

An Unusual Cause of Headache: Ruptured Intracranial Teratoma: A Case Report

SHARMIN AKTER¹, MD. ABU TAHER², GOLAM FAHAD BHUIYAN³, ISHTIAQUE MOHAMMAD BEHNOM⁴, MEER TAHMINA YASMIN MISHOE⁵

Abstract

Intracranial teratoma are uncommon intracranial neoplasms usually present in childhood or early adulthood and typically smaller. MRI and MRV of Brain of an 18-year-old male to evaluate chronic intermittent headache for 4 years founds rupture intracranial teratoma.

Key words: Chronic headache, Intracranial teratoma, rupture

Introduction

Intracranial teratomas are infrequent intracranial neoplasms usually present in childhood or early adulthood and typically smaller in appearance. They are benign, slow growing, and

rarely rupture. However, it can lead to complications due to compression of the surrounding region or vasculature. Despite not being a rapidly growing tumor and considered benign, teratoma show some neurological signs and symptoms by impacting the surrounding nerves and blood vessels.

Case Report

An 18-year-old male came to the Radiology & Imaging department of Islami Bank Central Hospital Dhaka for MRI of Brain with contrast & MRV to evaluate chronic intermittent headache for 4 years, there were no other symptoms nor any neurological deficits previously. For the last 7 days he complaints of dimness of vision and double vision, on clinical examination there was signs of right 6th cranial nerve palsy.

Author of correspondence: Dr. Sharmin Akter, Registrar, Department of Radiology & Imaging, Bangladesh Institute of Research in Diabetes, Endocrine & Metabolic disorders (BIRDEM), Shahbag, Dhaka.

Initial magnetic resonance imaging (MRI) revealed-



Figure 1: T1 W1

T1 W image shows fairly large nearly lobulated extra axial mass lesion about 5cm x 4 cm having fat, calcification, solid and cystic components with fat CSF levels

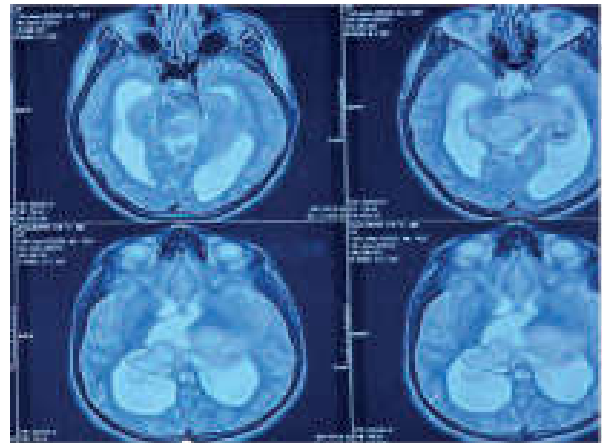


Figure 2: T2 W1

1) Registrar, Department of Radiology & Imaging, Bangladesh Institute of Research in Diabetes, Endocrine & Metabolic disorders (BIRDEM), Shahbag, Dhaka. 2) Professor, Department of Radiology & Imaging, Bangladesh Institute of Research in Diabetes, Endocrine & Metabolic disorders (BIRDEM), Shahbag, Dhaka. 3) Medical officer, Department of Nephrology, ShSMCH, Dhaka. 4) Assistant Professor, Department of Radiology & Imaging, Bangladesh Institute of Research in Diabetes, Endocrine & Metabolic disorders (BIRDEM), Shahbag, Dhaka. 5) Registrar, Department of Radiology & Imaging, Bangladesh Institute of Research in Diabetes, Endocrine & Metabolic disorders (BIRDEM), Shahbag, Dhaka.

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T2W shows heterogeneously hyperintense lesion. Hyperintense foci within ventricles & subarachnoid spaces.

