



LEFT ANTERIOR TEMPORAL ARACHNOID CYST PRESENTING WITH NEUROPSYCHIATRIC MANIFESTATIONS

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ABSTRACT

This case represents an arachnoid cyst in the left anterior temporal region of a middle aged man, found incidentally, but later on presenting as a space occupying lesion leading to neuropsychiatric sequel, in absence of any active neurological symptoms. Arachnoid cysts are known to be benign and asymptomatic, but sometimes can present with neuropsychiatric complications depending on their site of location.

KEYWORDS : Arachnoid Cyst, Left Anterior Temporal Lobe, Neuropsychiatric Manifestations

INTRODUCTION

Arachnoid cysts account for 1% of all intracranial space-occupying lesions. They have an unknown course, and the presenting signs and symptoms are unpredictable and usually related to the size and location of the cyst¹. The most common presenting symptoms of these cysts are neurological disturbances, such as headache, intracranial hypertension, visual loss, seizures, or focal neurological signs, but mental impairment is rare². There have been few reports of an arachnoid cyst accompanying psychiatric disturbance. We report on a patient with a left anterior temporal arachnoid cyst who presented with gross psychiatric symptoms.

Case Report

A 31 year old male patient was referred to psychiatry OPD of tertiary care hospital affiliated to medical college, who presented with chief complaints of muttering, gesturing, auditory hallucinations, visual hallucinations, agitation, severe anxiety and panic attacks. Symptoms were reported by patient as well as his mother as being insidious in onset, gradually increasing, abet episodically for last 2 years. There was no history of treatment taken, similar symptoms before, substance use or any family history. On mental status examination patient reported auditory hallucinations and was exhibiting hallucinatory behavior. There was no positive finding on systemic examination and blood pressure as within normal limits.

There was a history of Road Traffic Accident before 5 years, for which he was investigated at that time, with CT Scan Brain showing Arachnoid cyst in left anterior temporal region of 4x2 cm and comminuted mildly depressed fracture of the outer and inner tables of the left frontal sinus & left orbital roof, which was an incidental finding. Chest X-ray and USG Abdomen & Pelvis were normal.

A provisional diagnosis of complex partial seizures was kept. Patient was give Etizolam 0.75mg & Olanzapine 2.5mg for control of symptoms. MRI brain was advised which showed 26 (AP) x 34 (TRANS) x 33 (SI) mm sized Arachnoid Cyst in the left anterior temporal region leading to posterior displacement of adjacent left anterior temporal brain parenchyma (Figure 1). EEG was advised to rule out epilepsy which was found to be within normal limits. Fundus examination revealed optic disc hyperemia, blurred nasal margin & vascular tortuosity on both the eyes - which were signs of early papilledema. All his routine laboratory investigation was normal. A Neurosurgeon opinion was sought after, who advised that no active surgical treatment was required. Patient was advised to start Oxcarbazepine & Clonazepam, with which his symptoms subsided gradually in the next two months.

DISCUSSION

The conglomerate of signs and symptoms in neurology and psychiatry has historically proven difficult to differentiate. The case report discusses possible causal relationship between the MRI identified

space occupying lesion (arachnoid cyst) and the psychiatric manifestations. It can be possible that the cerebral lesion was an incidental finding and comorbid with a psychiatric condition, without any functional importance.

Arachnoid cysts are usually asymptomatic (even when the cyst is quite large) and are often an incidental finding on imaging. But, the patient's psychiatric symptoms can be correlated with Arachnoid due to the facts that - there was no past / family history of Psychiatric disorders, there were signs of raised intra cranial tension on fundus examination and temporal lobe dysfunction especially on the left side is commonly correlated with psychosis. Previous studies have tried to establish the relation. Dysfunctions in the left temporal lobe in schizophrenia has been supposed and, according to a previous study, 76% of patients on average whose temporal lobes are affected show psychological symptoms^{3,4}. Furthermore, recently Lanczik et al. reported a schizophrenia-like psychosis associated with an arachnoid cyst which mainly affected the left temporal lobe, which is similar to the present case⁵. In this case, the psychiatric symptoms correlated with the site of lesion in the brain. Previous studies have correlated Arachnoid cysts in middle fossa with psychotic symptoms. Arachnoid cyst found in the anteromedial aspect of middle cranial fossa was associated with brief psychotic disorder⁶. In another study, the arachnoid cyst in anterior pole of right temporal lobe presented as Schizophrenia⁷. Previously reported case series show that psychosis is associated with temporal lobe tumors and they commonly manifest as schizophrenia-like symptoms^{8,9,10}. In some case reports, schizophrenia like presentation has been reported in association with temporal lobe cysts^{5,6,11,12}.

There is a possibility that the space occupying lesion may lead to complex partial seizures, which in turn lead to psychiatric manifestations. It is also possible that the patient's neurological lesion coexisted with the psychiatric disorder and that it was an incidental finding without functional importance or correlation.

Thus, treatment programs in neuropsychiatry are likely to be more successful if there is close collaboration between neurologists, consultation-liaison psychiatrists, psychologists, and general practitioners.



Figure 1: T2-Weighted Axial MRI Image Showing a Large Arachnoid Cyst in the left anterior temporal region with posterior displacement of the adjacent parenchyma

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