



Contents lists available at ScienceDirect

Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology

journal homepage: www.elsevier.com/locate/jomsmmp

Case Report

A case of giant cell tumor of the temporal bone



Masako Yasunaga, Kazutoshi Ota*, Yoshihiro Yoshitake, Hideki Nakayama,
Akimitsu Hiraki, Masanori Shinohara

Department of Oral and Maxillofacial Surgery, Sensory and Motor Organ Sciences, Faculty of Life Sciences, Kumamoto University, 1-1-1 Honjo, Kumamoto 860-8556, Japan

ARTICLE INFO

Article history:

Received 10 July 2013

Received in revised form 28 August 2013

Accepted 1 October 2013

Available online 9 November 2013

Keywords:

Giant cell tumor

Temporal bone

Articular process

Condylar reconstruction

ABSTRACT

We report a rare case of giant cell tumor affecting the articular tubercle of the temporal bone. The patient was a 43-year-old woman who referred to our hospital with swelling of the left temporomandibular area and pain on opening her mouth. Computed tomography (CT) and magnetic resonance imaging (MRI) revealed a tumor mass involving the left mandibular ramus and condylar process, with bone destruction extending to the mandibular fossa. The mass was removed by gross total resection and curettage, and the defect was reconstructed by using mandibular reconstruction plates with condylar heads for the resected mandible bone. CT during follow-up showed that additional bone surrounded the titanium condylar head. During 12 years of clinical and radiological follow-up, the patient has manifested no evidence of recurrence. Masticatory function is well preserved, the maximum mouth opening is 32 mm, and the left artificial joint can move smoothly via a hinge movement of the mandible without ankylosis of the temporomandibular joint.

© 2013 Asian AOMS, ASOMP, JSOP, JSOMS, JSOM, and JAMI. Published by Elsevier Ltd. All rights reserved.☆

1. Introduction

Giant cell tumor (GCT) is a relatively common benign neoplasm that most often affects the epiphysis of the long bones of the extremities [1]. GCTs of the skull are rare: less than 2% of all cases of GCTs of bone. We report here a case of a GCT affecting the articular tubercle of the temporal bone.

2. Case report

A 43-year-old woman was referred to the Department of Oral and Maxillofacial Surgery of Kumamoto University Hospital in July 2000 with swelling of the left temporomandibular area and pain on opening her mouth. She had noticed the swelling a few years ago, but she had had no medical attention. Her medical history showed

that she had started asthma treatment 5 years and had had surgery for an ovarian cyst. She had no history of head trauma. Her family history was unremarkable. She manifested no special systemic findings. Local findings included a poorly marginated tumor mass, 39 mm × 32 mm in size, in the left temporomandibular area, with induration (Fig. 1). She had no inflammatory findings such as spontaneous pain, tenderness, and redness. Blood analyses were normal. Computed tomography (CT) revealed a tumor mass involving the left mandibular ramus and condylar process, with bone destruction extending to the mandibular fossa (Fig. 1). Magnetic resonance imaging (MRI) indicated a hypointense tumor mass around the left condylar process on T1- and T2-weighted imaging. The tumor mass did not damage the mandible but did damage the middle cranial fossa. Tumor invasion of the dura mater was unclear, inasmuch as she could not tolerate a contrast study because of her asthma. Fine-needle aspiration was not sufficient for the diagnosis. We believed that we could diagnose the GCT, or giant cell granuloma, however, by using intraoperative rapid diagnosis. Therefore, we performed a complete wide excision, which included the left condylar process and a reconstruction. The mass from the segment of left mandible to the base of middle cranial fossa was removed and curetted (Fig. 2). By direct inspection, we established that the mass did not invade the brain. We made an incision from the left preauricular area to the inferior border of the mandible and checked the position of the parotid gland and facial nerve. The patient underwent local parotidectomy, with preservation of the facial nerve, and resection

☆ Asian AOMS: 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.

* Corresponding author. Present address: Department of Oral and Maxillofacial Surgery, Kumamoto City Hospital, 1-1-60, Koto, Kumamoto 862-8505, Japan. Tel.: +81 96 373 5288; fax: +81 96 373 5286.

E-mail addresses: masako77516@gmail.com (M. Yasunaga), kazu1121@kumamoto-u.ac.jp (K. Ota), yyoshi326@gmail.com (Y. Yoshitake), hinakayam@gmail.com (H. Nakayama), hilucky@gmail.com (A. Hiraki), shinora@kumamoto-u.ac.jp (M. Shinohara).

