

The Corpus Callosum and Bilateral Choroid Plexus Lipoma: A Case Report

Korpus Kallozum ve Bilateral Koroid Pleksus Lipomu: Olgu Sunumu

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Abstract

Corpus callosum (CC) lipomas are a rare congenital malformation associated with varying grades of CC dysgenesis. The extension of such a lipoma into the lateral ventricle is rarer. CC lipomas are typically asymptomatic, but they may present epilepsy, hemiplegia, dementia, or simple headaches. Computed tomography and magnetic resonance imaging may aid in their diagnosis. Herein, we present a case of a 32-year-old female who was diagnosed with bilateral lateral ventricle choroid plexus and CC lipoma.

Key Words: Choroid Plexus, Corpus Callosum, Lipoma, Agenesis

Öz

Korpus kallozum (KK) lipomları değişen KK disgenезisi evreleriyle ilişkili olabilen çok nadir konjenital malformasyonlardır. Söz konusu lipomların lateral ventriküle uzanımı ise ayrıca nadirdir. KK lipomları tipik olarak asemptomatik, ancak epilepsi, hemipleji, demans veya basit baş ağrısı yakınmaları ile ortaya çıkabilirler. Bilgisayarlı tomografi ve manyetik rezonans görüntüleme tanıda yardımcı olabilir. Burada, bilateral lateral ventrikül koroid Pleksus ve KK lipomu tanısı ile izlenen 32 yaşında erkek hasta sunulmuştur.

Anahtar Kelimeler: Koroid Plexus, Korpus Kallozum, Lipom, Agenesis

Introduction

Cranial lipomas accounts for approximately 0.1% of intracranial lesions and less than 5% of all primary brain tumors. Pericallosal lipoma (PCLp) accounts for approximately half of all intracranial lipomas (1).

Anomalies of the corpus callosum (CC) are typically seen in cases with PCLp, and intracranial lipomas usually originate from abnormal differentiation of the persistent primitive meninges (2). Typically, lipomas are localized in midline areas such as the CC and quadrigeminal cistern. Such lesions are classified into two morphologic subtypes: curvilinear and tubulonodular. The tubulonodular type of lipomas is more frequently associated with CC anomalies (3). Intracranial lipomas are usually asymptomatic

but may present symptoms such as seizures or paresthesia. Herein, we present an extremely rare case of bilateral choroid plexus and CC lipoma.

Case Report

A 32-year-old female was admitted to our department with complaints of severe headache that was unresponsive to analgesics. Neurological examination was intact, and family history and laboratory test results were negative. Cranial computed tomography (CT) revealed a diffuse midline mass that bilaterally extended into the lateral ventricles, particularly the choroid plexus, and it was more hypodense than cerebrospinal fluid (CSF) (Figure 1). Cranial magnetic resonance imaging (MRI) showed a lipomatous mass that was hyperintense on

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both T2- and T1-weighted images (Figure 2). However, there was no calcification or surrounding edema, and no agenesis regarding the CC was detected. Other cranial structures were evaluated to be normal. No surgical intervention was planned and the patient was followed up with no neurological deterioration.

Discussion

Intracranial lipomas are very rare lesions regarded to be related to an inadequate resorption of meningeal mesenchyme at the 8th and 10th weeks of gestation. Mechel (1881) and Rokitsky (1856) were the first to describe cases of CC agenesis and intracranial lipomas, respectively (4). Tart and Quisling (3) suggested that the difference in the two morphologic subtypes, curvilinear and tubulonodular, is related to the gestation time. Tubulonodular lipomas are anteriorly localized, tubular-shaped

