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The first case of osteoma of the mandibular notch located both medially and laterally and treated with a transoral endoscopy assisted approach. A case report

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ABSTRACT

INTRODUCTION: Osteomas are slow-growing benign tumours composed of mature compact or cancellous bone and are seen in facial bones but uncommonly in the mandible; cases that arise in the notch region are rarely reported in the literature.
PRESENTATION OF CASE: This article presents a 37-year-old woman with no preauricular swelling, no limitation of joint motion and pain only on the left side.
DISCUSSION: The patient was evaluated based on preoperative clinical manifestations, orthopantomography and a computed tomography (CT) scan. The CT scan showed bone density irregularity between the coronoid process and the left mandibular condyle in the notch region arising both medially and laterally. Surgery was performed based on these images and the patient's indications and symptoms.
CONCLUSION: Among the cases of osteoma in the literature, only six originated in the mandibular notch, but this is the only that was both medially and laterally located.

1. Introduction

Osteomas are uncommon, slow-growing benign tumours composed of mature compact or cancellous bone [1]. They are essentially restricted to the craniofacial skeleton and are rarely, if ever, diagnosed in other bones [2,3]. In the literature, we found only six cases originating in the sigmoid notch of the mandible [4]. The literature describes three different types of osteomas depending on their location [5]: (1) osteomas may arise on the surface of bone as a polypoid or sessile mass (periosteal, peripheral or exophytic osteoma); (2) they may be located in the medullary bone (endosteal or central osteoma); and (3) extra-skeletal soft tissue lesions are typically located within muscle or the dermis of the skin (osteoma cutis).

The aim of this study is to report a case of a particularly rare osteoma that developed in the sigmoid notch region both medially and laterally with particular attention to the histopathological, radiological, clinical and surgical aspects. This is the first case of an osteoma in the medial and lateral part of the sigmoid notch.

2. Presentation of case

A 37-year-old woman was referred to our institute, with left-sided preauricular pain lasting 1 year and aggravated by palpation, but with no mouth-opening limitation.

She experiences discomfort while chewing food.

There was no history of trauma or other events contributing to onset of the symptoms. A physical examination did not detect any facial nerve paralysis, hearing or facial sensation disturbances. The results of orthopantomography were not significant. A computed tomography (CT) scan with three-dimensional reconstruction revealed bone density irregularity between the coronoid process and the left mandibular condyle with dimensions of $15 \times 13 \times 11$ mm (Figs. 1 and 2). Because the lesion didn't have radiologic features compatible with malignant nature, no exploratory biopsy was performed.

A provisional diagnosis of osteoma was made.

Surgical intervention was performed under general anaesthesia after nasal intubation with a transoral endoscopy assisted

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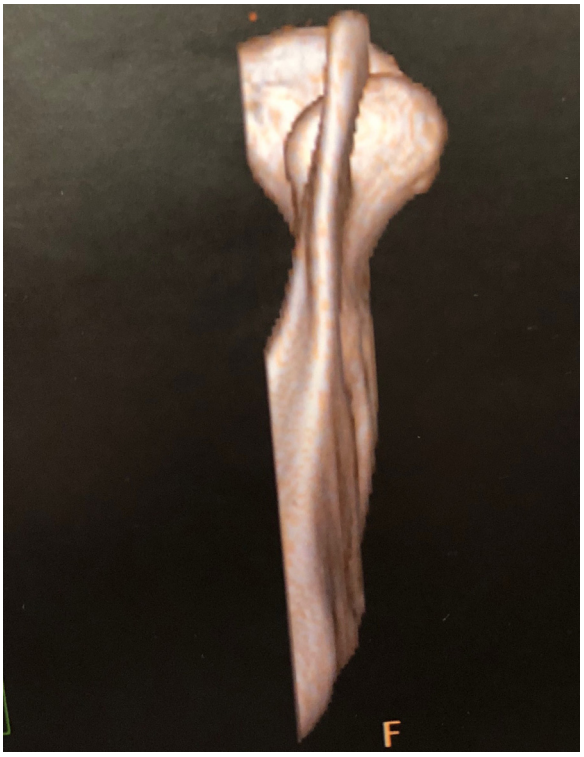

Fig. 1. Preoperative three-dimensional computed tomography scan.