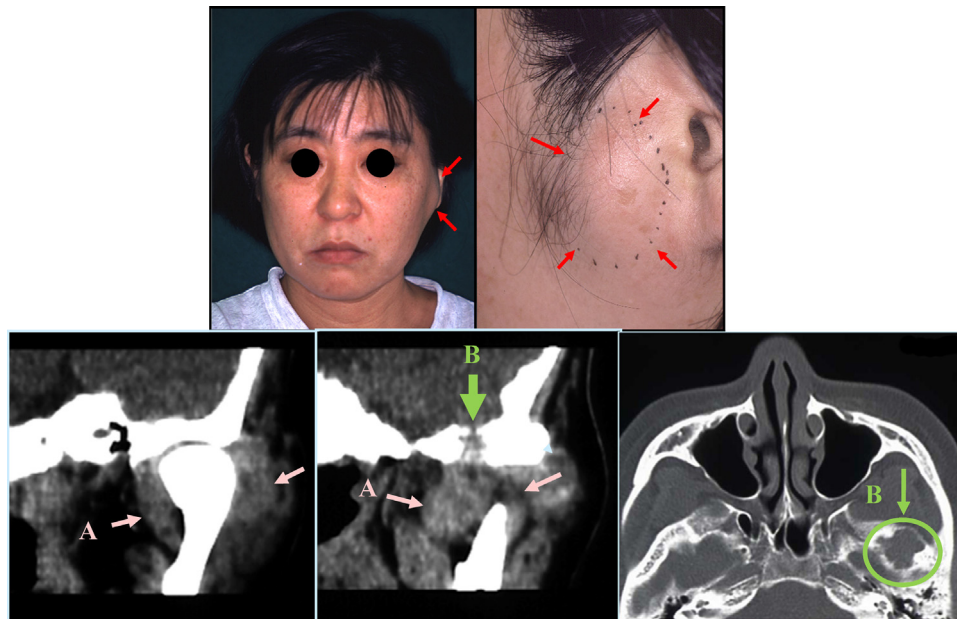


Fig. 1. The slight poorly marginated tumor mass with induration is localized at the left temporomandibular area, the size was 39 mm × 32 mm. CT revealed a tumor mass involving the left mandibular ramus and condylar process with bone destruction extending to mandibular fossa. (A) Tumor and (B) bone destruction area of skull base.

of the mandibular condyle. We then performed amputation of the body of the mandible at the mandibular lingual level, inverted the bone fragment with the tumor, amputated the muscular process, excised the tumor, including the left condylar process. We reconstructed the defect by using mandibular reconstruction plate with a condylar head for the resected mandible bone and fixed a titanium condylar head with surrounding soft tissues using polyglactin 910 synthetic absorbable sutures. Intermaxillary fixation for 3 weeks was used to maintain occlusion.

Microscopic examination showed tumor tissue consisting of multinucleated giant cells and spindle cells (Fig. 3A and B). The multinucleated giant cells had a relatively uniform size, and the number of nuclei per cell was 10 or more. We made a definitive diagnosis of GCT. The tumor had invaded surrounding tissue and parotid, adipose, nerve, and muscle tissues (Fig. 3C–E). The tumor

had not invaded, however, the cortical bone of the mandible or the bone marrow (Fig. 3F). For this reason, the primary tumor in this case did not originate in the mandible but rather in the temporal bone.

The patient had intermaxillary fixation for 2 weeks postoperatively, and then she had jaw exercise training. She was discharged from the hospital 23 days after surgery. She has been followed up for 12 years without any evidence of recurrence or metastasis. Palsy remains at the temporal branch of the facial nerve, lingual nerve, and inferior alveolar nerve on the left side but does not interfere with normal life. Her facial contour, occlusal condition, and masticatory function were well preserved, except for lateralization of the mandible on mouth opening (Fig. 4). The maximum mouth opening was 32 mm. Today, 12 years postoperatively, radiography shows that the right temporomandibular joint (TMJ) possesses a

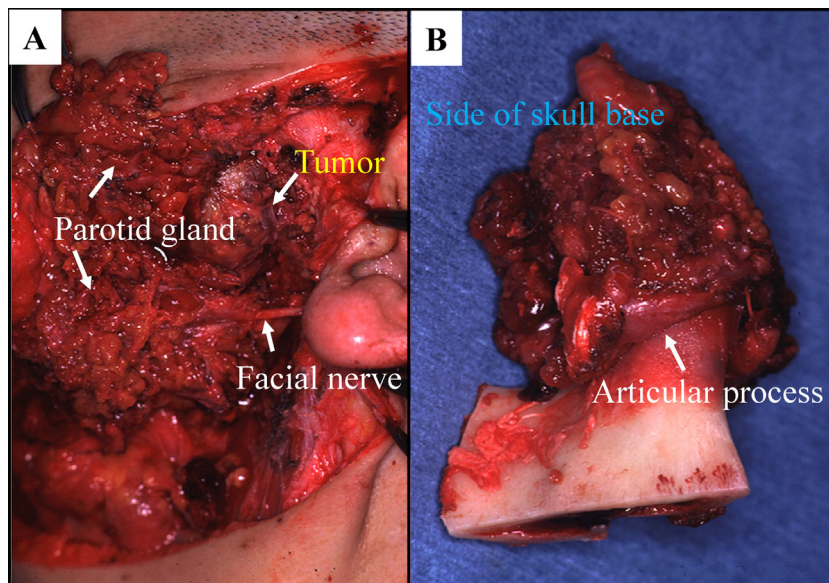


Fig. 2. (A) The mass lesion is exposed from the segment of left mandible to the base of middle cranial fossa; (B) we underwent complete excision including the left condylar process.

Download English Version:

<https://daneshyari.com/en/article/3160523>

Download Persian Version:

<https://daneshyari.com/article/3160523>

[Daneshyari.com](https://daneshyari.com)