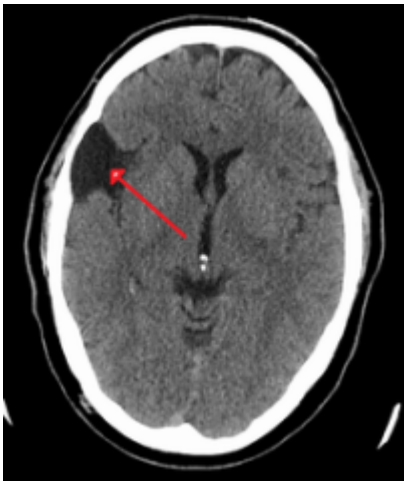
Nontraumatic de novo arachnoid cyst



Intracranial de novo arachnoid cysts in adults are very rare, suggesting the involvement of head trauma and inflammatory diseases.

Benign extracerebral fluid collections in infancy may constitute a significant risk factor for development of de novo arachnoid cysts. These findings support a 2-hit hypothesis for the development of arachnoid cysts, in which the combination of an embryological defect in arachnoid development followed by a second event leading to impairment of CSF fluid absorption in early childhood could lead to abnormal CSF dynamics and the consequent expansion of fluid collections in the intraarachnoid spaces [1].

Case reports

Yokoyama et al., reported a symptomatic adult case of nontraumatic de novo arachnoid cyst on the ventral medulla oblongata.

A 56-year-old man came to the hospital complaining of dysphagia and writing difficult since 3 months ago. There was no history of head injury or inflammatory disease. A 25-mm cystic lesion was found on the ventral side of the medulla oblongata on brain MRI, and the lower cranial nerve and medulla oblongata were highly compressed. The lesion did not exist on MRI performed 9 years ago. Capsular resection was performed and the histological diagnosis was a typical arachnoid cyst. After the operation, all neurological symptoms disappeared, and no recurrence has been observed after 6 months.

The pathophysiology of nontraumatic de novo arachnoid cysts has many unknown features, and it appears necessary to accumulate further case reports [2].

A 71-year-old male patient with progressive vertigo who had previous brain magnetic resonance imaging studies without abnormalities. Another MRI was performed 3 years from the last study that showed interval development of a large cystic lesion compressing the right cervicomedullary junction, as well as radiologic evidence of neurosarcoidosis. Intraoperative findings showed a cystic mass with clear, gelatinous fluid. The cyst was drained, and the walls were resected and sent to pathology.

Histopathologic testing confirmed the lesion was an arachnoid cyst. The patient's vertiginous symptoms improved after surgery.

This case represents the first incidence of a pathology-proven, nontraumatic de novo arachnoid cyst [3].

References

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