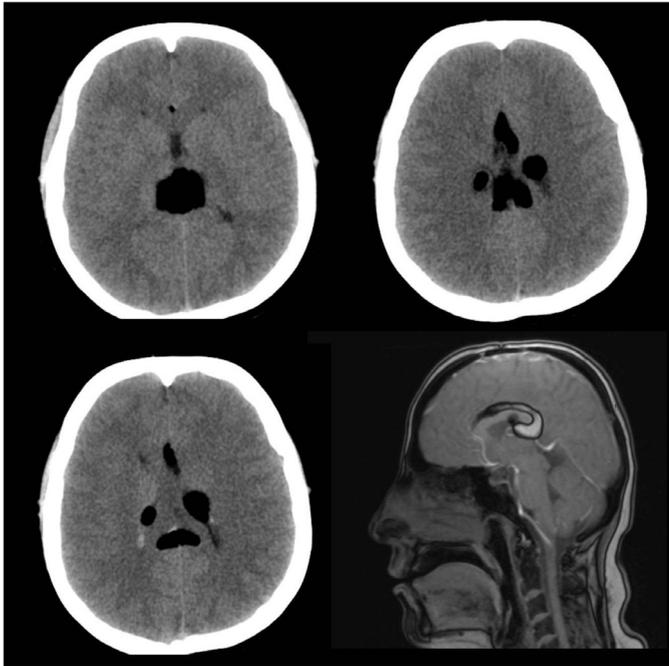


Figure 1: Cranial computed tomography imaging of the patient

lesions and may be associated with frontal encephalocele, frontal lobe anomalies, and CC dysgenesis. Co-existence of bilateral choroid plexus lipoma is exceptionally rare, whereas agenesis or dysgenesis of the CC occurs in approximately half of the patients (3,5).

Our patient was found to have the curvilinear subtype of intracranial lipomas. Although intracranial lipomas are often asymptomatic, the most common symptom is headache, as was reported by our patient. Recent publications have suggested that their symptoms also include drug-resistant epilepsy and strength loss (6).

Radical resection of intracranial lipomas is not possible without morbidity. Strong adherence to the surrounding brain and vascular tissues is considered a challenge when intracranial lipoma surgery is required. Peripheral edema and the accompanying neurological symptoms are the most important surgical indications. To date, it remains unclear as to why the pathophysiological mechanism related to lipomas causes edema. Using modern methods, intracranial lipomas can be prenatally diagnosed. In Pai syndrome, a congenital disease, facial median cleft closure defect is accompanied by CC lipomas (7,8). CT and MRI are essential for the diagnosis of intracranial lipomas. On CT, the lesions are characterized by limited margins and occasionally accompanied by peripheral calcification; they often show greater hypodensity than CSF. They are also hyperintense on T1- and T2-weighted MR images. In addition, there is often a loss of signal in fat-suppressed MRI. Dermoid cysts, teratomas, and gliomas should be considered as differential diagnoses, and surgery should be accordingly planned (4).

Conclusion

CC and bilateral choroid plexus lipomas are rare conditions. The tubulonodular type of lipomas is frequently associated with various anomalies of the CC. Their diagnosis can be challenging as the radiological appearances of lipomas can vary.

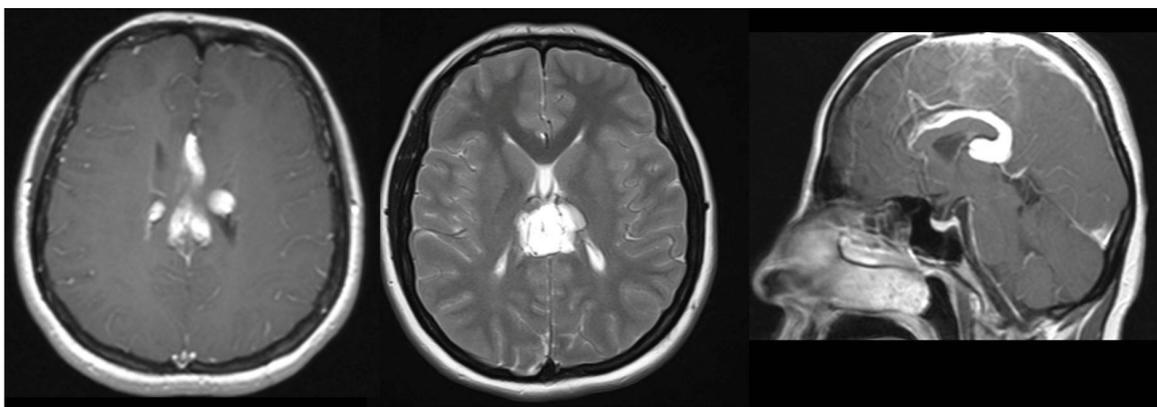


Figure 2: Cranial magnetic resonance imaging of the patient

Ethics

Informed Consent: Informed consent was obtained.

Peer-reviewed: Externally peer-reviewed.

Authorship Contributions

Concept: Design: Data Collection and Processing: Analysis or Interpretation: Literature Search: Writing: All authors have contributed equally.

Conflict of Interest: The authors declared that there was no conflict of interest during the preparation and publication of this article.

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