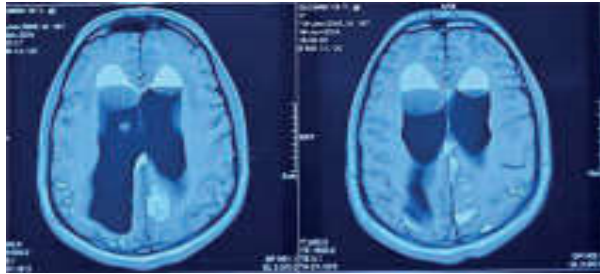


Figure 3: FLAIR

On FLAIR Image heterogeneously hyperintense lesion with fat CSF levels noted in 3rd & lateral ventricles. Obstruction of 3rd ventricle causing marked dilatation of 3rd & both lateral ventricles, 4th ventricle is normal. Fat droplets also noted in the subarachnoid spaces.

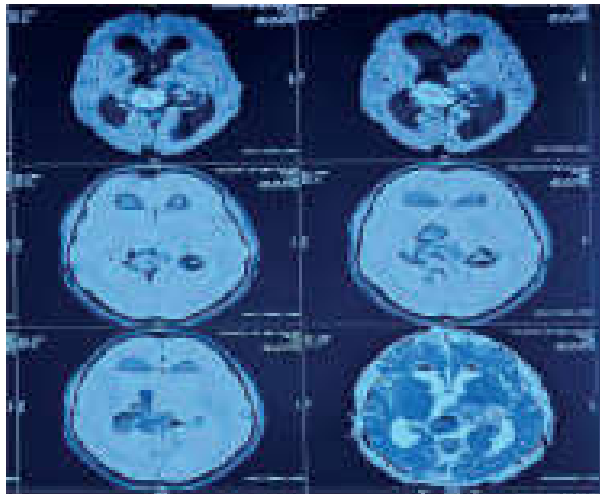


Figure 4: DWI, ADC & GRE

On DWI, ADC & GRE sequences shows true restriction of solid component on diffusion weighted image, blooming of calcifications & fat on GRE

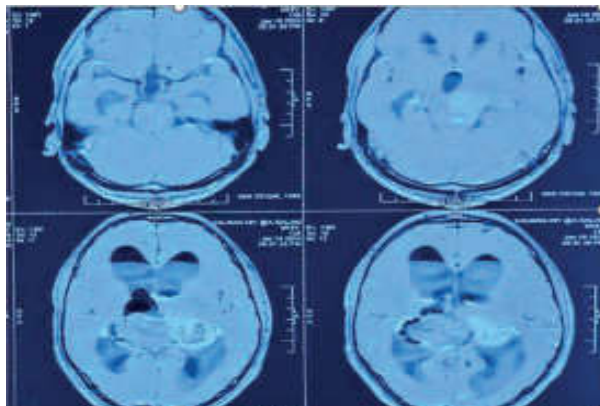


Figure 5: Post contrast T1WI

Post contrast image shows heterogeneous enhancement. No obvious meningeal enhancement.

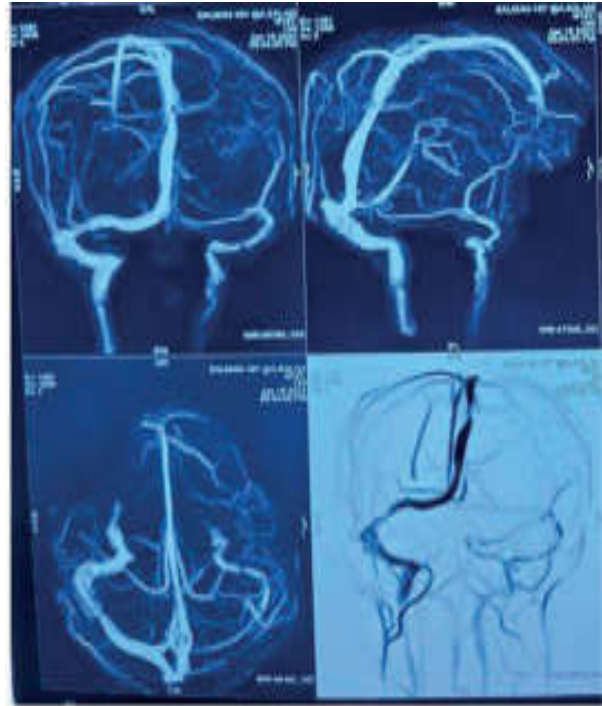


Figure 7: MRV

In MRV, irregularity and interruption of flow pattern seen in the distal transverse and proximal sigmoid sinuses on right side. Hypoplastic left transverse and sigmoid sinuses with normal flow.

