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Case report

Maxillary osteoblastoma in a woman: Report of a rare case and review of the literature

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ABSTRACT

Osteoblastoma is a rare bone tumor showing a predilection for males, and only 15% of all osteoblastomas occur in the maxillofacial region, affecting the maxilla less than the mandible. A very rare case of osteoblastoma affecting the maxilla in a female patient is reported. The diagnosis of osteoblastoma of the maxilla was made based on clinical, radiological, and histopathological findings. The lesion was completely resected, and the excised specimen showed features that are typical of osteoblastoma. At 2-year follow-up, the patient was disease-free. This report presents this rare case of osteoblastoma of the maxilla in a female patient and discusses the importance of correct diagnosis and complete surgical approach in the treatment of this lesion.

1. Introduction

Osteoblastoma is a rare tumor characterized by osteoid and woven bone deposition and enriched osteoblasts. It accounts for approximately 1% of all primary bone tumors [1], and it occurs most frequently in male patients, with a male-to-female incidence ratio of 2:1 [2]. The locations of the lesions primarily involve the vertebral column, long tubular bones, calvarium, and facial bones including the jaw. In the maxillofacial region, Lin et al. reported the mandibular bones (58.7%) are more commonly affected than the maxillary bones, and male patients (66.5%) are predominantly affected [3]. Jones et al. reviewed 19 cases (79.2%) arose in the mandible and 5 cases (20.8%) occurred in the maxilla [4]. Of note, very few cases of osteoblastoma have been reported affecting the maxilla of a female patient. The current study reports a very rare case of osteoblastoma that developed in the right maxilla of a 24-year-old Japanese woman, along with a literature review.

2. Case report

A 24-year-old Japanese woman was referred to our hospital by her dental practitioner for detailed examination of the right maxilla. One year earlier, she had first noticed pain and swelling in the second premolar and right maxilla. Her dentist made a diagnosis of periodontitis, and root canal treatment was provided. However, the progressive pain and swelling did not improve. Rather, the region had grown even large and become increasingly painful.

On intraoral examination, there was a diffuse bony swelling of the right hard palate extending from the right canine to the second premolar. The swelling was hard in consistency and measured approximately 2 cm in greatest dimension (Fig. 1). The second premolar in this region showed slight mobility. Mucosa over the swelling was normal, with no ulcerations. On intraoral palpation of the mass, the patient felt severe pain, although no local inflammation was observed. For the severe pain, the patient was treated with nonsteroidal anti-inflammatory drugs (NSAIDs), but she obtained no relief. There were no other secondary changes, such as paresthesia or cervical lymphadenopathy.

Pantomography and computerized tomography (CT) of the right maxilla revealed an expansile, mixed radiolucent and radiopaque lesion with a radiolucent rim in the vicinity of the second premolar root. CT also showed a mass of about 10 mm × 8 mm × 8 mm (Fig. 2).

A provisional diagnosis of a benign odontogenic tumor was given. Thus, the patient underwent excisional biopsy given the small lesion size, and the lesion was completely enucleated,

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

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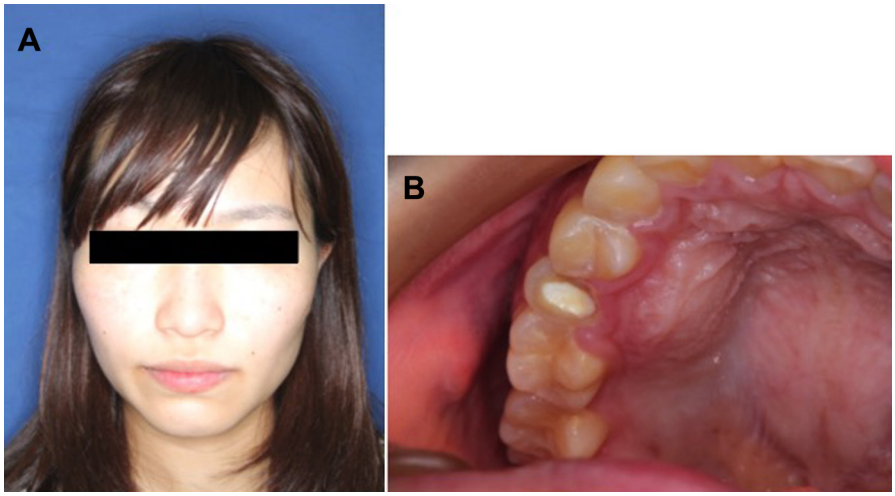

Fig. 1. (A) Pre-operative facial appearance. (B) Pre-operative photograph showing intraoral swelling in the right hard palate. On palpation, it was bony hard in consistency with well-defined borders. Interestingly, severe pain was noted with pressure, despite the absence of findings of inflammation.

