Psychosis and arachnoid cyst

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INTRODUCTION

Arachnoid cysts (AC) are benign and rare space-occupying lesions (SOL) (1% of all SOL) formed by arachnoid membrane containing spinal fluid. They can affect any area of the Central Nervous System but they more frequently appear in the middle cranial fossa and left hemisphere. They are more frequent in males.

They are usually detected accidentally in asymptomatic patients; when symptomatic, the clinical manifestations are dependant upon the size and location of the lesion and the patient's age; in adults headache and convulsions are usual.

When diagnosed in patients with psychotic disorders, AC may assume an important etiologic role, mainly in the absence of previous psychiatric disease.

AIMS

To report the case of a patient with a psychotic episode and an Arachnoid Cyst (AC). To do a brief review on the topic.

MATERIAL AND METHODS

Review of the clinical file and research in "PubMed", with keywords "arachnoid cyst" and "psychosis". Five articles were selected.

CASE REPORT

Identification	♂, 55 years old, married, 2 sons, 4 th grade, farmer, lived with wife and children
Past history	# Medical: migraine, psoriasis and traumatic brain injury (TBI) 30 years before (with no deficits) # Smoker, with no abusive alcohol intake and no use of cannabis or other illicit drugs # Didn't take medication, there was no recent TBI or psychologic trauma nor relevant family history
History of present illness	Patient brought to the Emergency Room with a clinical picture (reported by the family) of visual hallucinations, persecutory and auto-referencial delusions and psychomotor agitation that had started two days before.
Mental status examination	He was alert, extremely anxious and agitated. Suspicious attitude. He did not provide history and didn't collaborate to proceed the mental status examination.
Investigation	# MRI of the brain showed a small AC in the anterior slope of the left middle fossa # Laboratory/urinary analysis, lumbar puncture and a whole body CT revealed no alterations
Treatment	The patient was admitted to the psychiatric inpatient unit to clarify the etiology of the psychotic episode and treated with Haloperidol 10 mg/day. Within 2 days, the clinical picture completely remitted, with no changes on the mental status and neurologic examinations. During the remaining hospitalization, the patient remained calm, adequate and with well functioning and he had an episode of left temporal headache, which resolved in ~ 4 days. He was discharged one week later, with indication to do a downward titration of Haloperidol, referred to liaison psychiatry and neurosurgery appointments.
Follow-up	6 months after this first episode (he was on no medication), he had another one, with the same clinical picture and no new alterations on the imagiologic findings that remitted completely after reintroduction of antipsychotic medication. He was discharged oriented to liaison psychiatry, neurology and neuropsychology appointments.

DISCUSSION AND CONCLUSION

Given the age of the patient, the absence of a previous psychiatric history, stress factors or recent TBI, rapid remission of clinical picture and anatomical location of the AC (association of structural changes in the temporal lobe with schizophrenia), we cannot exclude the possibility of this having played an important role in the etiology of the psychiatric condition. Mention may also be made of left temporal headache (most common symptom of supratentorial arachnoid cysts *versus* reference to migraine history). However, it is not possible to establish with absolute certainty a relationship between the two diagnostic entities.

The association between arachnoid cysts and psychiatric symptoms remains a controversial issue despite the growing number of case reports supporting it, and perhaps the most convincing evidence of its existence is the rapid resolution of symptoms in cases where treatment has been given by neurosurgical intervention. Further studies are needed to better characterize this relationship and optimize the (medical-surgical) approach of these cases.

The authors declare that they have no conflict of interest.

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Poster presented in the **19th WPA World Congress of Psychiatry**
21st-24th August 2019