Bulletin of Environment, Pharmacology and Life Sciences
Bull. Env. Pharmacol. Life Sci., Special Issue [1]2022 : 1516-1519

Online ISSN 2277-1808
Journal's URL:http://www.bepls.com
CODEN: BEPLAD

ORIGINAL ARTICLE **OPEN ACCESS**

Osteoma of Hard Palate

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ABSTRACT
Osteoma is one of the benign odontogenic tumors which derives from proliferation of compact or cancellous bone. It usually occurs in facial & skull bones except maxilla. In this article we have presented a case of osteoma in the hard palate of a 21-year-old female which was treated by surgical excision and collagen membrane placement to cover the defect.
Keywords: *Osteoma, Maxilla, Hard palate.*

Received 26.02.2022 Revised 25.03.2022 Accepted 22.04.2022

INTRODUCTION

Osteomas are benign decelerating osteogenic lesions, comprising of compact or cancellous bone[1]. Even though developmental, traumatic, neoplastic & infectious theories have been suggested [3], etiology of the same is unknown & is affirmed by furlaneto et al[2]. It's usually asymptomatic, but occasionally might emerge as slow growing lump with mild pain over the affected site[4]. Apart from the maxillary sinus, occurrence of osteoma in maxilla is rare [1]. There is limited evidence about gender predilection; several authors have suggested on higher incidence of osteomas in males, chiefly second to fourth decades[5]. Suggested management is surgical excision & also its recurrence is uncommon[6].

CASE REPORT

A 21-year-old female patient came to the department of oral & maxillofacial surgery, Karnavati school of dentistry, Gandhinagar, with the chief complaint of notable swelling over palatal region on left side. She was asymptomatic before five years when she noticed hard palpable swelling over left palatal region which was gradually increasing in size. She was healthy with no relevant medical history & was asymptomatic except for discomfort over the affected region. On intraoral examination, a unilateral (not crossing midline), firm, pedunculated, mildly tender mass of approximately 2x3 cm^2 sizewith no signs of fistula or discharge was present in relation to 24,25 regions. The mucosa covering the mass appeared normal. The premolars were missing on that side. The rest of teeth which were present in that quadrant were vital.

Well defined radio opacity was visible palatally over 24,25 regions of approximately 2*3 cm^2 in size, in maxillary occlusal view. Intra-oral periapical view also showed similar findings over 24,25 regions. A differential diagnosis of osteoma, cementoblastoma or maxillary torus was made based on clinical & radiographic findings.

After giving local anaesthesia with 2% lignocaine, crevicular incision was given in relation to 22,23 regions then continued as a crestal incision over 24,25 region & again crevicular incision in 26. Mesial & distal releasing incisions were given in 22 & 26 regions respectively. Full thickness mucoperiosteal flap was raised & reflected. With the help of surgical carbide bur the lesion was exposed & excised in toto. After the excision, the defect over affected site was covered with 5x5 cm^2 collagen membrane sheet &

sutured with 3-0 vicryl sutures in horizontal mattress pattern. The excised specimen was sent for histopathologic examination which confirmed the diagnosis of osteoma. Acrylic plate was given to the patient to be worn post treatment. Patient was kept on follow up. No recurrence is observed till date post operatively.

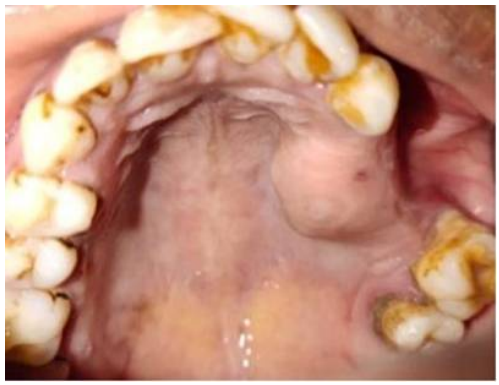

Fig 1 – Clinical picture of lesion over left palatal region.