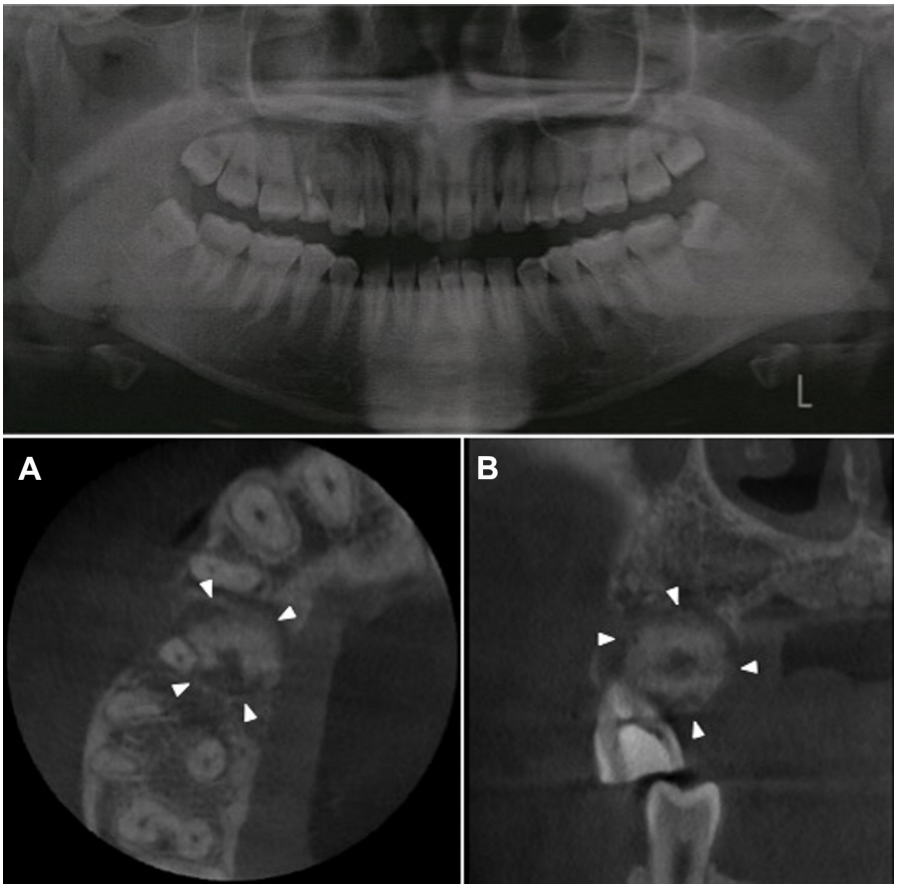

Fig. 2. Upper panel: orthopantomogram showing the lesion in the right maxilla. Lower panel: axial (A) and coronal (B) computed tomography images showing a radiolucent/radiopaque mass, 10 mm × 8 mm × 8 mm, in the right hard palate.

including the second premolar, and curettage was performed under general anesthesia (Fig. 3A). The specimens were sent for histopathological analysis, put into 10% formalin and processed for routine histopathologic examination, and then embedded in paraffin; 4-μm-thick sections were prepared and stained with hematoxylin and eosin. Examination of the stained sections showed numerous proliferating osteoblasts and fibro-vascular connective tissue stroma forming trabeculae (Fig. 3B and C). Based on the histomorphologic characteristics of the tumor, clinical examination, and radiological findings, the final diagnosis of an osteoblastoma of the maxilla was established. There was no sign of recurrence at 2-year follow-up in pantomography (Fig. 4).

3. Discussion

In this report, a very rare case of osteoblastoma occurring in the maxilla of a female patient was described. Generally, the clinical symptoms of an osteoblastoma arising in the maxillofacial region

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