CT Scan of Head was advised to exclude any hemorrhage, which shows

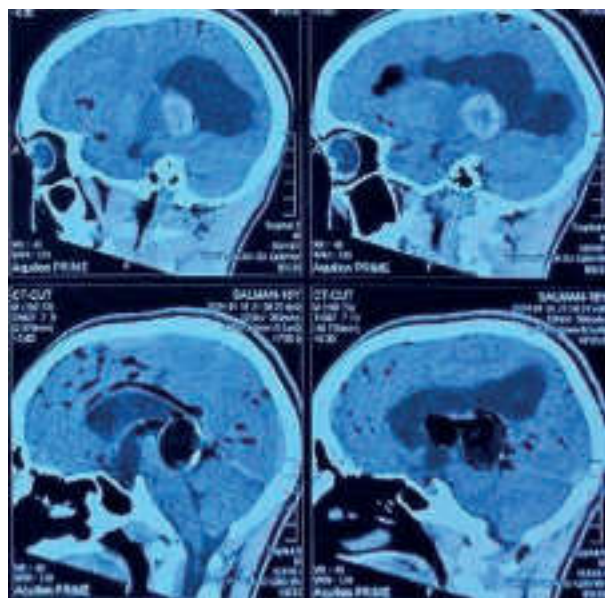


Figure 7: CT-Sagittal

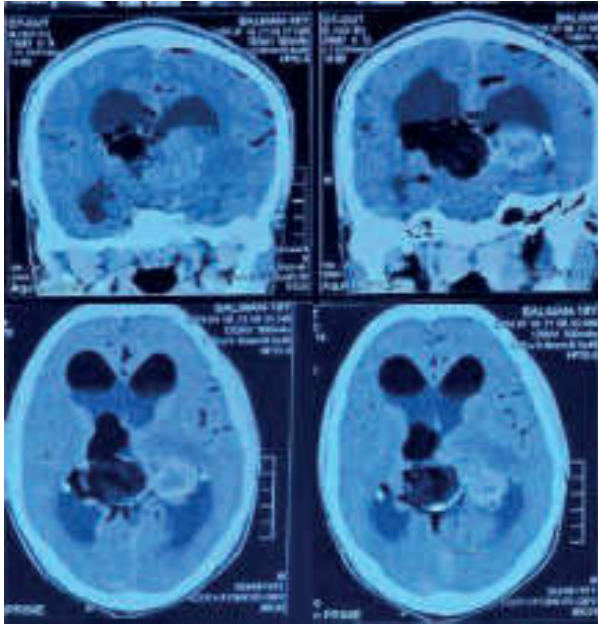


Figure 8: *CT-Axial & coronal*

No evidence of hemorrhage. A large mixed density lesion in pineal region and posterior third ventricle. Solid and cystic component, low density (represents fat) and calcifications, fat CSF levels noted within the lateral ventricles, fatty components evident within the sulci and subarachnoid space. Dilated both lateral & third ventricle & normal 4th ventricle.

Discussion

Intracranial teratoma is very uncommon, while ruptured intracranial teratoma is extremely rare. Classified into two broad categories, intra and extra axial. Spotted calcification & adipose components revealed using CT or MRI scans are characteristic for intracranial teratoma diagnosis.

After intravenous contrast administration teratomas usually show heterogeneous enhancement on the MRI, while its internal architecture is best displayed on T1- & T2-weighted images. Teratoma can lead to complications due to compression of the surrounding region or vasculature structures. Ruptured teratoma is a serious condition which can cause cerebral infarction, hydrocephalus, chemical meningitis and even death. Treatment includes radical resection whenever possible, with surgical approach depending on the location of the teratoma.

Conclusion

In case of chronic headache, brain imaging should be done to rule out common Intra Cranial Space Occupying Lesion as well as rare tumor like teratoma/ dermoid and complications.

Early detection and surgical intervention can help management of intracranial teratoma/dermoid as well as prevent complications due to rupture.

Reference

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