A rare case of osteoid osteoma of mandible. Case report

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Abstract

Osteomas are benign, slow-growing osteogenic tumors rarely occurring in the craniofacial bones. Osteoid osteoma is a benign tumor of the bone which has seldom been described in the jaws. It was first described as a distinct clinical entity by Jaffe in 1935. Lichtenstein defined osteoid osteoma as a "small, oval or roundish tumor like nidus which is composed of osteoid and trabeculae of newly formed bone deposited within a substratum of highly vascularized osteogenic connective tissue." The most interesting clinical feature of osteoid osteoma is the exquisite pain produced by a very small lesion, never greater than one centimeter in diameter. It accounts for 3% of all primary bone tumors, and about 10% of benign bone tumors. About 80% of cases of osteoid osteoma occur in long bones, while less than 1% occur in jaws. Here, a case of osteoid osteoma of the mandible in a 47-year-old female patient is presented with a literature review.

Keywords: Osteoid osteoma, mandible, nidus, radio opacity

INTRODUCTION

Osteoid osteoma was first described as a distinct clinical entity by Jaffe in 1935 [1]. It is a benign tumor of bone which has seldom been described in jaws. Jaffe and Lichtenstein have suggested that the lesion is a true neoplasm of osteoblastic derivation, but other have reported the lesion occurs as a result of trauma or inflammation [2]. Jaffe refers to the osteoid osteoma as distinct denoting the lesion's small self-limiting nature. Green et al. reviewed the literature and reported the total number of cases of osteoid osteoma of the jaws to be 7 of these 4 have occurred in the mandible and 3 in the maxilla (one in the antrum) [2].

MATERIAL AND METHODS

A 47-year-old female patient was presented to the Emergency County Hospital Bihor with swelling in the vestibular area of the body of the mandible, region 44, 46 measuring approximately 2 x 2 cm in size, asymptomatic with no numbness of the area, lower lip and right mental area. We considered this a good sign. The swelling was hard in consistency and tender on palpation. During the intraoral clinical examination, it was found that the appearance and coloring of the mucosa is normal (Figure 1). CBCT radiological examination shows in the right lateral mandibular region a well-defined oval-shaped radiopacity surrounded by a thin radiolucent border (Figure 2). We consider the teeth 44, 46 to be extracted. Mentally the patient was very fragile because she thought her disease was malignant, that was one of the reasons she postponed her visit to the specialist. The patient had poor oral hygiene. With an extraoral examination, no submandibular lymph nodes are palpable. The patient had no relevant medical and family history.

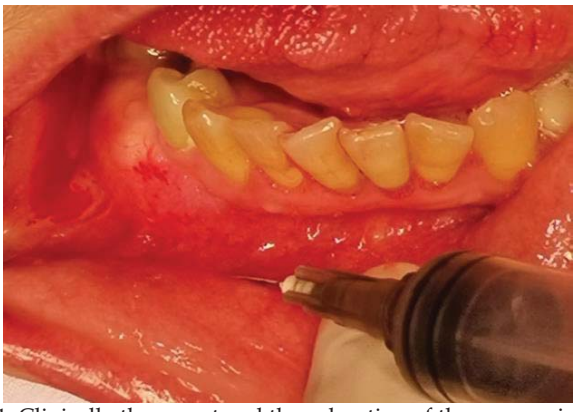

Figure 1. Clinically the aspect and the coloration of the mucosa is normal

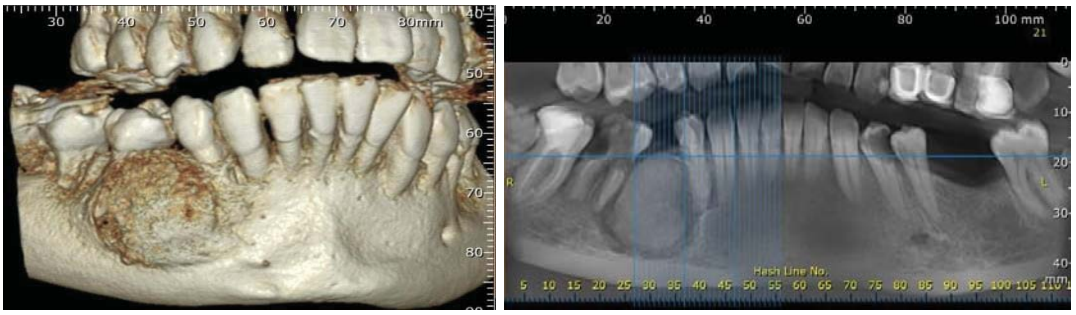

Figure 2. CBCT sections region 44,46 showing a well-defined oval shaped radiopacity surrounded by a thin radiolucent rim

Routine blood investigations were carried out and all the values were in normal limit. Surgical resection of the lesion along with the extractions 44 and 46 were performed in general anesthesia. The curettage of the lesion was done properly with conservation of the inferior alveolar nerve which was pushed by the tumor bone caudally to the basilary of the mandible (Figure 3). The excised specimen was submitted for histopathological examination (Figure 4).

