Osteoma – A report of two cases

Bhaskar YH¹, Shaminey SA², Gopika Manoharan GVM³

ABSTRACT

Osteomas are benign, slow-growing osteogenic tumors commonly occurring in the craniofacial bones. Osteomas are characterized by the proliferation of compact and/or cancellous bone. It can be of a central, peripheral, or extraskeletal type. The peripheral type arises from the periosteum and is rarely seen in the mandible. We deal with the report of two cases of osteoma with no history of any trauma and emphasis on radiological findings.

Key words: Peripheral osteoma, periosteum, osteogenic tumour, benign, cancellous bone

Introduction

Osteoma is a benign often asymptomatic neoplasm, consisting of well-differentiated matured bone. It is characterized by proliferation of either compact or cancellous bone in an endosteal or periosteal location. [¹] The central osteoma arises from the endosteum, the peripheral osteoma from the periosteum and the extra-skeletal osteomas are found mainly in the craniofacial bones. The peripheral osteoma (PO) occurs most frequently in the paranasal sinuses. Other locations include the orbital wall, temporal bone, pterygoid processes, and external ear canal. As noted in previous reports in the literature, a solitary PO of the jaw bones is quite rare, involving the mandible more often than the maxilla. [²,³,⁴] This paper presents two cases of peripheral osteoma, without syndromic involvement.

Case report

A 31 year old male reported to the Department of Oral Medicine and Radiology with a chief complaint of painless swelling in left side of the lower part of face for the past six months. The swelling gradually increased in size to attain the present size. The swelling was not associated with pain. No history of trauma. There was no similar type of swelling present elsewhere in the body. Past medical and dental history was non contributory. On extra oral examination facial asymmetry was present on left side of the face. A solitary swelling of size 3 x 3 cm present in left angle of the mandible. The borders were ill defined. On palpation, the swelling was bony hard in consistency non tender, immobile, attached to the underlying tissues. (Fig. 1) Intra orally all the teeth were except 36 were present. No
significant intra oral changes were noted on inspection. On palpation, a bony hard, non tender swelling was palpable on the buccal aspect of 38 in the vestibular region. Lateral oblique view of mandible revealed an irregularly shaped radioopaque mass present in left angle of mandible. (Fig. 2) Panoramic radiograph revealed a well defined irregularly shaped uniformly radio opaque mass present in left angle of mandible, extending beyond lower border of mandible. (Fig. 3) Cone beam computed tomography revealed a pedunculated hyperdense mass with an irregular appearance attached to buccal aspect of left angle of the mandible. (Fig. 4) The case was provisionally diagnosed as peripheral osteoma of the mandible. Under local anesthesia the lesion was surgically excised. (Fig. 5) Histopathological report was consistent with clinical diagnosis of osteoma.

**Case Report: 2**

A 16 year old male reported to the Department of Oral Medicine and Radiology with the chief complaint of swelling in the left cheek region for past year 3 years. History revealed that the swelling was small in size initially and progressed slowly to
attain the present size. His past medical and surgical history was non contributory. No history of trauma or any other similar swelling elsewhere in the body was present. On examination, the patient has the facial asymmetry due to diffuse swelling present in left maxillary region. It was hard in consistency, non tender, skin over swelling is pinchable, on palpation. Intra orally, a solitary swelling present in relation to 24 to 26 region, of size 2 x2cm present at the attached gingival level, covering the crown of 25,26 region, mucosa over the swelling was normal, hard bony in consistency, non-tender. (Fig.6)

OPG revealed altered trabecular pattern seen in relation to 25, 26 region. (Fig. 7) CBCT revealed buccal cortical plate expansion present on the buccal aspect of 25, 26 attached to alveolar process. (Fig.8) The case was provisionally diagnosed as Osteoma of the left maxilla. Differential diagnosis of fibrous dysplasia and ossifying fibroma was given. Under local anesthesia the lesion was surgically excised. (Fig. 9) Histopathological report was consistent with clinical diagnosis of osteoma.

