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Image of Interest

Clival Cordoma

Klival Kordoma

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ABSTRACT

A 61-year-old female patient was admitted to the hospital with a headache that lasted for 2 months and diplopia for 5 days. In the magnetic resonance imaging examination, there is a soft tissue mass originating from the sellar region, extending to the suprasellar area, compressing the optic chiasm, destroying the clivus on the right, and extending into the sphenoid sinus. The lesion was diagnosed as chordoma. This patient's chordoma is a rare malignant tumor originating from notochord remnants. It is located in the skull base and spinal bones. It is a rare tumor classified under bone and soft tissue sarcoma.

Keywords: Cancer, Chordoma clivus, MRI imaging features of intracranial chordomas

ÖZ

61 yaşında kadın hasta 2 aydır devam eden baş ağrısı ve 5 gündür çift görme şikayeti ile hastaneye başvurdu. MRG incelemesinde sellar bölgeden köken alan, suprasellar alana uzanan, optik kiazmayı sıkıştıran, sağda klivusu tahrip eden ve sfenoid sinüse uzanan yumuşak doku kitlesi mevcuttu. Lezyona kordoma tanısı konuldu. Kordoma, nortokord kalıntılarından kaynaklanan nadir bir malign tümördür. Kafa tabanı ve omurilik kemiklerinde bulunur. Kemik ve yumuşak doku sarkomu altında sınıflandırılan nadir bir tümördür.

Anahtar Kelimeler: Kanser, Klival kordoma, İntrakranial kordomalarda MR görüntüleme özellikleri

INTRODUCTION

Chordoma is a rare malignant tumor originating from notochord remnants. It is located in the skull base and spinal bones.[1,2] It is more common in men than in women. Since most of the cases are axial skeleton and intraosseous lesions, they usually cause bone destruction. They are locally aggressive lesions and rarely metastasize.[3,4]

CASE PRESENTATION

A 61-year-old female patient was admitted to the hospital with a headache that lasted for 2 months and diplopia for 5 days. The laboratory test values of the patient were as follows: leukocytes, 10 200/mm^3, Hgb, 12.8 g/dL, and biochemistry parameters were within the normal range.

In the magnetic resonance imaging (MRI) examination, there is a soft tissue mass originating from the sellar region, extending to the suprasellar area, compressing the optic chiasm, destroying the clivus on the right, and extending into the sphenoid sinus. The defined lesion largely surrounds the cavernous segment of the internal carotid artery on the right. The described lesion is observed with hypointense signals in T1-weighted series and hyperintense signals in T2-weighted series (Figures 1a,b and 2).

The patient was operated with the transsphenoidal method with a preliminary diagnosis of chordoma. In the

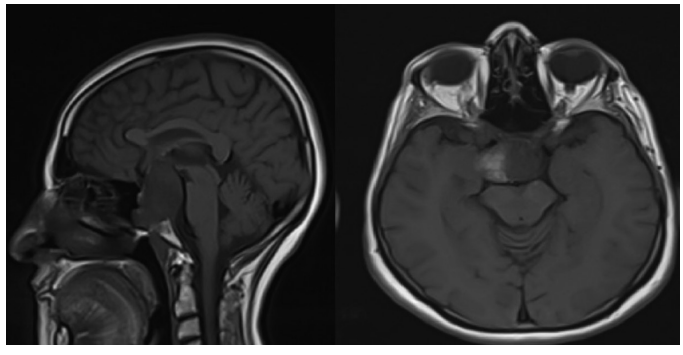

Figure 1. Sellar and suprasellar extent of the tumor is shown by T1 sagittal and T1 axial images.

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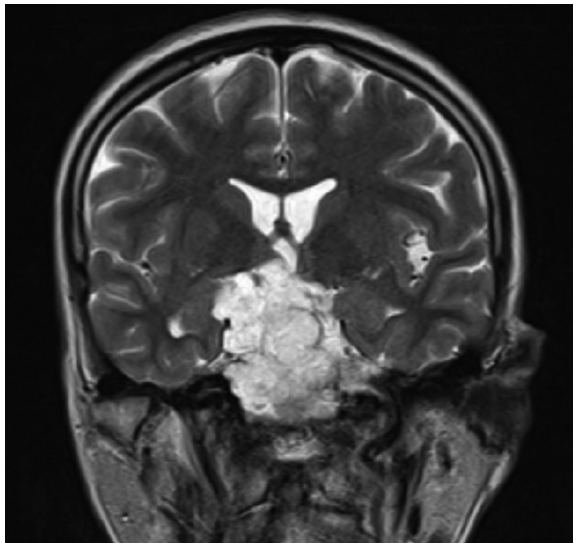

Figure 2. Heterogenous hyperintense signals were obtained in the lesion on the coronal plane T2-weighted image.

