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RESEARCH ARTICLE

Peripheral Osteoma of the Lower Border of Mandible: A Case Report.

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Abstract

Osteomas are benign osteogenic tumours which are slow growing in nature. They mainly develop in the craniofacial bones but rarely originates from the mandible. The three varieties of osteomas are central, peripheral and extraskeletal. Central and peripheral varieties of osteomas develop in the facial bones whereas peripheral osteoma is seen in the frontal, ethmoid and maxillary sinus. The occurrence in the lower border of mandible is very rare. Herein, we report a rare case of peripheral osteoma of the lower border of the mandible in a 46-year-old male and excision of the lesion was done. The patient was asymptomatic thereafter.

INTRODUCTION

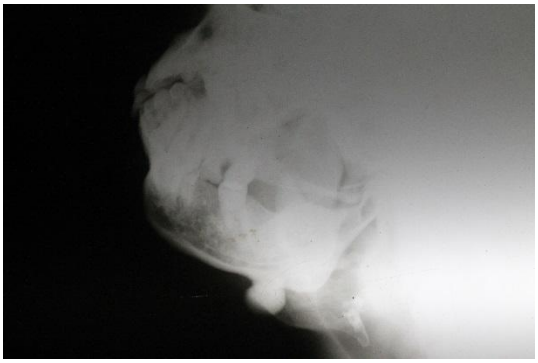
Osteoma is a benign, osteogenic neoplasm, formed by proliferation of matured bone[1]. The etiology of osteoma is mainly infection or trauma[1]. The solitary osteoma may be classified as central, peripheral or extra skeletal[1]. It is called central when arising from endosteum, peripheral when it arises from periosteum and extra skeletal when it arises from soft tissue[2]. The common regions where this occurs are paranasal sinuses, auditory canal, frontal bone, temporal bone and orbit[1]. It is rarely seen in mandible[1]. Clinically, peripheral osteoma appears as a unilateral, sessile or pedicled, well-circumscribed, mushroom-like mass ranging from 10 to 40mm in diameter[1]. There is no predilection for age or sex[1]. The peripheral osteoma is asymptomatic but can produce swelling and hence asymmetry[1]. The lesion is slow growing in nature[3]. Radiographically the lesion appears as a well-circumscribed radiopacity[4]. Computed tomography is the best imaging modality for diagnosis of osteoma[5]. Histologically, osteomas show trabeculae of lamellar bone with a fibrofatty marrow. The treatment for peripheral Osteoma is excision of the mass. There is no report of recurrence and malignant transformation.

The purpose of this article is to present a case of peripheral osteoma of the oral and maxillofacial region with an analysis of the literature.

Case report

A 46 year old man reported to Department of Oral and Maxillofacial Surgery in Yenepoya Dental College with a complaint of swelling in the lower border of the left mandible of 2 years duration. On extra oral examination a discrete facial asymmetry was noticed. On palpation, a well-defined swelling measuring 2*2cm in size, bony hard in consistency which is fixed to underlying bone with no tenderness on palpation. Lymph nodes were not palpable. It was asymptomatic. The patient was well built and nourished with no history of previous facial trauma or contributory medical factors. An OPG showed a well circumscribed, oval radiopaque area in the lower border of left mandible. An excisional biopsy was performed via a submandibular incision under GA. The lesion was removed completely using rotary instruments and a chisel and mallet. The specimen was sent to the Department of Oral Pathology. Co-relating the clinical, radiographic and pathologic findings the diagnosis is peripheral osteoma. The patient has had periodic clinical-radiographic follow-ups and has remained free of disease 1 year and 5 months after surgery.

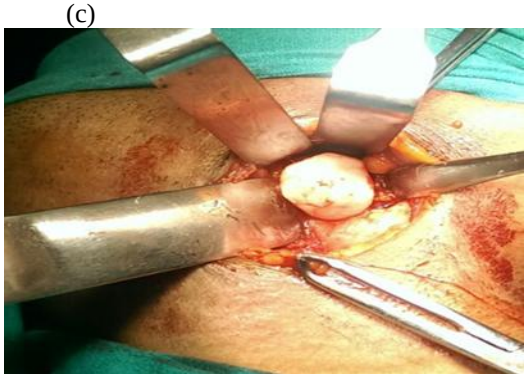
(a)



(b)

(c)

(d)



(e)

Fig: 1 (a) (b) radiographs showing radiopaque mass in the lower border of left mandible. (c) frontal view showing swelling on the left side (d) lateral view (e) intra operative view showing the mass.

Discussion

Peripheral osteoma has no definite pathogenesis. In the literature it is reported as developmental anomaly and usually occurs due to a reactive mechanism followed by trauma or infection[1]. But in this case there is no known previous trauma or episode of infection. It is a rare lesion occurs mostly in young individuals with equal gender prediliction[6]. In this case the patient is middle aged. Peripheral osteoma is most commonly seen in the paranasal sinuses, external auditory canal, pterygoid plates and temporal bone[7]. Thus occurring in mandible is very uncommon[7]. In this case the patient noticed swelling in the left lower border of mandible. It was slow growing with 2 years of duration. It is usually asymptomatic but sometimes if it affects the paranasal sinuses it can interfere with drainage and become symptomatic. This case was absolutely asymptomatic other than a swelling in the left lower border of mandible. Peripheral osteoma has an easily recognizable radiographic presentation. In a radiograph peripheral osteoma of mandible has well circumscribed round or oval mushroom like radiopaque mass with distinct borders. In our case OPG showed a dense uniform radiopaque compact bone with a pedicle on the lower border of left mandible.

Differential diagnosis are osteoid osteoma, exostoses, late stage central ossifying fibroma, complex odntoma or osteoblastoma. Osteoid osteoma and osteoblastoma is painful and fast growing comparing peripheral osteoma. Exostoses are differentiated from peripheral osteoma as exostoses ceases its growth after puberty. Central ossifying fibromas have well-defined border. A sclerotic border may be present in the bone next to the lesion. A complex odontoma has 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. Excision of an asymptomatic peripheral osteoma is not advised. Surgical removal is done only if it becomes large enough to cause facial asymmetry and functional impairment. Surgical excisions in case of mandibular peripheral osteomas are performed through an intraoral approach rather than extraoral approach because of cosmetic reasons. In our case extra oral approach was done as the lesion was situated in the lower border of mandible. A submandibular incision was placed and tissue dissection was performed. Lesion was exposed. Osteotomy was done with bur and hand piece and chisel and mallet. Periosteal layer and muscle layer sutured with 3-0 vicryl. Skin sutured with 3-0 ethylon. Patient is asymptomatic for 10 months of periodic follow ups.

Conclusion

We presented a case of peripheral osteoma of lower border of mandible. The lesion had grown slowly for 2 years and caused extra oral swelling and asymmetry. Surgical excision and histological diagnosis was done. After complete surgical excision of peripheral osteoma, recurrence is rare. However regular clinical and radiographic follow up is advisable.

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