Discussion
Osteomas are rare benign tumors of bone commonly seen in the maxillofacial skeleton. Peripheral osteomas are more frequent in the mandible than the maxilla. To best of our knowledge, and there are only 10 cases of maxillary osteomas apart from its location in maxillary sinuses previously described in the English literature. [5] Kaplan et al reported that 81.3% of cases occurred in the mandible [6] and Sayan et al. reported that 22.85% of the lesions in the mandible. [7] Males and females are equally affected, while the age
varies between 9-85 years. But in present paper, case 2 presented with lesion on the left maxillary region which was not the most common site as per the literature. Osteomas are usually slow growing, painless solitary masses that are palpable unless they develop within the medullary space. Periosteal osteomas clinically appear on the surface of bone as a polypoid or sessile mass, with freely mobile underlying mucosa.\(^8\) The discovery of an osteoma of the facial skeleton should raise the possibility of Gardener’s syndrome. Patients with Gardener’s syndrome may present with symptoms of rectal bleeding, diarrhea and abdominal pain. The triad of colorectal polyposis, skeletal abnormalities and multiple impacted or supernumerary teeth is consistent with this syndrome. Skeletal involvement includes both peripheral and endosteal osteomas. Since the osteomas often develop before the colorectal polyposis, early diagnosis of the syndrome may be life saving in certain cases. Mandibular osteomas may be a genetic marker for the development of colorectal carcinoma. Therefore the patient with a diagnosis of mandibular osteoma, suspected to have Gardener’s syndrome, should be further evaluated to rule out colorectal carcinoma.\(^9\) In the present paper both patients did not manifest any associated systemic conditions. 

The exact etiology and pathogenesis of peripheral osteoma is unknown. Both hamartomatous and neoplastic factors have been advocated, but no definite conclusion has been reported. Infiltration of interdental bone and abnormal histological bone structure might support the neoplastic nature of this lesion.\(^10\) It is unlikely that peripheral osteomas are a developmental anomaly, as most cases occur in adults. Some investigators have classified them as a reactive condition triggered by trauma. But in our case the etiology was not clear as the patients had no history of trauma. Peripheral osteomas, in most cases, are easy to recognize because of their classic radiographic findings. On radiological imaging, a peripheral osteoma of the mandible is a classically well-circumscribed, round or oval, mushroom-like radiopaque mass with distinct borders. The lesion may be sessile and attached to the cortical plates with a broad base. If a peripheral osteoma is pedunculated, a narrow contact area can be seen between the lesion and the compact bone. In our case, the lesion consisted of radiopaque mass attached to buccal cortex of left angle of mandible and left maxillary region.

Peripheral osteoma should be differentiated from several pathologic entities, such as exostoses, osteoblastoma, and osteoid osteoma, calcified lymph node, late-stage central ossifying fibroma, or complex odontoma. Exostoses are bony excrescences that usually stop growing after puberty, differentiating them from osteomas. The borders of central 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 the lesion. Osteoblastomas and osteoid osteomas are more frequently painful and grow more rapidly than peripheral osteomas. Calcified lymph node especially if, it is in the lower border of the mandible. A complex odontoma presents as a well defined radiopacity situated in bone, but with a density that is greater than bone and equal to or greater than that of a tooth. It is also surrounded by a narrow radiolucent rim.
But in our cases the lesion appeared as a radiopaque mass attached to the buccal cortical plate without a radiolucent rim and our patient experienced no pain.

**Conclusion**

Osteomas are diagnosed and treated by local excision. Recurrence of peripheral osteoma after surgical excision is extremely rare. The goal of follow-up is to look for new osteomas or other signs indicative of Gardner’s syndrome, but it was ruled out in our case. Malignant transformation of peripheral osteoma has not been reported in the literature. In conclusion, osteomas are slow growing benign tumors with a very rare recurrence rate. Local excision is treatment of choice.

**References**


Source of Support: Nil
Conflict of Interest: No