CASE REPORT

Osteoid Osteoma in Mandible: A Rare Case Report with Literature Review

S Manoj Kumar, P Mahesh Kumar, PE Chandra Mouli, Meenakshi Krishnan, Vijeev Vasudevan, S Kailasam

ABSTRACT

Osteoid osteoma is a benign tumor of unknown etiology. It is more common in males. The hallmark of classical presentation is unrelenting, sharp, boring pain which worsens at night and increases with activity and followed by eventual regression. Diagnosis is established by histopathology. Treatment can be conservative management with long-term nonsteroidal anti-inflammatory drugs (NSAIDs) or surgical excision. We present a rare case of 30 years old female who had a complaint of painful mass in the left mandible that prompted an osteoid osteoma diagnosis.

Keywords: Osteoid, Woven bone, Unrelenting, Sharp, Boring pain.

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INTRODUCTION

Osteoid osteoma is a benign tumor of unknown etiology.1 The lesion is composed of osteoid and woven bone and is usually smaller than 1.5 cm in size. Osteoid osteomas are more common in males than females (2-3:1) and 75% occur between the age of 5 and 25 years. It can occur in any bone, the skull and facial bones are exceptionally affected.1 The growth is followed by eventual regression.2

The hallmark of classical presentation is unrelenting, sharp, boring pain which worsens at night and increases with activity.3

Osteoid osteomas have been called the most common cause of painful scoliosis.4

Treatment can be conservative management with long-term nonsteroidal anti-inflammatory drugs (NSAIDs) or surgical excision.5,6

CASE REPORT

A 30-year-old woman presented with swelling in the left side of lower jaw for past 2.5 years. The swelling started as a small single one and grew-up slowly to attain the present size in the lower border of the angle of mandible. No history of trauma or no history of similar swelling in the body. Her past medical, dental, family and personal history did not reveal anything that could be attributable to diagnosis.

On extraoral examination, presence of a swelling in the left side mandible measuring about 3 × 3 cm, round in shape, extending anteroposteriorly 4 cm from the angle of mandible and 4 cm from the corner of the mouth (Fig. 1). No secondary changes were seen. On palpation the swelling was hard in consistency and tender on palpation. In a lateral cephalogram, there is presence of a circumscribed sclerotic mass near the mandibular angle area of left side (Fig. 2). There were no significant intraoral findings. Excisional biopsy was done under local anesthesia and sutures were placed. The histological features showed compact osteoma

Fig. 1: Extraoral view showing swelling in the left side mandible
composed of normally appearing bone showing minimal marrow tissue. Cancellous osteoma showed trabeculae of bone and fibrous fatty marrow (Fig. 3).

**DISCUSSION**

Osteoid osteoma is made known by Jaffe’s, distinguishing it from sterile Brodie’s abscess and Garre’s osteomyelitis.2

The tumor consist of an ovoid or spherical nidus of osteoid-rich tissue and interconnected bone trabeculae superimposed on a background of highly vascularized connective tissue containing large vascular channels. The average size of the nidus is approximately 0.5 to 2 cm.3

The eventual regression of growth is in a variable period of up to 15 years, but the exact mechanism is not known (tumor infarction postulated), but many patients present for treatment before this.4

The hallmark of classical presentation is unrelenting, sharp, boring pain which worsens at night and increases with activity. The site of involvement may be tender to touch or the pressure. The lesion produces prostaglandins (PGE2 and 6-keto-PGF1α) in excess, causing local inflammatory effects and vasodilatation which in turn generate pain.5

They present histologically as they are composed of small nidus of osteoblasts and osteoid that are arranged in a haphazard fashion over several millimeters, margined by a periphery neural and arterial supply. The amount of osteoid tissue exceeds that of mineralized tissue. Multinucleated giant cells and osteoclasts are frequently observed.6

It is classified as cortical osteoid osteoma, cancellous osteoid osteoma and subperiosteal osteoid osteoma.7

Imaging with plain radiograph of osteoid osteoma demonstrates dense reactive bone with radiolucent nidus, which is diagnostic.7

Radionuclide scanning with technetium Tc99m diphosphonate uptake shows intense activity at the tumor site.7

Computed tomography (CT) is ideal for the detection and precise localization of the nidus.

Magnetic resonance imaging has reduced enhancement as compared to CT.

The roles of conventional and Doppler ultrasonography have not been established yet, but can be used to guide percutaneous localization and biopsy of the lesion.

On angiography the nidus is highly vascularized with an intense circumscribed blush appearing in the early arterial phase and persisting in the late venous phase—diagnostic of osteoma.7

Treatment can be conservative management with long-term NSAIDs.

In cases where pain is severe and unrelenting, surgical excision is the treatment of choice. Due to higher risk of complications and prolonged postoperative recovery, less invasive techniques have been proposed, such as CT-guided
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As osteoid osteoma has a rare incidence and also its male predilection, this is indeed a rare case report.

REFERENCES


ABOUT THE AUTHORS

S Manoj Kumar
Professor, Department of Oral Medicine and Radiology, Ragas Dental College and Hospital, Chennai, Tamil Nadu, India

P Mahesh Kumar
Senior Lecturer, Department of Oral Medicine and Radiology, Ragas Dental College and Hospital, Chennai, Tamil Nadu, India

PE Chandra Mouli (Corresponding Author)
Reader and Incharge, Department of Oral Medicine and Radiology Sri Venkateswara Dental College and Hospital, Chennai, Tamil Nadu India, e-mail: mouriranjith@gmail.com

Meenakshi Krishnan
Postgraduate Student, Department of Oral Medicine and Radiology Ragas Dental College and Hospital, Chennai, Tamil Nadu, India

Vijeev Vasudevan
Professor and Head, Department of Oral Medicine and Radiology Krishnadevaraya College of Dental Sciences and Hospital, Bengaluru Karnataka, India

S Kailasam
Professor and Head, Department of Oral Medicine and Radiology Ragas Dental College and Hospital, Chennai, Tamil Nadu, India