions may proliferate in medullary bone (central Osteoma) or on the bone surface (Peripheral Osteoma) as a polypoid or sessile mass. These tumors are mainly located on the skull and in the frontal, ethmoidal, and maxillary sinuses. peripheral osteoma of the jawbones are rare.

These lesions are more frequent in the mandible than the maxilla. In the mandible, the most

common sites are the angle and lower border of the body of the mandible, locations that are more susceptible to trauma. Sometimes the location of peripheral osteoma of the jaws is usually in close proximity to areas of muscle attachment, suggesting that muscle traction may play a role in its development^[7].

Sayan et al.^[5] reported finding 22.85% of the lesions in the mandible and 14.28% in the maxilla in their study; also, Kaplan et al.^[6] reported that 81.3% of cases occurred in the mandible. There is a 3:1 female predilection. The mean age of patients with osteomas in the maxillofacial region has been reported to be 29.6 and 40.6 years.

Various hypotheses have been set forth with regard to the etiology of osteoma. These include congenital and hereditary disorders, developmental origin, neoplastic or reactive mechanism to trauma or infection. As in this case infected root piece can be etiological factor.

Most cases of peripheral osteoma have a very slow growth rate, without significant symptoms. In many cases, the discovery of the peripheral osteoma is an incidental finding. In some cases, however, depending on the location, the size of the tumor may cause facial deformity, deviation of the mandible on opening, headache and exophthalmos.^(8,9) In our case, lesion was interfering in tongue movements.

Histologically, an osteoma consists of either normal- appearing dense mass of lamellar bone with minimal marrow tissue (compactosteoma), or of trabaculae of mature lamellar bone with intervening fatty or fibrous marrow (cancellous bone).

Osteomas are completely benign and patients do not experience malignant change or recurrences after excision. When associated with gnathic lesions they are associated with facial deformity. The osteomas appear as areas of increased radiodensity that vary from slight thickening to large masses.^[9]

Differential diagnosis: peripheral osteoma should be differentiated from several pathologic entities, such as astori, ossifying fibroma. Tori is a nodular

protuberances in the palate or lingual aspect of mandible that usually stop growing after puberty, differentiating them from osteomas^[11]. The borders of ossifying fibromas are well-defined, and a thin, radiolucent line may separate it from the surrounding bone. A sclerotic border may be present in the bone next to lesion. Patients of osteoma associated with impacted or supernumerary teeth, they should be evaluated for the possible Gardner's syndrome.

Peripheral osteomas are usually pedicled, so the surgical excision is usually simple^[10] as was also in this case. Radiographic follow up on a six month schedule is recommended for two to three years^[8]. The post operative follow-up should include periodic clinical and radiographic studies.

Conclusion

Osteoma of craniofacial region is a rare, slow-growing, benign lesion. So whenever a case of bony hard swelling in craniofacial region is encountered, osteoma should be included in the differential diagnosis and treatment modality for osteoma should be an osseous contouring surgery, if the patient is symptomatic.

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