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OSTEOID OSTEOMA OF MANDIBLE A RARE CASE REPORT

[1]Dr Nitin Bhaga, [2] Dr Priyanka Sachdeva, [3]Dr Siddharth Rawat, [4]Dr Rohit Sharma, [5]dr Anu Sing

[1]associate professo, dept of oral and maxillofacial surgery, school of dental sciences , sharda university ,greater noida, email id – nitin.bhagat@sharda.ac.in

[2]assistant professor, dept of pediatric dentistry, school of dental sciences , sharda university ,greater noida ,email id – daprika@gmail.com

[3] assistant professor ,dept of oral and maxillofacial surgery, school of dental sciences , sharda university, greater noida ,email id – siddharth.rawat1@sharda.ac.in

[4]assistant professor, dept of oral and maxillofacial surgery, school of dental sciences , sharda university, greater noida ,email id – rohit.sharma1@sharda.ac.in

[5] 3rd year post graduate student, dept of oral and maxillofacial surgery school of dental sciences , sharda university, greater noida, email id – anu.allstars.singh@gmail.com

ABSTRACT

Osteoid osteoma is a benign primary neoplasm of bone and is three to four times more common than osteoblastoma, a tumour that it histologically resembles. The tumour most commonly occurs in the long bones of the body; however, jaw lesions are very rare. Herein, we report a rare case of osteoid osteoma that presented in the mandible of a 45-year-old female.

KEY WORDS

Mandible, bone, pain, osteoid, benign

INTRODUCTION[1]

Osteoid osteoma is a rare jaw lesion which is most commonly seen in long bones such as femur and tibia. It constitutes 3% of all primary bone tumours. It shows a slight mandibular predominance and is mostly witnessed during the second and third decades of life. The most prominent symptom reported is pain which aggravated at night and subsides of taking NSAIDs.

Radiographically, the lesion appears as a round to ovoid radiolucency (nidus) which is well circumscribed and has surrounding reactive sclerosis. Nidus is less than 1.5 cms and constitutes a central radiopacity which is small and centralised that gives a target like appearance. It is seen within the cortical bone and a periosteal reaction may be a finding.

Most osteoid osteomas of the jaws are treated by local excision or curettage. Recurrence after complete removal is uncommon. Osteoid osteoma exhibits no potential for malignant transformation.

CASE PRESENTATION

A 45-year-old female patient presented to the Department of Oral and Maxillofacial Surgery with pain and swelling in lower right side of the mouth for 5 months. Pain presented 5 months back and was continuous and radiated to the right temporal region. It aggravated on lying down and mastication. It was followed by swelling one month later in the lower right inner side of the jaw.

On intraoral examination, dental caries and tenderness on percussion was established i.r.t. 46. And a bony hard swelling was present extending antero-posteriorly from distal aspect of 43 till distal aspect of 46 on the lingual surface of the mandible. Supero-inferiorly it extended 5 mm below the cervical margin till a depth of about 1.5 cms.

A written informed consent was obtained. Patient refused oral prophylaxis before treatment because of severe pain.

The overlying mucosa was normal and no lymph nodes were palpable.

On the basis of clinical examination, a differential diagnosis of Unilateral mandibular torus, osteoid osteoma, odontoma was taken into consideration.

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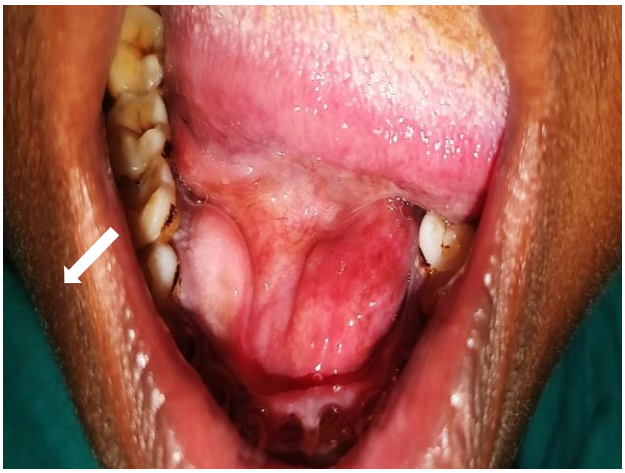

Fig 1: A photograph showing lingual cortex expansion in the 43-46 region.