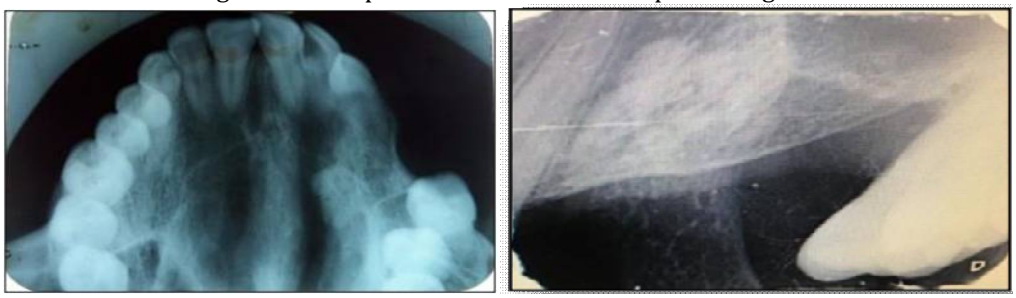

Fig 2 & 3: Maxillary occlusal & periapical radiographic views showing radiopaque, well circumscribed mass.

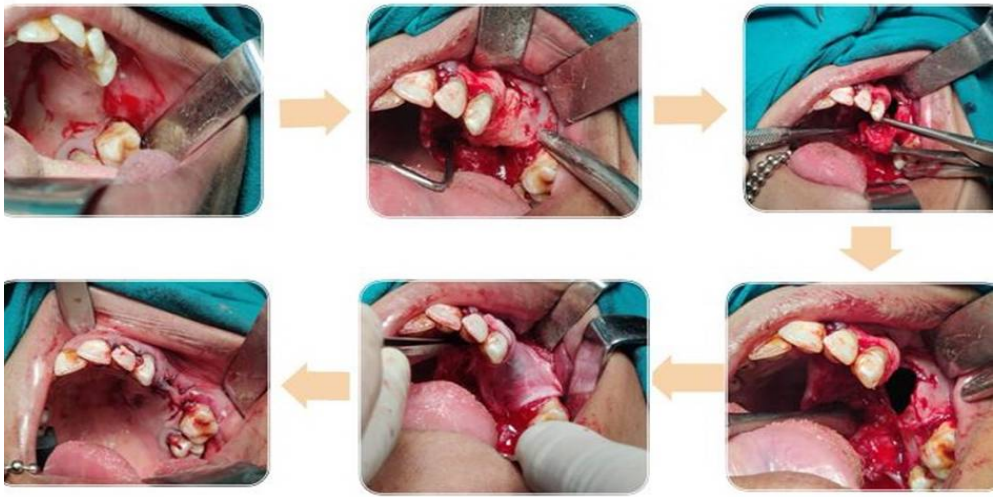

Fig 4: Surgical procedure starting from incision, reflection of flap, exposure of lesion, excision of lesion, collagen membrane sheet placement, suturing

