



POST CRANIOTOMY ARACHNOID CYST: A CASE REPORT AND REVIEW OF LITERATURE

Radiology

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ABSTRACT

Arachnoid cyst is an entrapment of Cerebrospinal fluid in the nervous system. It may occur as a congenital malformation or as complication of trauma or surgery. Treatment is needed if the size increases and causes pressure symptoms. Here we report a case presented to our institution with neurological signs of increasing Intracranial pressure, 1 year post craniotomy for meningioma surgery. Imaging showed a large arachnoid cyst with mass effect. The patient underwent a Cerebrospinal fluid shunting procedure which provided relief of symptoms.

KEYWORDS

Arachnoid cyst, Craniotomy, Cerebrospinal fluid.

INTRODUCTION

Arachnoid cysts are classified as developmental cysts, first described in 1831.[1] These cysts lie between 2 membranes of normal arachnoid matter and are more properly described as intra-arachnoid cysts.[2] Congenital or developmental arachnoid cysts differ from secondary or acquired arachnoid cysts, as the latter are loculations of cerebral spinal fluid (CSF) surrounded by arachnoid scarring.[3]

Most commonly, they are found within the middle cranial fossa with an incidence of 42% followed by retrocerebellar and convexity locations. About 60%–90% of all patients with developmental arachnoid cysts are children with a male-to-female predominance of approximately 2:1.[4]

CASE REPORT

We report a case of 45 year old man with acute onset of Headache and associated with seizure. The Patient had a past history of resection of left frontoparietal Meningioma 1 year back. Clinically, the patient was conscious.

Magnetic Resonance imaging (MRI) of the brain with contrast showed left Frontoparietal large cystic lesion causing mass effect. T1 axial image showed a hypointense cystic lesion in the left frontoparietal region.[Figure 1] T2 coronal and axial FLAIR images showed CSF intensity lesion causing compression of the frontal horn of left lateral ventricle.[Figure2][Figure 3] Post contrast image showed no enhancing soft tissue lesion.[Figure 4] It was diagnosed to be an acquired Arachnoid cyst. The patient was admitted and received dexamethasone and phenytoin. After stabilizing the Patient, it was decided to treat the arachnoid cyst with Cystoperitoneal shunt. Pathological examination of the cystic fluid ruled out malignant or inflammatory cells.

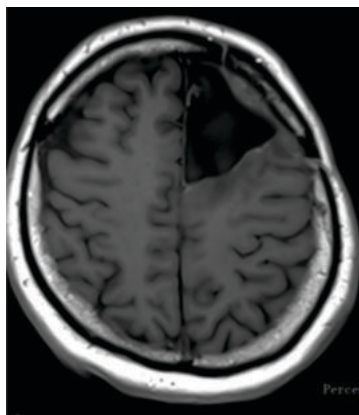


Figure 1: T1 Axial Image Showed A Hypointense Cystic Lesion In The Left Frontoparietal Region.



Figure 2: T2 Coronal Images Showed Csf Intensity Lesion Causing Compression Of The Frontal Horn Of Left Lateral Ventricle.

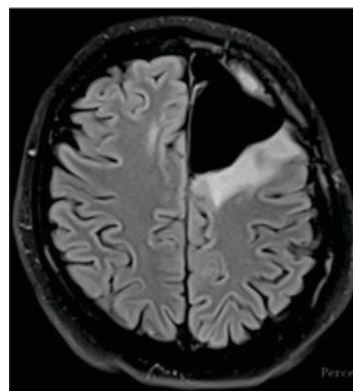


Figure 3: Axial FLAIR Images Showed CSF Intensity Lesion Causing Compression Of The Frontal Horn Of Left Lateral Ventricle.

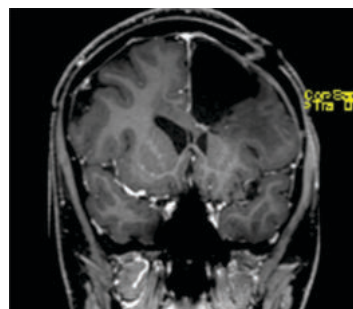


Figure 4: Post Contrast Image Showed No Enhancing Soft Tissue Lesion.

DISCUSSION

Arachnoid cysts are extra-axial collection of CSF and are most commonly seen intracranially. They may be associated with headache and seizures.[5]

Post traumatic arachnoid cyst forms due to adhesive arachnoiditis with CSF accumulation which occurs as a sequel of arachnoidal tissue injury following irritation of leptomeninges by inflammatory mediators.[6]

Imaging shows CSF intensity on MRI and they do not enhance on contrast. They show no restriction in diffusion weighted images which helps to differentiate them from epidermoid.[7]

In patients with symptomatic arachnoid cysts, treatment may lead to relief of focal neurological deficits; treatment modalities involve endoscopic or open fenestration and shunt placement.[8]

CONCLUSION

However, arachnoiditis seems to be unavoidable issue, meticulous deal with the arachnoid matter with trial of bloodless field would decrease the possibility of such a problem.

Financial support and sponsorship: Nil.

Conflicts Of Interest: There are no conflicts of interest.

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