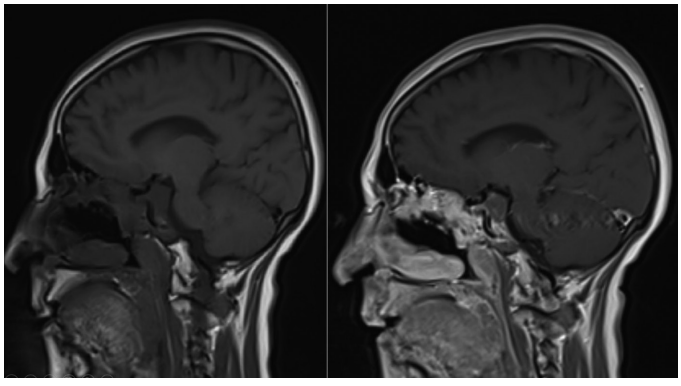

Figure 3. T1 sagittal images without contrast on the right and T1 sagittal images with contrast on the left.

MRI of the patient with headache 9 months after the operation, T1 hypointense, T2 hyperintense, and postcontrast T1-weighted series showed a lesion consistent with a heterogeneously enhanced recurrent mass (Figures 3 and 4). The patient was sent to an advanced center for Radiotherapy (RT) treatment due to recurrence.

MAIN POINTS

- Chordoma is a rare malignant tumor in the literature.
- As chordoma is a rare malignant tumor, radiologists are not experienced enough.
- In terms of differential diagnosis of skull base tumors, in this article, it is thought that presenting the imaging findings of chordoma will contribute to radiologists in terms of diagnosis and differential diagnosis.

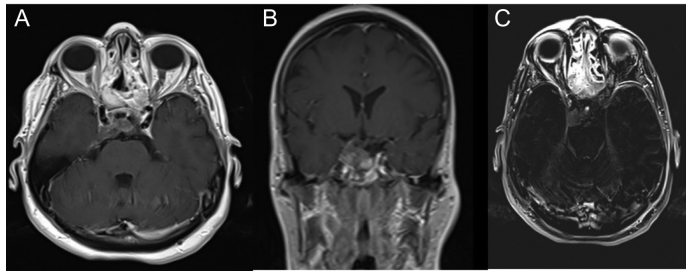

Figure 4. T1 enhanced axial image (A), T1 enhanced coronal image (B), and axial T1 subtraction image (C) indicate the contrast enhancement of the lesion.

DISCUSSION

Chordomas are rare malignant tumors that develop in the primitive remnants of the notochord. Notochord is the primitive cell that forms the first fetal skeleton extending from Rathke's sac to the coccyx. Chordomas can occur at any age.[2,4,5]

Clivus involvement is the second common location. There is no gender difference in clival involvement.[4,6]

Computed tomography (CT) and MRI are complementary imaging modalities in the diagnosis of chordomas. While CT is preferred to show bone involvement of the lesion and calcifications within the lesion, MRI is preferred for the spread of the lesion to neighboring structures and preoperative diagnosis. The classical CT imaging features of intracranial chordomas are lytic bone destruction and a centrally located well-circumscribed soft tissue mass originating from the clivus. It may contain calcifications or may be observed with moderate-to-extreme enhancement in contrast-enhanced images.[2,5,7,8] Classical MRI imaging features of intracranial chordomas are observed as hypointense or isointense signal on T1-weighted images. Hyperintense areas within the lesion on T1-weighted images represent bleeding or a mucus pool. On T2-weighted images, it is generally seen as a hyperintense signal. On T1-weighted contrast-enhanced series, it shows heterogeneous contrast enhancement pattern. Lesions with more contrast are associated with poor prognosis.[1,2,4,9] While the first choice in the treatment options of chordomas is surgery, the first choice in relapsed cases is RT.[10] Skull base chondrosarcoma, pituitary macroadenoma, plasmacytoma, and meningioma should be considered in the differential diagnosis of clival chordomas.

Informed Consent: Written informed consent was obtained from the participant who participated in this study.

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