CASE REPORT

A Rare Case Report of Peripheral Osteoma

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ABSTRACT

Introduction: Osteoma is a benign tumour that consist of mature, compact, or cancellous bone. Osteomas that arise on the surface of bone are called as periosteal osteomas, whereas those developing centrally are called endosteal osteomas. A report is presented of a rare case of Peripheral Osteoma.

Case report: We present here a case of peripheral osteoma located in right upper back tooth region in a 35 year old female patient. There was no radiologic evidence of bone involvement. The osteoma was surgically removed and no recurrence was found.

Conclusion: Peripheral osteomas of the maxilla are uncommon bony lesions. Final diagnosis should only be made after complete clinical and histopathological diagnosis.

Keywords: Osteomas, Compact bone, Peripheral Type

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INTRODUCTION

Osteomas are benign neoplasms in which apposition of newly formed bone creates a tumor mass. Majority of cases involve the paranasal sinuses and the jawbones.[1] They appear clinically as asymptomatic, slow growing, bony, hard masses.[2]

They can be classified as Central, Peripheral and Extraskeletal. Central osteomas are those arising from the endosteum, peripheral osteomas arising from the periosteum, whereas extraskeletal osteomas developing from the soft tissues, usually within a muscle. Histologically there are differences between compact, cancellous and mixed type of osteomas. Compact osteomas consist of dense, compact bone, whereas cancellous osteomas consist of soft, spongy bone.[2]

Its pathogenesis is unclear. Although trauma, infection and developmental abnormalities have been suggested as a contributing factor. Osteomas are generally solitary, except in patients with Gardner ‘s syndrome.[3]

CASE REPORT

A 35 year old female patient reported to I.T.S Dental College& Hospital, Greater Noida with a chief complaint of swelling in right upper back tooth region since 7-8 months. Patient was apparently asymptomatic 7-8 months back when she first noticed a painless swelling. Patient had no relevant medical history. On examination a single swelling 2 X 1 cm in size, reddish in colour was seen in right upper posterior tooth region extending from distal surface of 15 to mesial surface of 17 [Figure 1]. Superiorly the swelling extended upto the vestibule and inferiorly covered the cervical margins of 15,16,17. It was firm in consistency and sessile in nature. There was no radiologic evidence of bone involvement[Figure 2]. An incisional biopsy was performed under local anaesthesia. Gross examination reveals a single piece of soft tissue measuring 1.5x1cm, firm in consistency, oval in shape, brownish white in colour[Figure 3]. Microscopic evaluation revealed compact bony areas in a dense collagenous tissue with blood vessels and hemorrhagic areas. The bony tissue exhibits lacunae which are empty in few areas and filled with osteocytes in other areas [Figure 4]. Few reversal lines are also noted along with hemorrhagic areas [Figure 5]. Diagnosis was established as Peripheral Osteoma.

DISSCUSION

Osteoma is a benign neoplasm consisting of well-differentiated compact or cancellous bone that increases in size by continuous osseous growth. Peripheral osteoma occurs most commonly in the frontal, ethmoidal

Figure-1: Intra oral view showing a firm painless swelling extending from distal surface of 15 to mesial surface of 17.

Figure-2: OPG- No radiological involvement of swelling noted.

Figure-3: Gross examination of the lesion.

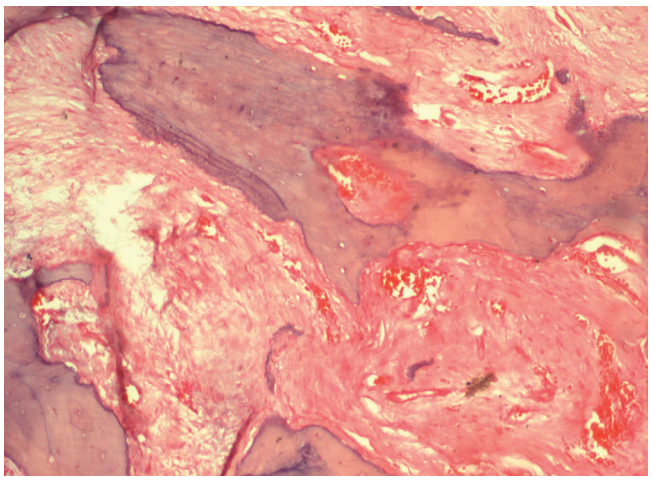

Figure-4: Photomicrograph showing compact bony areas in a dense collagenous tissue with blood vessels and hemorrhagic areas. (H & E,X100)

