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Images in Neuroscience: Answer

Large loculated cyst in the right sylvian fissure in a patient with subacute cognitive decline: Answer

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1. Answer

Arachnoid cysts

2. Discussion

MRI revealed a large cyst with midline shift, characterized as a large loculated extra-axial CSF-like fluid collection centered in the right sylvian fissure and extending along the entire right convexity, septations along the anterior and posterior margins with thinning of the adjacent bone were seen. Mass effect with effacement of the sulci and compression of the right lateral ventricle was noted by 10 mm midline shift to the left and a subfalcine herniation. This most likely consistent with an arachnoid cyst.

Arachnoid cysts are a common neurodevelopmental disorder with an estimated prevalence of 0.2–1.7% [1]. Arachnoid cysts have a predilection for the middle cranial fossa [1]. They account for 1% of intracranial space occupying lesions. Of patients undergoing a brain MRI, only 1.4% are identified to have an arachnoid cyst [2]. Only 5% of arachnoid cysts are symptomatic [2]. The clinical manifestation of these cysts varies depending on their location and the patient's age. Hydrocephaly or cranial deformation are the most common manifestation in the pediatric population while in adults, headaches and convulsive episodes are the most common [3].

Other signs and symptoms include ataxia, ocular alterations, focal signs, dizziness, and altered memory [3]. Intracranial arachnoid cysts have been reported in literature to cause deficits in higher level executive functions, such as inhibition, cognitive flexibility, rule learning, planning, problem solving, and initiating tasks which improve significantly after neurosurgical intervention even though these cysts are congenital and they have affected the brain tissue for a long time, their effect appear to be of a reversible suppression [4].

Conflict of interest

The author report no conflict of interest concerning the materials or methods used in this study or the findings specified in this paper.

I, Yasir Al-Khalili, am the primary and corresponding author of this case report and its conception and creation was performed by all the authors. We have no conflict of interest to declare.

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