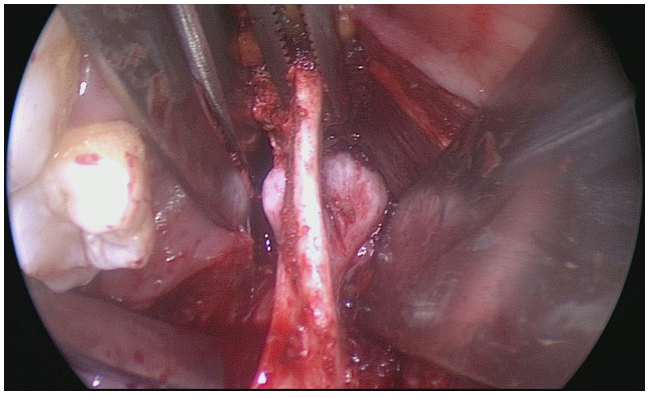

Fig. 2. Axial Ct scan of the Lesion.

approach. An intraoral anterior ramal incision similar to the one used for a sagittal osteotomy of the mandible was made; the lateral and medial surface of ascending ramus was exposed up to the coronoid process, then the masseter muscle and the temporal tendon were stripped laterally to expose the mass, and the lesion was removed at the level of the sigmoid notch. We visualised the neoformation through an endoscope using 0° and 45 ° angle optics (Karl Storz, Tuttlingen, Germany) (Fig. 3). Then, we performed an ostectomy of the lesion using a drill with a curved rotary cutter working both medial and lateral to the coronoid process. Coronoidectomy wasn't performed.

The lesion was completely removed and was sent for histopathological evaluation. The surrounding soft tissues were intact. The specimen was a nodular $15 \times 13 \times 11$ mm formation with a hard outer surface.

Primary closure of the wound was achieved with 4-0 Vicryl.

Multiple fragments of mature lamellar bone with few marrow spaces were observed microscopically. These histopathological

Fig. 3. Intraoperative endoscopic view.

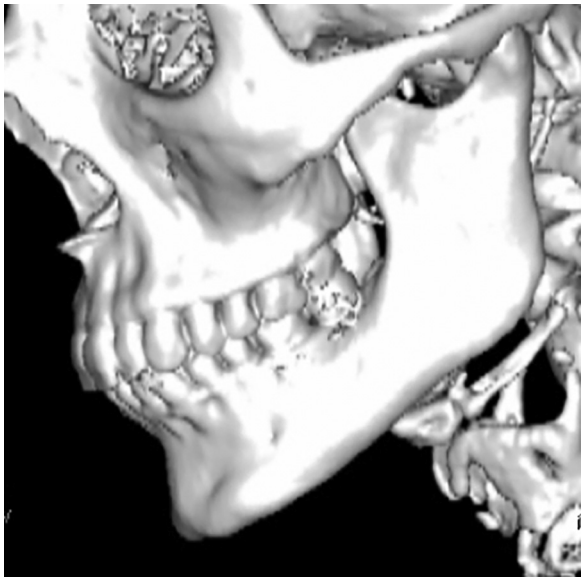

Fig. 4. Postoperative three-dimensional computed tomography scan.

findings revealed a diagnosis of compact osteoma. The follow-up period was 12 months without recurrence (Fig. 4).

This case report was written according to the Surgical CAse REport guidelines [21].

3. Discussion

Osteoma is defined by World Health Organisation as a benign lesion consisting of well-differentiated mature bone tissue with a predominantly laminar structure and very slow growth [6]; it is