LETTERS TO THE EDITOR

Obstructive hydrocephalus due to benign cysts of the thalamus: report of two patients

Benign cysts of the thalamus compressing the posterior third ventricle are an unusual cause of obstructive hydrocephalus. We report two patients with symptomatic hydrocephalus due to such cysts and discuss the pathogenesis and treatment of these rare lesions.

A 35 year old woman (patient 1) presented with a one month history of intermittent and severe frontal headaches, nausea, difficulty reading, and numbness also abated. Physical examination revealed bilateral papilloedema and constriction of the temporal visual fields. Slight weakness was present in both upper limbs. The left lower limb was hyporeflexic. The remainder of the neurological examination was normal.

Brain CT showed obstructive hydrocephalus due to a 3 × 3 cm cyst within the right thalamus compressing and shifting the posterior third ventricle to the left (figure). Transendymal diapedesis of CSF was present. Brain MRI showed the cyst fluid to be similar in intensity to CSF on all pulse sequences; the cyst wall failed to enhance with gadolinium. No communication existed between the cyst and the third ventricle or subarachnoid space.

The presence of papilloedema prompted urgent placement of a right ventriculoperitoneal shunt. Two days later, CT guided stereotactic aspiration of the cyst yielded 16 ml of colourless fluid without evidence of tumour, haemorrhage, or infection.

Postoperatively, the headaches resolved and vision returned to normal. The weakness and numbness also abated. The cyst was fully collapsed on CT 48 hours after aspiration and remained unchanged 19 months postoperatively.

Obstructive hydrocephalus due to benign cysts of the thalamus was present. The cyst fluid is similar in intensity to CSF.

For five months, a 72 year old woman (patient 2) experienced progressive gait ataxia, urinary incontinence, and disorientation. She denied headaches, nausea, vomiting, or visual symptoms. Physical examination showed her to be slow to respond and oriented only to person. Gait was unsteady and assistance was needed for ambulation. The remainder of the neurological examination was normal.

Brain CT and MRI of the head showed hydrocephalus due to a 2.5 × 3 × 2 cm cyst in the right thalamus identical in characteristics to patient 1. A CT guided stereotactic aspiration of the cyst was performed and 14 ml of colourless fluid obtained. A biopsy of the cyst wall showed a lining composed of a single layer of ependymal cells. Four hours postoperatively showed that the cyst did not collapse. A right ventriculolugal shunt was placed nine days later for persistent hydrocephalus.

Postoperatively, mentation, gait, and urinary continence improved, and one year later the neurological examination was normal. Brain MRI 24 months postoperatively showed no change in the size of the cyst.

Benign cysts of the thalamus may compress the third ventricular system lined by a single layer of ependymal or choroidal cells, with or without cilia, are classified as neuroepithelial cysts. These can occur throughout the CNS but are most common adjacent to the third ventricle or the subarachnoid space, especially of the frontal lobes. The persistence of the cysts in both of our patients after shunting shows the characteristic lack of communication of neuroepithelial cysts with the subarachnoid space and ventricles.

Obstruction of the posterior third ventricle by the mass effect of the thalamic cyst led to obstructive hydrocephalus in both patients. Presenting signs were of increased intracranial pressure with papilloedema, loss of visual fields, and headaches in patient 1 and gait disturbance, change in mentation, and incontinence in patient 2 mimicking normal pressure hydrocephalus. Numaguchi et al reported two patients with smaller left thalamic cysts which were not associated with signs of increased intracranial pressure.1 Increased intracranial pressure from obstructive hydrocephalus, thalamic cysts produce neurological signs due to compression of the posterior thalamus. Patient 1 had contralateral lower extremity hyperreflexia, whereas one of the patients reported by Numaguchi et al had contralateral face and hemiconus pain.1

Neuroepithelial cysts are considered to arise from the pinching off of a diverticulum from the neuroepithelium lining the primitive ventricular system, producing intracerebral or subarachnoid heterotopic rests of ependymal or choroidal cells. Friele and Yasargil suggested that the pinched off diverticulum is composed of a short segment of neuroepithelium of the wall of the neural tube equivalent to the tela choroidea, equating the variaed found also had acute transverse myelopathy2 and severe optic neuropa-thy (worse eye with maximal visual acuity less than 20/200) during their clinical course, and were in the active phase. The cerebrum, brainstem, and cerebellum were unaffected in all of the 13 patients. Serum samples from 26 other patients with conventional multiple sclerosis, and from nine patients with mononeuropathy,3 transverse myelopathy of unknown aetiology, also in

Antineutrophil cytoplasmic antibodies and the optic-sinal form of multiple sclerosis in Japan

A high incidence of the optic-sinal form of multiple sclerosis (OpS-MS) has been said to be one of the characteristic features of multiple sclerosis (MS) in Japan, whereas other aetiologies such as vasculitis should be considered in patients diagnosed with OpS-MS.4 Anti-neutrophil cytoplasmic antibodies (ANCAs) may be implicated in the pathogenesis of vasculitis,5 we investigated ANCAs in serum samples from 13 patients with a diagnosis of clinically definite multiple sclerosis in both of our patients suggests cyst enlargement. The electron microscopic finding of pinocytic vesicles in the cyst epithelium suggests transcellular fluid transport and supports the hypothesis of active fluid secretion into the brain to enlarge early in life may indicate communication of the cyst with the ventricles or subarachnoid space which closes off in later life.
The goal of surgical removal of thalamic cysts causing hydrocephalus is cyst decompression to alleviate obstruction of the third ventricle. Surgical options include cyst ventriculostomy, cyst-peritoneal and cyst-subarachnoid shunts, fenestration of the cyst to the ventricle, and stereotactic aspiration. Stereotactic cyst aspiration is a reasonable initial procedure for cyst decompression, supported by the continual collapse of the cyst.6 It is not successfully decompressed by aspiration, the cyst or ventricular system can be shunted. It is not known why simple aspiration of a secreting cyst maintains collapse although recurrence of the neuroepithelial cysts in either patients suggests the extent of the brain has been reported to two years after aspiration.7

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