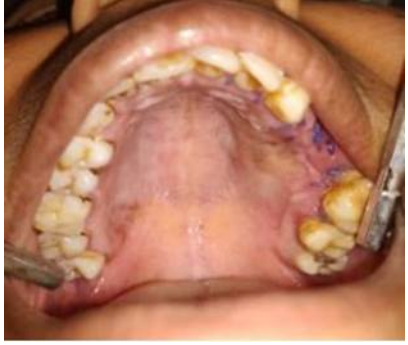

Fig 5: Follow up after 1 week

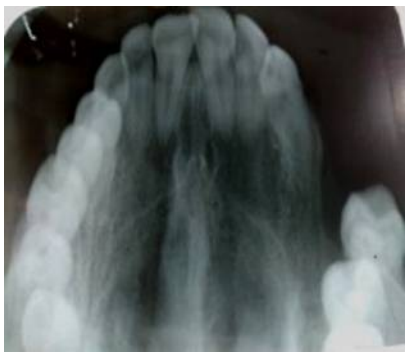

Fig 6: Post –operative radiograph after 1 week

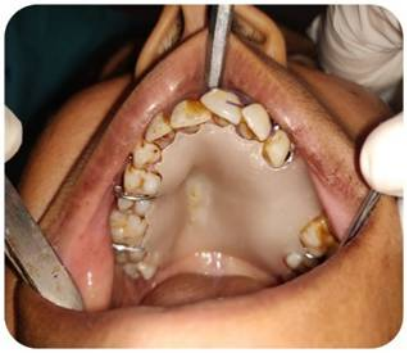

Fig 7: Acrylic palatal plate placement

DISCUSSION

Osteoma is a benign tumor of the cranio-facial region[5]. It usually occurs in the paranasal sinuses, frontal sinus being the most commonly affected[4], followed by maxillary sinus, ethmoidal sinus & sphenoidal sinus. This data is supported with those reported by Sayan et al & Longo et al. Other reported sites in the craniofacial region are the external auditory canal, orbit, temporal bone, pterygoid process & sparsely in the jaws[7].

This benign tumor is characterized by proliferation of spongy (cancellous) or compact bone. Even though developmental, traumatic, neoplastic & infectious theories have been suggested[3], etiology of the same is unknown & is affirmed by Furlaneto et al[2].

It is unlikely of osteoma forming as a developing anomaly, as most cases occur in adults & rarely it is found in childhood or adolescence. Also, it is uncertain of osteoma to be of neoplastic origin, reason being its sessile nature. The probability of it being a reactive lesion, perhaps due to local trauma, is set up on the history of trauma prior to the blooming of the lesion in few cases. One such theory was proposed by Thoma& Goldman[1]. However, this can only be applied to cases that are more prone to trauma such as mandibular angle or the lower border [8]. Scheider et al recorded a definite history of prior trauma in six cases[1]. The association of trauma & muscle traction was also put forward as a theory by Kaplan et al as a viable pathogenesis[9].

Multiple osteomas relate to Gardner's syndrome [3] which is an autosomal dominant disease characterized by a triad of Gastro-intestinal polyps, multiple osteomas & skin & soft tissue tumors.

In the case presented here, it occurred in the maxilla over the hard palate which is a rare location for an osteoma to occur. In the jawbones, it occurs either on bony surface as a unilateral, painless, pedunculated or sessile mushroom like mass deriving from periosteum or in the medullary space rising from the endosteum[7].

There is not much evidence about gender predilection. Schneider et al, suggested cancellous osteomas occur favorably in females & compact osteomas occur favorably in males is not verified [7]. Also, it can occur in any age group. An average mean age group of 40.5 years was reported by Woldenberg et al[6]

Differential diagnosis may include exostosis, ossifying fibroma, odontoma, osteoblastoma [6]. In patients with multiple lesions, a hereditary disorder, Gardener's syndrome can be considered as underlying primary cause[1]. Computed tomography helps in precisely locating the lesion[8].

Indications for surgery include cosmetic mutilation, limitation or loss of function, significant growth rate. Standard choice of treatment for the lesion is complete surgical excision. Recurrence is rare & chances of malignant transformation are generally nil[8]. In the literature[7], one case of recurrence was reported after nine years of treatment by Bosshardt et al. Horikawa et al reported another case of recurrence two

years after treatment. On histopathological examination, differentiation between compact, cancellous & mixed variant type of osteoma can be done [9].

CONCLUSION

Osteomas of the facio-maxillary region are generally of the para nasal sinuses & mandible. Maxilla is a rare site for its occurrence & very few cases have been reported in the literature. They are predominantly asymptomatic, painless, slow growing, unilateral, mushroom like masses & the treatment of choice for the same is complete surgical excision. Recurrence is rare.

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CITATION OF THIS ARTICLE

K Thanki, R Matariya,N Desai, Y Patel, N Rao, M Irfan Osteoma of Hard Palate. Bull. Env.Pharmacol. Life Sci., Spl Issue [1] 2022 : 1516-1519