RADIOGRAPHIC FINDINGS

A mandibular occlusal radiograph showed the radiopaque lesion causing bony expansion of the lingual plate. A mandibular cross-sectional occlusal radiograph revealed a well-defined radiopacity in the mandible extending from region 43 to 46 causing an expansion of the lingual cortex. Based on the results of the radiographic analysis, osteoid osteoma, cementoblastoma, complex odontoma, ossifying fibroma, osteoblastoma, and idiopathic osteosclerosis were considered in the differential diagnosis. Surgical excision of the lesion was done as a part of the treatment. The lesional tissue was sent for histopathological analysis. The postoperative healing was uneventful and the patient was followed-up for a period of 6 months. The pain was completely relieved.

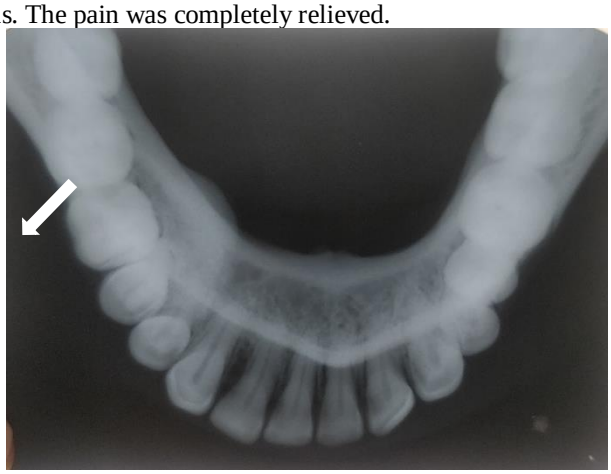

Fig 2: A mandibular occlusal radiograph showing the radiopaque lesion causing bony expansion of the right lingual plate extending from 43 to 46.

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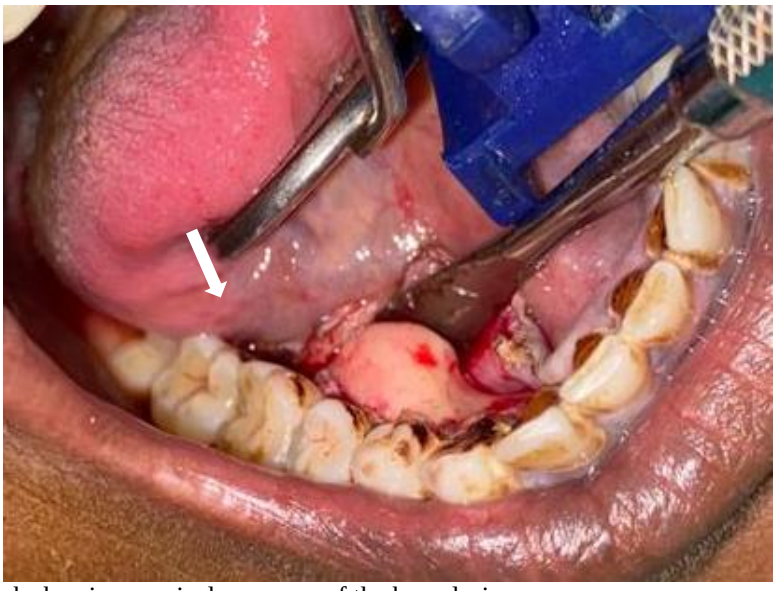

Fig 3: Photograph showing surgical exposure of the bony lesion.

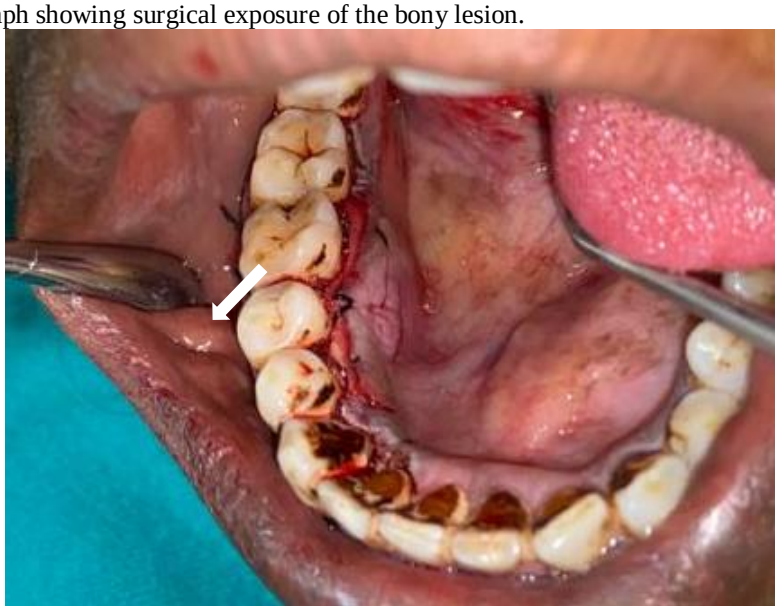

Fig 4: Photograph showing closure after excision of the bony lesion.

