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Case Report *Volume 5 Issue 1*

A Rare Case Report of Post Cortical Venous Thrombosis (CVT) Idiopathic Intracranial Hypertension (IIH) Related to Transverse Sinus Stenosis

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Abstract

IIH presents with clinical symptoms of headache, transient visual obscurations, pulsatile tinnitus, diplopia, and sustained visual loss. There are multiple causes of secondary IIH like syndrome, CVT being one of them. However, remote CVT as a cause of IIH is rare. In our case, 35 years old female with history of CVT many years back, which was treated completely and now presenting with IIH, this patient showed transverse sinus stenosis. There is a debate that unhidden transverse sinus stenosis is primary cause of IIH or is secondary to increased pressures. In view of past history of CVT, transverse sinus stenosis appears to be the primary cause.

Keywords: Transient Visual Obscurations; Headache; Intracranial Hypertension; Transverse Sinus Stenosis

Abbreviations

CVT: Cortical Venous Thrombosis; IIH: Idiopathic Intracranial Hypertension; MRI: Magnetic Resonance Imaging; CSF: Cerebro Spinal Fluid; IVH: Intraventricular Hemorrhage.

Introduction

IIH presents with clinical symptoms of headache, transient visual obscurations, pulsatile tinnitus, diplopia, and sustained visual loss. CVT is one of the causes of IIH like syndrome. However, remote CVT many years ago as a cause of IIH like syndrome is rare.

Case Presentation

35 years old female patient, presented with severe and persistent headache for past 4 to 5 days, which was not relieved by medication or rest. The pain was dull, boring in character, generalised and severe in intensity. The pain was not associated with fever, nausea, vomiting, diurnal variation, cough, cold, difficulty in vision, double vision, pulsatile tinnitus. On examination, not any sign of meningeal irritation or papilledema were present.

Approximately 7 years ago, in 2018, the patient had similar complaints and was diagnosed to be having cortical venous thrombosis by appropriate MRI and MR venography studies. She was treated and managed appropriately and her symptoms improved. Since then, she was asymptomatic and doing well, only since past few days she was having complaint of headache.

Now, the patient was investigated again, MRI brain was done, which didn't show any significant abnormality. CSF Manometry was done, which measured CSF pressure of

>250 mm of H_2O, which was suggestive of raised intracranial pressures. Repeat CT venography was done, which didn't show any evidence of Cortical Venous Thrombosis, but distal transverse venous sinuses were significantly narrowed (Figure 1).