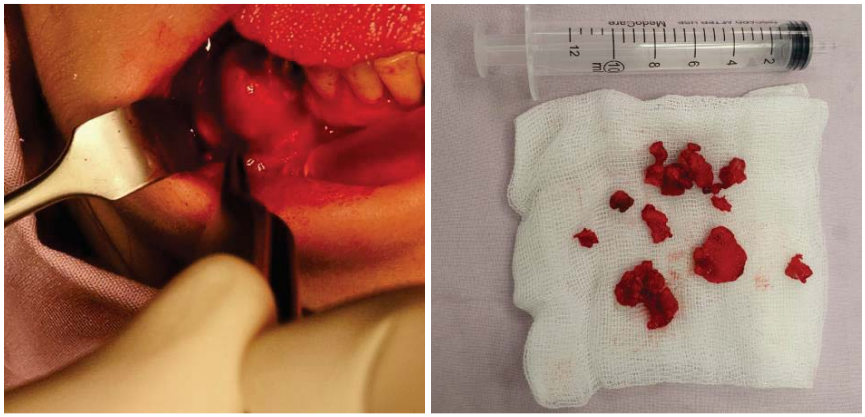

Figure 3. Surgical exploration and excised specimen

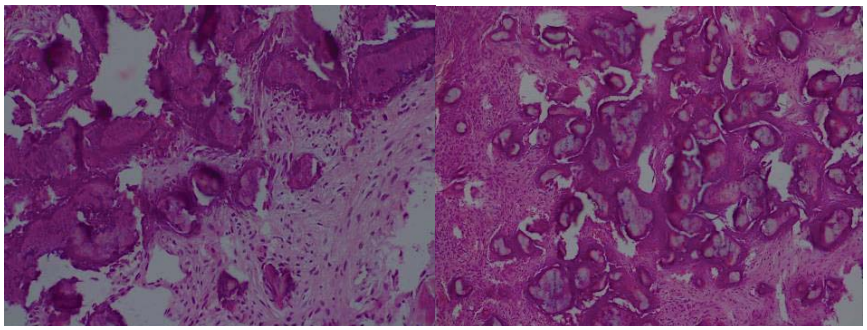

Figure 4. Thin hazardous bone lamella infiltrating the fibrovascular stroma

RESULTS

The postoperative course was uneventful, and the patient is still being followed. The perioperative regimen of antibiotics and anti-inflammatories was followed. From a psychological point of view, she was optimistic and relieved after receiving the histopathological result. The suture was removed after 7 days. The postoperative evolution was favorable (Figure 5).

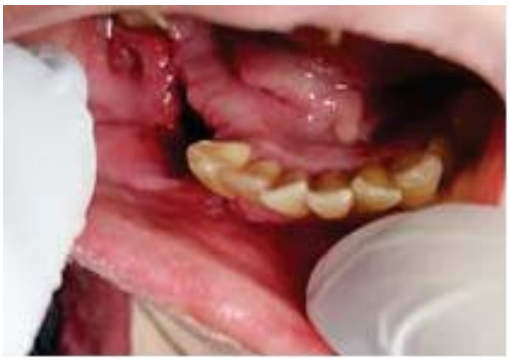

Figure 5. Ten days after suture removal

DISCUSSIONS

Osteoid osteoma is a benign lesion consisting of a round nidus. It accounts for 3% of all primary bone tumors, and about 10% of benign bone tumors. About 80% of osteoid osteoma occur in long bones, while less than 1% occurs in jaws. Osteoid is most frequently observed in the second and third decades of life, more commonly in males than females, at a ratio approximately 2:1. Mild pain is the principal symptom as in the present case [3-7]. Osteoid osteoma was described as a specific entity by Jaffe in 1935. Jaffe described a type of nidus which appeared as a hard osseous core composed of densely set trabeculae of newly formed bone which was atypical. Jaffe perceived the initial notable changes in this lesion as an increased vascularity and destruction with replacement by new atypical bone following resorption of the destroyed tissue. The stroma consisted of osteogenic connective tissue containing numerous blood channels. A cortical lesion which produced this bony replacement stimulated the overlying periosteum to lay down new bone of fairly normal architecture [8].

There is general agreement in the literature that the treatment of choice for osteoid osteoma is the complete removal of the nidus. It is reported that osteoid osteoma does not recur after complete removal of the nidus [9].

Patients with osteomas should be evaluated for Gardner's syndrome. This syndrome is an autosomal dominant disease characterized by gastrointestinal polyps, multiple osteomas, skin and soft tissue tumors and multiple impacted or supernumerary teeth. Intestinal polyps are predominantly adenomas and may progress to malignancy in almost 100% of patients [10,11].

CONCLUSIONS

Correct diagnosis of osteoid osteoma is based on the elements of clinical semiology together with the imaging findings. A wrong radiological technique or a misinterpreted radio-clinical approach inevitably leads to an incorrect diagnosis and treatment. To confirm diagnosis, the anatomopathological examination is required.

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