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Case Report
Clinical Pathology

Solitary osteochondroma of the mandibular symphysis

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Abstract. Osteochondroma is a benign neoplasm that usually develops in long bones and very rarely occurs in craniofacial bones. Nearly all reported mandibular osteochondromas have arisen in the condyle and the coronoid process, and occurrence in other locations is extremely rare. We describe a case of osteochondroma arising from the inferior border of the mandibular symphysis.

Key words: osteochondroma; bone neoplasm; mandibular symphysis.

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Osteochondroma is a benign neoplasm that usually develops in long bones and very rarely occurs in craniofacial bones. Both the condyle and the coronoid process are common sites in the craniofacial region. Craniofacial osteochondromas occurring in other locations are extremely rare. To our knowledge, only one case arising in the mandibular symphysis has been reported[4]. We describe a case of osteochondroma arising from the inferior border of the mandibular symphysis.

Case report

An 18-year-old Japanese man was referred to our clinic because of a painless bony hard swelling in the submental region in April 2002. The patient had noticed a swelling in the region several years previously, but did not seek medical attention. During the 6 months before presentation, there was no marked change in tumor size and no signs or symptoms. A well-defined bony swelling was present at the right side of the mandibular symphysis. Three-dimensional computed tomographic examination revealed a pedunculated osseous protuberance arising from right side of the inferior border of the mandibular symphysis (Fig. 1). The tumor was covered by the geniohyoid muscle. There was also no history of trauma in the region.

The clinical diagnosis was osteoma, and the tumor was resected under general anesthesia on August 22, 2002. The tumor was easily removed from the inferior border of the mandible with the use of surgical chisels and bars. It was covered with cartilaginous and fibrous tissues and measured 15 mm in length and 15 mm in diameter. Histopathological examination revealed an osteochondroma. The lesion had a bony structure and was covered with a cartilaginous cap and bone marrow showing signs of fatty degeneration (Fig. 2).

Discussion

Osteochondroma is a common benign bone tumor that rarely arises in cranial and maxillofacial bones, because these bones develop by intramembranous ossification. Many cases of osteochondroma of the mandible have been reported in the English-language literature, but almost all cases have arisen from the condyle and the coronoid process[1,5]. Osteochondroma occurring in other regions of the mandible is extremely rare; only one case arising in the mandibular symphysis has been reported previously[4].

Histologically, osteochondromas are characterized by the presence of a cartilage cap on top of the tumor. With time, this cartilage gradually undergoes endochondral ossification and is replaced by bone. In adults a cartilage cap is often absent. In the present case, a cartilage cap was clearly observed.

For treatment, radical excision including the surrounding periosteum is strongly recommended, and recurrence of osteochondroma is extremely rare[3,5]. Malignant transformation is also rare, but chondrosarcomas arise in 1–2% of all solitary osteochondromas. Only one case of malignant transformation of osteochondroma in the oral and maxillofacial region has been reported, originating from the nasal septum[2].

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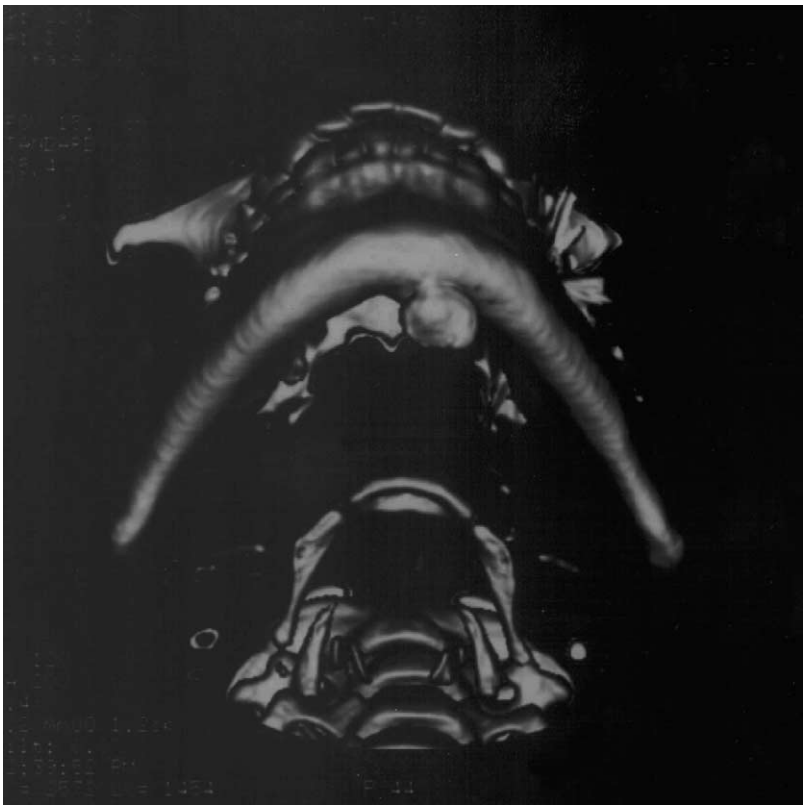

Fig. 1. Three-dimensional computed tomographic findings. Preoperative three-dimensional computed tomographic examination revealed a pedunculated osseous protuberance arising from the inferior border of the mandibular symphysis.

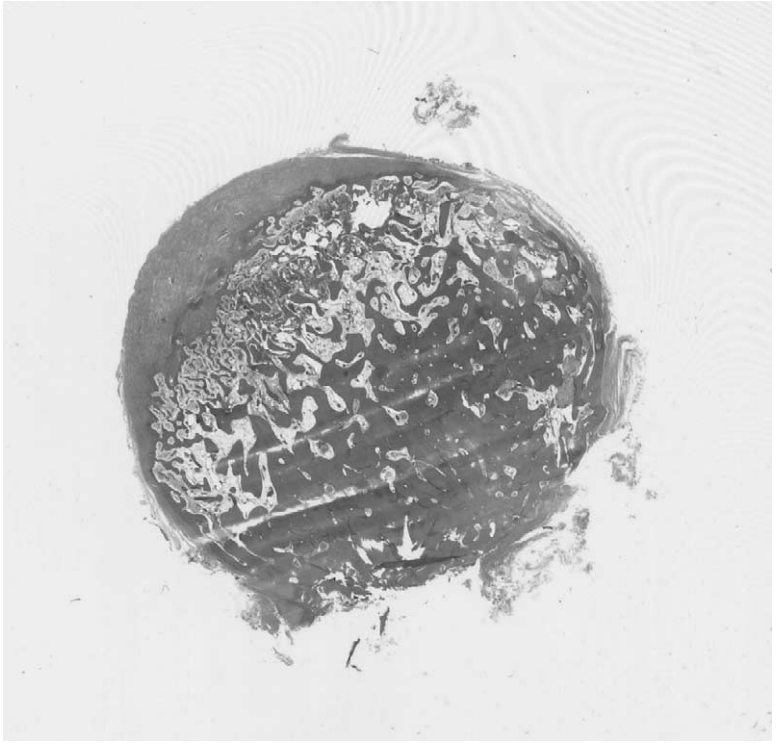

Fig. 2. Microscopic appearance of excised specimen. Microscopic examination revealed an osteochondroma showing a bony structure covered with a cartilaginous cap (hematoxylin and eosin stain 20×).

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