Amit Mittal · Nageshwar Iyer

Large peripheral osteoma of the mandible

Abstract

This case report concerns a 30-year-old man who presented with a large mass on the left side of the jaw in the submandibular area. Panoramic radiography and computed tomography revealed the swelling to be a peripheral osteoma of the mandible, which was excised surgically.

Key words Peripheral osteoma · Mandible · Panoramic radiography · Computed tomography

Introduction

An osteoma is a benign neoplasm of bone tissue characterized by very slow, continuous growth. While both central and peripheral osteomas have been described in the facial bones, a peripheral osteoma of the mandible is uncommon. It is a circumscribed, slow-growing, generally asymptomatic, hard mass producing obvious asymmetry. Here, we present a case of giant peripheral osteoma of the mandible with its radiological features.

Case report

A 35-year-old man came to the Department of Oral and Maxillofacial Surgery with a large swelling in the left submandibular area leading to facial asymmetry, which had developed over the previous 5 years. The swelling was not painful, and no history of abdominal pain, rectal bleeding, diarrhea, or trauma was reported.

On examination, a large, nonmobile, bony, hard swelling measuring 4.0 cm × 4.1 cm × 4.0 cm in the left submandibular area and angle of the mandible along the lower border of the mandible was detected. The overlying skin was normal, with no evidence of ulceration (Fig. 1). Swelling was also seen intraorally with intact overlying mucosa.

The patient was sent for a radiological examination. A panoramic radiograph (Fig. 2) showed a large lobulated radiodense mass in the left mandibular area that appeared to involve the roots of the posterior mandibular tooth. The tooth was found to be vital on pulp testing. These findings were suggestive of endosteal osteoma or another calcified odontogenic tumor affecting the jawbone requiring segmental or block resection.

As no migration of the inferior alveolar neurovascular canal or roots of the teeth was observed, computed tomography (CT) was performed to further evaluate the character and extent of the mass. CT was carried out on a Spiral CT scanner (Somatom; Siemens, Erlangen, Germany) in the axial and coronal planes, and a three-dimensional (3-D) reconstruction was made. CT showed a large, lobulated, well-defined radiopaque mass of bone density attached to the inferior part on the left side of the body of the mandible and extending along both the lingual and lateral borders, that is, intraorally and extraorally (Figs. 3 and 4). The mass did not involve the teeth or alveolus of the mandible; on panoramic radiograph, the mass only overlapped the teeth and alveolar area. The mandibular condyles and temporomandibular joints were normal. The mass was seen clearly in the shaded surface display reconstructions (Figs. 5 and 6).

On the basis of the CT findings, a diagnosis of a large peripheral osteoma of the mandible was made. In this case, CT helped to differentiate the mass from an endosteal osteoma or calcified odontogenic tumor, both of which require segmental or block resection with reconstruction. However, CT very clearly indicated that the mass had no relation to the teeth or alveolus of the mandible, and the findings were diagnostic of a peripheral osteoma that required simple excision only, without the need for reconstruction. Without the aid of CT, the surgeon might plan an intraoral resection of this mass and discover a large lingually placed tumor mass, complicating the surgery. The CT
Fig. 1. Clinical photograph showing a large swelling on the left side of the face along the inferior border of the mandible.

Fig. 2. Panoramic radiograph showing a lobulated radiodense mass along the left side of the body of the mandible near the periapical area of the lower left first molar.

Fig. 3. Axial computed tomography (CT) scan showing a lobulated bony mass arising from the inferior border of the body of the mandible.

Fig. 4. Coronal CT showing a lobulated bony mass arising from the mandible with a wide base and both intraoral and extraoral components.

Fig. 5. Shaded surface display reconstruction image showing a lobulated bony mass along the left side of the inferior border of the body of the mandible (front view).

Fig. 6. Shaded surface display reconstruction image showing a lobulated bony mass along the left side of the inferior border of the body of the mandible (side view).

The swelling was excised, and a hard bony mass measuring 4.0 cm x 4.0 cm was excised from the inferior border of the mandible. The scan helped with the planning of extraoral surgery, which turned out to be quite simple.