Arachnoid Cyst and Psychosis: The Troublemaker or Innocent Bystander

Soumitra Das, Arjun Kartha, Sumesh Thoppil Purushothaman, Varun Rajan

ABSTRACT
Organic underpinning of a psychotic disturbance is often missed. Arachnoid cysts are considered a rare neurological tumor, few of which exhibit any symptomatology. In most cases, they are diagnosed by accident. Literature regarding the coexistence of arachnoid cysts with psychiatric disorders is sparse. Here, we present a case who presented with a typical presentation of psychosis which was not enough for suspecting for an organic etiology.

Key words: Arachnoid cyst, psychosis, temporal lobe

INTRODUCTION
Arachnoid cysts are accounting for only 1% of intracranial space occupying lesions. These are benign congenital malformations arising from the arachnoid layer. Most of these (34%) are found to be in the mid-cranial fossa with left preponderance. Rarely, may complain of a headache, ataxia, seizures, dizziness, and visual changes.[1] Symptoms are mostly due to the pressure of the cyst on the surrounding brain tissue, cranial nerves, and/or leptomeninges leading to aberrant functions of the surrounding brain tissue.[1,2]

CASE REPORT
A 26-year-old, a male who is an auto driver by profession presented with a relapse of alcohol dependence. The patient was treated for alcohol dependence in a private hospital, and he was abstinent for last 4 years till 2 months before. He also a complaint of hearing voices for the 4 months but it did not disturb him much. Patient complaint of excessive anxiety and restless 2 months ago following the demise of his relative. He started consuming alcohol and within 4 days he developed tremor, insomnia, craving for alcohol which qualified him for a relapsed episode. He was admitted to hospital and detoxified. During the stay, complaint of hearing of voices getting more prominent following deaddiction treatment. After the admission, he complaint of hearing multiple people talking among themselves about him. He used to talk back to them but could never control it. He also used to get irritated on silly matters and cry like a helpless boy with an expression of suicidal ideation to get relief from the agony of hearing derogatory voices. He continued to

Department of Psychiatry, Government T. D. Medical College, Alappuzha, Kerala, India

Address for correspondence: Dr. Soumitra Das
C/420, PG Hostel, Medical College Hospital, Vandannam, Alappuzha - 688 005, Kerala, India.
E-mail: soumitratdmc@gmail.com

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Das S, Kartha A, Purushothaman ST, Rajan V. Arachnoid cyst and psychosis: The troublemaker or innocent bystander. Indian J Psychol Med 2017;39:194-5.
be abstinent from alcohol after 2 weeks of discharge, but the hearing of voices got worsened which was quite unexpected even in the presence of olanzapine 20 mg and quetiapine 25 mg. His cognition was well preserved with Mini-Mental State Examination score of 27. Due to the atypical course of illness, we sought a neurological consultation, who suggested for magnetic resonance imaging (MRI) brain and electroencephalogram (EEG). Out of our surprise, MRI report revealed the presence of an arachnoid cyst in right middle cranial fossa compressing temporal lobe. EEG did not reveal any paroxysmal discharge. Other investigations such as total and differential count, blood sugar, thyroid function, urine routine, liver and renal function tests were within normal range. Hence, neurosurgical consultation was asked for. They suggested mannitol to reduce intracranial pressure and phenytoin to prevent focal seizure. Surgical intervention was discussed with the patient. With anti-edema measures, the patient was significantly improved from hallucination.

**DISCUSSION**

Psychiatric sequels of arachnoid cyst could be of varied presentations like mood symptoms, schizophrenia-like psychosis or amnestic symptoms.\(^3\) There is always a controversy whether the cyst directly causes the symptoms or it is only an innocent bystander. Organic psychosis usually presents with some atypical features such as memory deficit, disinhibition, movement disorder or localizing sign. Supporting negative history of the family and past psychiatric illness is also often found to be important. However, in our case-patient did not show any atypical symptom to suspect as organic psychosis.\(^2\)

There are different opinions about surgical resection of the cyst. Asymptomatic cyst can be left behind. Sometimes conservative treatment approaches are preferred over surgical management. Resection of cyst is often associated with rapid improvement. Furthermore, risperidone is being tried for associated psychotic symptoms and found to be effective.\(^2\)-\(^4\)

In our case, mannitol infusion was associated with significant improvement of psychotic symptoms. Later, the patient was planned for surgical approach if symptoms reappear.

**CONCLUSION**

Typical symptoms sometimes are the indicators of organic pathology if treatment outcome is atypical. Though arachnoid cyst could be a coincidental finding, it is often seen that specific management is far better in the long run. More research in that area is definitely needed. Where early onset psychosis is more expected in a congenital cyst, the reason behind the later presentation in most of the cases should be experimented further.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

**REFERENCES**

1. Baquero GA, Molero P, Pla J, Ortuño F. A schizophrenia-like psychotic disorder secondary to an arachnoid cyst remitted with neurosurgical treatment of the cyst. Open Neuromag J 2014;8:1-4.
2. da Silva JA, Alves A, Talina M, Carreiro S, Guimarães J, Xavier M. Arachnoid cyst in a patient with psychosis: Case report. Ann Gen Psychiatry 2007;6:16.
3. Colameco S, DiTomasso RA. Arachnoid cyst associated with psychological disturbance. J Med Soc N J 1982;79:209-10.
4. Kohn R, Lilly RB, Sokol MS, Malloy PF. Psychiatric presentations of intracranial cysts. J Neuropsychiatry Clin Neurosci 1989;1:60-6.