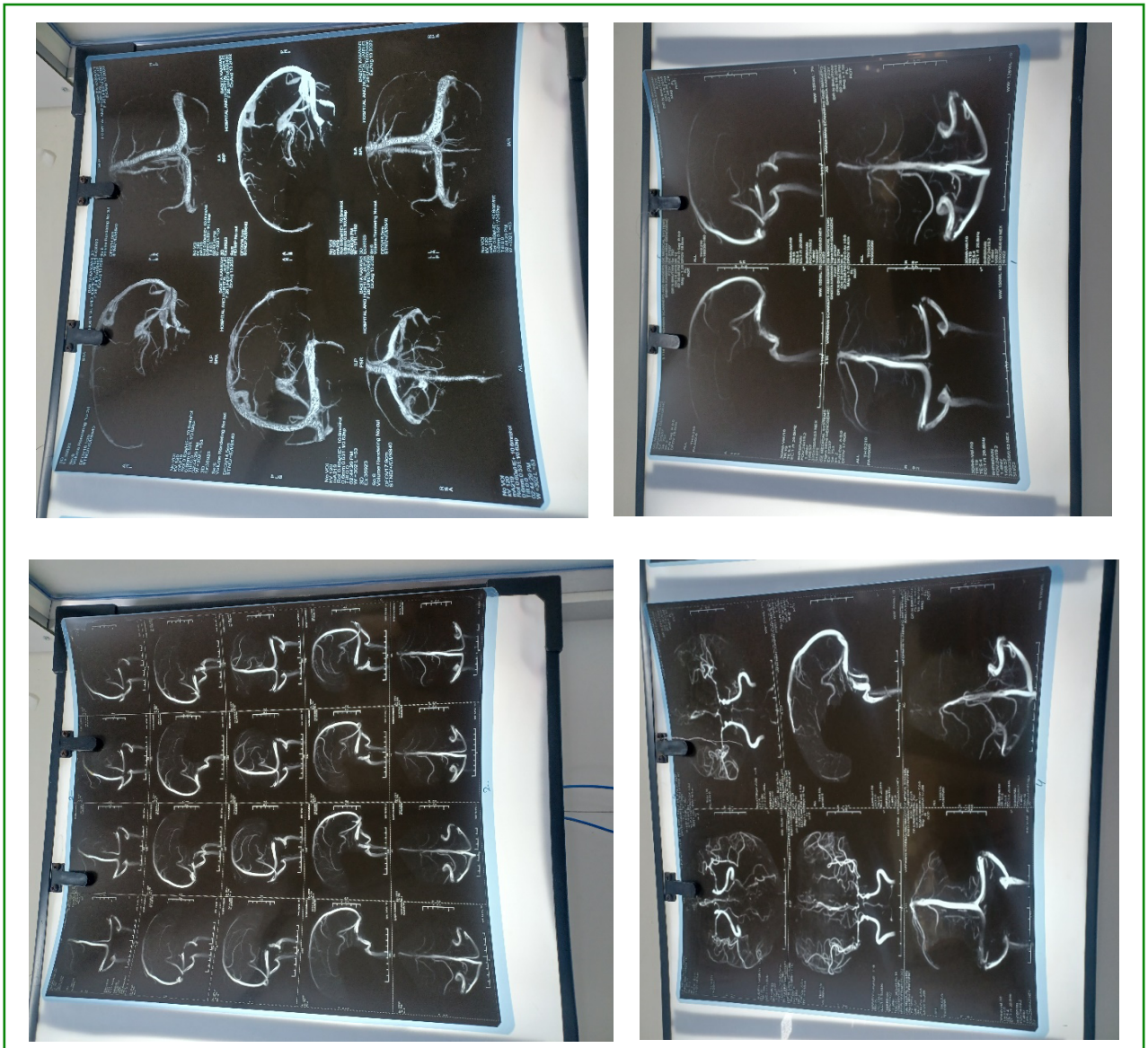

Figure 1: Images Showing Transverse Sinus Stenosis (Old Images).

So, this is a case of idiopathic intracranial hypertension, who had CVT 8 years ago. During the current evaluation only distal sinus narrowing was found. So, we propose that patient had developed transverse sinus narrowing after resolution of CVT, which has gradually evolved into IVH. Though, it has been debated that either the narrowing of transverse venous sinuses itself causing the entity of idiopathic intracranial hypertension or severely raised intracranial pressures compressing the venous sinuses and causing cortical venous thrombosis.

Discussion

IIH presents with constellation of symptoms including headache, transient visual obscurations, pulsatile tinnitus, diplopia, and sustained visual loss. Diagnosis requires ruling out other causes of raised ICT. CT or MRI scanning is required to look for hydrocephalus and mass lesions. LP is done along with CSF pressure monitoring, for diagnosis most patients have CSF pressure above 200 mm of water upto >500 mm of water. IIH occurs more frequently in females. Pathophysiology

of IIH is, when the sinuses draining blood from the brain are obstructed, absorption of CSF is reduced, causing the pressure of the CSF to increase. There are multiple causes of secondary IIH like syndrome, CVT being one of them. Venous pressure measurement has shown high pressure in superior sagittal sinus and proximal transverse venous sinuses, with a drop in venous pressure distal to the transverse sinus. Whether the high venous pressure and imaging evidence of venous narrowing is the cause or the result of the increased ICP is controversial. However, remote CVT as a cause of IIH is rare. This patient showed transverse sinus stenosis. There is a debate that unhidden transverse sinus stenosis is primary cause of IIH or secondary to increased pressures. In view of past history of CVT, transverse sinus stenosis appears to be a primary cause. However, remote CVT many years ago as a cause of IIH like syndrome is rare (Figure 2).

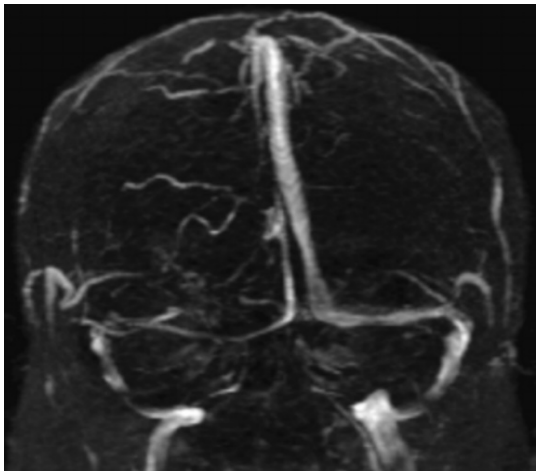

Figure 2: Image Showing Transverse Venous Sinus Stenosis in a Patient Presenting with LIH With a History of CVT.

Conclusion

In our patient, previous history of CVT and now IIH with c may suggest that transverse sinus narrowing is a primary cause of IIH, rather than being a result of it [1-3].

References

1. Ridha MA, Saindane AM, Bruce BB, Riggeal BD, Kelly LP, et al. (2013) MRI findings of elevated intracranial pressure in cerebral venous thrombosis versus idiopathic intracranial hypertension with transverse sinus stenosis. Neuroophthalmology 37(1): 1-6.

2. Satti SR, Leishangthem L, Chaudry MI (2015) Meta-analysis of CSF diversion procedures and dural venous sinus stenting in the setting of medically refractory idiopathic intracranial hypertension. AJNR Am J Neuroradiol 36(10): 1899-1904.

3. Schartz D, Finkelstein A, Bender M, Kessler A, Zhong J (2024) Association of extent of transverse sinus stenosis with cerebral glymphatic clearance in patients with idiopathic intracranial hypertension. Neurology; 103(1): e209529.