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CASE REPORT

Chondrosarcoma of the nasal septum: a case report

Septumdan kaynaklanan kondrosarkom: Olgu sunumu

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The nasal septum is a particularly rare site of origin of a chondrosarcoma. A 55-year-old man presented with complaints of nasal obstruction and anosmia of one year duration. A fragile mass was detected in the left nasal cavity. Computed tomography showed a large hypodense mass with scattered calcifications, eroding both ethmoid sinuses and extending to the left orbit. Following a biopsy, the tumor was resected via a lateral rhinotomy approach. No evidence for recurrent disease was detected during a three-year follow-up period. Although unusual in the nasal septum, chondrosarcoma must be considered in the differential diagnosis of calcified intranasal masses.

Key Words: Chondrosarcoma/diagnosis/surgery; nasal septum/pathology/radiography/surgery; nose neoplasms/diagnosis/surgery.

Nazal septum, kondrosarkomun nadir görüldüğü bir bölgedir. Bir yıldır burun tıkanıklığı ve koku alamama şikayeti olan 55 yaşındaki erkek hastanın sol burun boşluğunda frajil bir kitle saptandı. Bilgisayarlı tomografide, sol orbitaya uzanan ve her iki tarafta da etmoid sinüsleri tutan, dağınık olarak kalsifikasyon gösteren büyük hipodens bir kitle görüldü. Biyopsiyi takiben tümör lateral rinotomi yaklaşımıyla çıkartıldı. Üç yıllık izlem dönemi içinde, hastada herhangi bir tekrarlama belirtisine rastlanmadı. Nazal septumda nadir görülmesine rağmen, kondrosarkom, intranazal kalsifikasyon gösteren kitlelerin ayırıcı tanısında göz önünde bulundurulmalıdır.

Anahtar Sözcükler: Kondrosarkom/tanı/cerrahi; nazal septum/patoloji/radyografi/cerrahi; burun neoplazileri/tanı/cerrahi.

Chondrosarcoma arising in the head and neck region is rare, accounting for approximately 5% to 10% of all chondrosarcomas.[1] Nasal septum is particularly an unusual site for this neoplasm.[1,2] At the time of presentation, there is frequently extensive involvement of adjacent tissues. Radical surgery is the best treatment.[3] We report a case of chondrosarcoma originating from the nasal septum.

CASE REPORT

A 55-year-old man presented with complaints of nasal obstruction and anosmia of a year history. During the past seven months, he noticed a mass located in the region of the left nasal lateral wall. Endoscopic examination revealed a red irregular nasal mass, obstructing both nasal cavities, invading the left maxillary antrum and ethmoid sinus and extending to the left orbit. It was fragile and bleeded on gentle pressure during examination. There was no cervical lymphadenopathy. Computed tomography (CT) showed a large hypodense mass with scattered calcifications, eroding the ethmoid sinus bilaterally, and extending to the left orbit (Fig. 1). Due to claustrophobia of the patient, magnetic resonance imaging could not be per-

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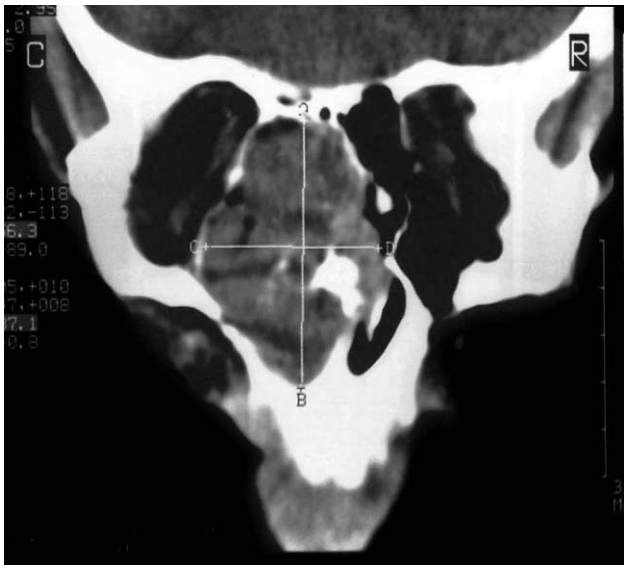

Fig. 1 - *A large hypodense mass is seen with scattered calcifications on computed tomography scan.*

formed. Ophthalmologic consultation was obtained and the patient was found to have intact vision with extraocular mobility.

A transnasal biopsy was obtained under local anesthesia, which showed a low-grade chondrosarcoma. Total resection of the tumor was performed, using a left lateral rhinotomy incision by dividing the upper lip. On entrance the nasal cavity, the mass was clearly visualized. After partial removal of the septum, medial maxillectomy and bilateral ethmoidectomies were performed. The mass was safely resected together with a left periorbital fatty tissue. The site of the resection was examined endoscopically and no attempts were made for reconstruction. Histologic examination confirmed grade I chondrosarcoma with negative margins (Fig. 2). The patient was discharged on the tenth postoperative day. No evidence for recurrent disease was detected during a three-year follow-up period (Fig. 3).