HISTOPATHOLOGICAL FINDINGS

H&E stained section revealed a well circumscribed round benign bone forming tumor surrounded by thick ring of mature bone. Tumor is composed of haphazard, irregular trabeculae of woven bone rimmed by osteoblast and contained dilated blood vessels. Few scattered osteoclasts are seen on the surface of trabeculae. Osteocytes were within the lacunae. Scanty connective tissue stroma showed numerous fibroblasts collagen fibres and vascular spaces.

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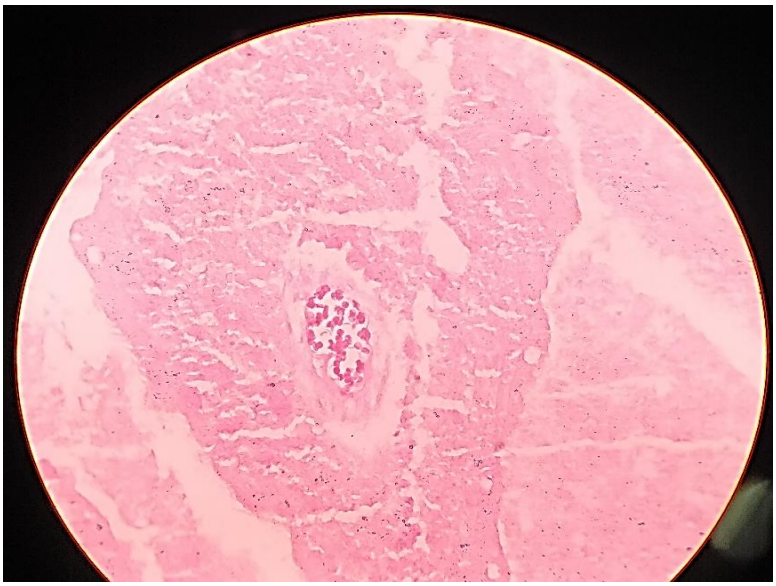

Fig 5 A photomicrograph showing irregular bony trabeculae lined by plump osteoblasts. Many dilated blood vessels are seen in the stroma (hematoxylin and eosin, 40x)

DISCUSSION

Although a few descriptions of the tumor were published earlier under different names, Jaffe et al, in 1935, are usually credited with establishing osteoid osteoma as a characteristic entity.[2] They concluded that it was a true neoplasm because (a) the lesion consisted of osteoid and atypical bone that, without obvious cause, displaced normal bone; (b) the growth was independent of the host bone; and (c) microscopically, the lesion differed from that of surrounding normal bone, but was itself homogeneous and consistently the same in different cases.[2] It was claimed to be a peculiar form of localized inflammation because patients did not manifest increased leukocytes or fever and because results of microbial cultures of the lesions were uniformly negative. There was also absence of suppuration. However, others, questioned its neoplasticism mainly on the basis of its limited growth potential of only 1 cm and the rare instances of alleged spontaneous regression.[3] Despite these criticisms, most authorities continue to consider osteoid osteoma as a tumor, rather than a reactive lesion.[4,5]

Osteoma of the jaw bones is a rarity. These lesions are seen more commonly in the mandible than the maxilla. Sayan *et al*[6] reported finding 22.85% of the lesions in the mandible and 14.28% in the maxilla in their study. Kaplan *et al*[7] reported 81.3%, Chaurasia and Balan[8] reported 83% and Woldenberg *et al*[9] reported 64% of cases occurred in the mandible.

Patients with osteomas are required to be evaluated for Gardner's syndrome which is an autosomal dominant disease characterised by gastrointestinal polyps, multiple osteomas, skin and soft tissue tumours and multiple impacted or supernumerary teeth.[10,11]

CONCLUSION

There is a dearth of information about the origin of osteoid osteoma and the lack of clarity with respect to similar lesions in the body makes precise gathering of data concerning the lesion a problem. There are only a few number of cases reported of osteoid osteoma in the jaws that prohibits any conclusions regarding the behaviour of this lesion. It is therefore safe to assume that its occurrence in the jaws is more common than the literature would indicate, and it is hoped that the dentists' awareness of it will result in additional cases being reported in the literature.

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