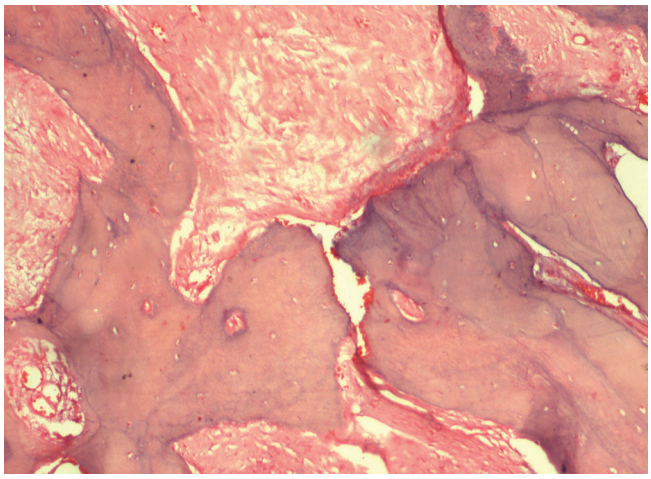

Figure-5: Photomicrograph showing the bony tissue exhibiting lacunae which are empty in few areas and few reversal lines are also noted. (H & E,X100)

and maxillary sinuses but are not so common in jaw bones.[4]

The pathogenesis of peripheral osteoma is unclear. Some authors classified it as a reactive condition triggered by trauma, as these are mostly located on the traumatized areas such as lower border or buccal aspect of the mandible.[4]

Varboncoeur et al, reported osteomas to arise either from embryological cartilaginous rests or from persistent embryological periosteum. According to the embryological theory, osteomas would originate from the suture between the bones with different embryological derivation, but it seems rather unlikely as in most of the cases they develop in adults and not during childhood or adolescence.[5]

The inflammatory theory suggests that chronic infections of the paranasal sinuses could stimulate the proliferation of the periosteum-related osteogenetic cells, although it is rarely possible to determine whether it is the infection or the osteoma that precedes. Moreover, this does not explain the pathogenesis of osteomas in other locations.[2]

Most jaws osteomas occur in young adults and are generally asymptomatic, solitary lesions with increased predilection to occur in mandible than the maxilla. The most common gnathic locations are the body of the mandible or condyle. When located in the body, most osteomas occur posterior to the premolars on the lingual surface.[6] The most common site of maxillary osteoma is the alveolar process which was so in our case. There is a 3:1 female predilection, but different authors have reported both female and male predilection.[3] The age of the patient in present case also coincides with the average age reported in the literature i.e 35 years.

Clinically, peripheral osteoma appears as a solitary, firm, well circumscribed, asymptomatic, sessile large mass of long duration.[7-8] The swelling is usually painless.[9] Our case presented clinically as a single swelling approximately 2.0 X 1.0 cm in size, reddish in colour, firm in consistency without facial asymmetry.

Radiologically, a peripheral osteoma of the mandible is a classically well circumscribed, oval or round, mushroom-like radiopaque mass with distinct borders. The lesion may be sessile and attached to the cortical plates with a broad base.[10,8] In our case, there was no radiological evidence of bone involvement.

On histopathological examination, osteoma is composed either of extremely dense compact bone or of coarse cancellous bone. In any given areas the bone formed appears to be normal. The lesion is most often well circumscribed, but not encapsulated. Myxomatous tissue also may be intermingled on rare occasions.[6,8] Histopathological evaluation of our case confirmed the findings of Peripheral Osteoma.

Differential diagnosis includes several pathological entities both inflammatory and neoplastic such as exostosis, but these tend to stop growing after puberty; periosteal osteoblastoma, osteoid osteoma and paraosteal osteosarcoma usually present as a rapidly growing painful swelling.[3]

Treatment consist of surgical removal if the lesion is causing difficulty or if a prosthetic appliance is to be constructed.[8] Small, asymptomatic osteomas, particularly those located endosteally, do not need to be treated but should be observed periodically.[6] In the reported case, surgical excision of the lesion was preferred in order to preserve dental integrity and vitality.

Osteoma does not recur after surgical removal. There are no reports of its malignant change in the literature[3,2]

CONCLUSION

We have reported a rare and unusual case report of peripheral osteoma of maxilla which is frequently found centrally in the mandible.

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