DISCUSSION

Chondrosarcomas are malignant neoplasms of cartilaginous tissue. They are slow-growing, but locally aggressive tumors with a propensity for local recurrence.[4] They usually involve the pelvis, ribs, long bones of the extremities, scapula, and the sternum.[5] They are rarely encountered in the head and neck region,[6] accounting for 3% to 12% of all chondrosarcomas in various reports.[3,5] Involvement of the nasal septum is quite uncommon, the most common sites of origin being the maxilla and mandible in the head and neck region.[3] Most occur in middle ages with a male preponderance of 2:1.[7] Etiologic factors are unknown, but associated conditions include multiple hereditary exostosis, Ollier's disease, Maffucci's syndrome, previous use of intravenous thorium dioxide for contrast, Paget's disease of bone, chondromyxoid fibroma, and previous irradiation therapy.[1,5,7] Histologically, chondrosarcomas are divided into three grades on the basis of cellularity, nuclear size and atypia and mitotic activity. The histologic differential diagnosis includes chondroma, chondromatous metaplasia/hamartoma and salivary gland neoplasms.[2]

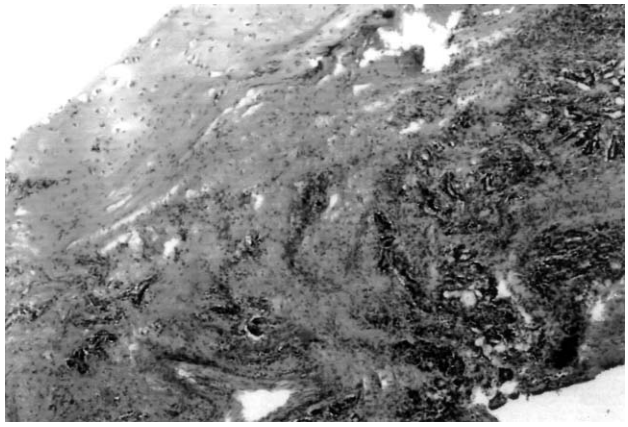

Fig. 2 - *The tumor with chondroid cells causing destruction in the bone (H-E x 100).*

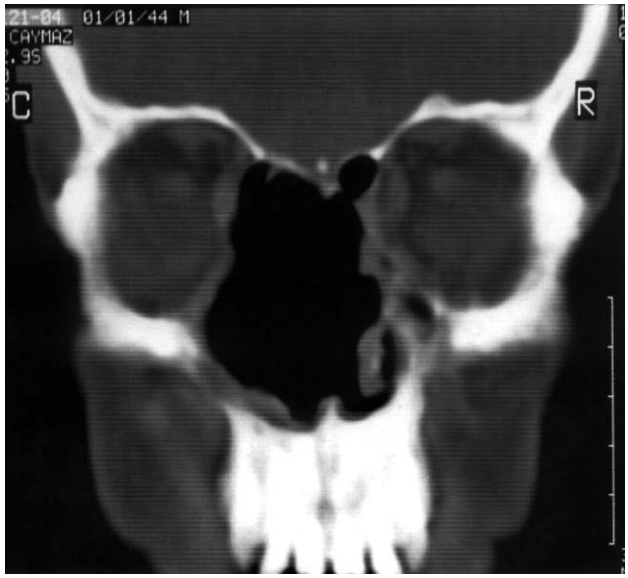

Fig. 3 - *A computed tomography scan of the patient in the postoperative 17th month.*

Chondrosarcomas are classified into three main types: primary chondrosarcomas arising from undifferentiated perichondrial cells; secondary chondrosarcomas arising from metamorphosed cells either in a central chondroma or cartilaginous exostosis; and mesenchymal chondrosarcomas arising from primitive mesenchymal cells.[1]

For histopathologists, chondrosarcomas can be one of the most difficult malignant bone tumors to distinguish.[3] Involvement of the maxilla is an unusual entity because the tumor is usually well-differentiated with a slow course and rare metastatic capability.[3] Correlation with intraoperative findings is necessary to determine the site of origin.[1] Characteristic ring forming calcifications seen on CT scans may be a clue for the correct diagnosis and relate to the pattern of calcification inside the tumor.[1,3] Radiologically, the differential diagnosis includes osteosarcoma and chondroma. In osteosarcoma, the calcifications seen on CT scans tend to be linear rather then spotty, whereas in chondromas, they are usually located around the tumor, in areas of bone resorption.[1] The prognosis of a chondrosarcoma is determined by three factors: tumor site, tumor grade, and resectability of the tumor.[8]

Calcifications on the CT scan were suggestive of a nasal chondrosarcoma. The origin of the tumor was found as the nasal septum during the operation. The mass was removed and safe surgical margins were confirmed by histopathological examination. Postoperative radiotherapy was not given. During the follow up period, no tumor recurrence was seen.

There have been 45 reports in the English-language literature concerning chondrosarcomas arising in this location, with surgical excision using craniofacial procedures, facial degloving, facial splitting, and maxillectomy techniques. Meric et al.[9] reported a case treated by a transnasal and transpalatal approach. Endoscopic resection of nasal septum chondrosarcomas has been advocated by a number of authors in recent years.[10,11] Matthews et al.[10] reported that this approach provided a minimally invasive method to remove well-differentiated, low-grade (grade I) and size-limited malignant cartilaginous tumors of the nasal septum.[11]

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