Third Ventricle Colloid Cyst : A Mimicker of Chronic Migraine Headaches

Akintunde R. Akinleye[1] MBChB, MSc; Ayodeji Olarewaju[1] MBChB; Muhammad Furqan[2] MD; Pavan Ravella[2] MD

[1]Internal Medicine Department, Overlook Medical Center, Summit, New Jersey; [2]Division of Oncology/Hematology, Westchester Medical Center, Valhalla, New York.

Abstract

Colloid cyst (CC) of the brain is a tumor that may grow to a considerable size before causing significant clinical symptoms. We herein describe a case of an adult female who was eventually diagnosed with a large colloid cyst of the third ventricle after suffering from presumed chronic migraine headaches for 20 years. This case is of interest because colloid cysts present with non-specific clinical features and standard of its surgical management is controversial and not well-established [1]. A review of diagnosis and clinical management is also discussed.

Case Presentation

A 49 year old female with a twenty-year history of mild throbbing, right sided intermittent headaches diagnosed as chronic migraine headaches presented at the ER of our institution. Three days ago, she developed a headache in the same location but the pain has become progressively more severe, persistent and without relief from acetaminophen. She had no other symptoms. Physical examination showed no focal neurologic deficits. Her routine hematological and serum chemistry profile were unremarkable. A CT scan of her head showed a hyperdense lesion in the third ventricle with moderate hydrocephalus. This was confirmed as a third ventricular colloid cyst on MRI with hypointense content signal on T2 and FLAIR images. She underwent transcortical endoscopic resection of the tumor accompanied with placement of a left frontal ventriculostomy tube. Pathology confirmed the cyst contained a soft brownish material consistent with a colloid cyst.

Postoperatively she developed right frontal intraparenchymal and intraventricular hemorrhages accompanied by obstructive hydrocephalus. She was discharged to a rehabilitation facility to optimize her cognitive/speech deficits resulting from the complications.

Discussion

- Colloid cyst of the brain is a rare, benign, well-circumscribed tumor, first described by Wallmann in 1858
- In population studies, the incidence is estimated at approximately 3 per million per year
- Lesion grossly presents as a slow-growing, sharply demarcated, smooth-walled, spherical structure in the third ventricle at the region of foramen of Monro
- Typically asymptomatic, patients with CC may present with various non-specific symptoms and signs [4], such as chronic intermittent frontal headaches presumably diagnosed as chronic migraine headaches in our case
- Vertigo, memory deficits, diplopia, mental status changes, and sudden death due to raised intracranial pressure have also been reported
- Diagnosis of CC is established by its typical location and radiologic appearance on MRI
- Signal intensity of the lesion content on T2-weighted images correlates with its state of hydration
- Hyperintense signal is suggestive of a higher water content and propensity of further cyst expansion
- Conversely, CC content with hypointense signal on T2-weighted images tend to be more viscous, tenascious and difficult to aspirate during endoscopic procedures
- Multiple treatment options for CC have been proposed, including watchful waiting, stereostatic aspiration, direct surgical resection, and bypass of its obstruction by shunting
- However the standard of surgical management of colloid cyst is not well-established

Conclusion

CC of the third ventricle is a rare nonneoplastic lesion of the brain occurring mostly in young adults. This disorder should be considered in young patients who have chronic, intermittent headaches syndrome. Surgical management is controversial and not well-established.

References

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