Cyst of the septum pellucidum causing increased intracranial pressure and hydrocephalus

Case report

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A 22-month-old girl had a large noncommunicating cyst of the septum pellucidum which blocked the foramen of Monro and caused increased intracranial pressure and hydrocephalus. She recovered completely after the cyst wall was removed.

KEY WORDS septum pellucidum cyst hydrocephalus

CAVUM septi pellucidi (cyst of the septum pellucidum) communicating with the ventricular system is usually an incidental air study finding. If the cyst does not communicate with the ventricles, it may occasionally become so large that it blocks the foramen of Monro, leading to hydrocephalus and increased intracranial pressure. The following report is of one such case.

Case Report

This 22-month-old girl was admitted to the Neurosurgical Clinic of the University Central Hospital of Helsinki because of slow development, inability to walk, and restlessness and irritability. She was the first of normal dizygotic twins. Birth weight had been 2800 gm and head circumference was 33.5 cm. After the first few months, her development became noticeably slower than that of her twin; she learned to walk at the age of 15 months, but had increasing difficulty.

Examination. The patient could not walk and could stand only when aided. The legs were spastic, with exaggerated ankle and knee jerks and bilateral extensor plantar responses. The head circumference was 50 cm (95 percentile line). She had an incipient papilledema. A right carotid angiogram showed a supratentorial expansion in the region of the third ventricle and enlarged lateral ventricles (Fig. 1). At ventriculography only a few drops of cerebrospinal fluid (CSF) were obtained from the right frontal horn. The left frontal horn was therefore tapped and filled with oxygen (Fig. 2) disclosing enlarged lateral ventricles with a large round mass mainly in the right lateral ventricle. The anterior part of the third ventricle was not filled, but there was slow passage of air through it and the
aque duct because the fourth ventricle was visualized.

Operation. Through a right frontal transcortical approach, a bluish transparent membrane was observed beneath the ependyma of the lateral ventricle. It contained clear CSF with a protein content of 15 mg%, while the CSF from the left lateral ventricle contained 7 mg% of protein. The membrane was easily separated from the ventricular wall. It originated at the septum pellucidum, which was opened to the left side while the membrane was being removed. Histological examination was consistent with a cyst of the septum pellucidum.

Discussion

A cavum within the anterior part of the septum pellucidum is called a *cavum septi pellucidi* and in the posterior part a *cavum Vergae*. Usually they communicate with each other. They are present in the premature normal brain, but in most individuals they shrink and close just before or after birth. The incidence of a cavum septi pellucidi in adults is about 15%. Cysts of the septum pellucidum are divided into communicating and noncommunicating types. Shaw and Alvord used the division:

1) incidental, asymptomatic, communicating cysts; and
2) pathological, symptomatic, noncommunicating cysts with increased pressure within the cyst.

Communicating cysts are usually found incidentally during air study and have no clinical significance. Noncommunicating cysts may block the foramina of Monro, leading to increased intracranial pressure and hydrocephalus. Dandy first reported such a case in 1931. Shaw and Alvord collected 15 cases of symptomatic septum pellucidum cysts in the literature up to 1969.
Cyst of the septum pellucidum

The treatment is simple. Fenestration of the cyst wall seems to be enough.\textsuperscript{1,3,4,6,7,9,11} Even spontaneous ruptures in connection with air study have been reported.\textsuperscript{2,4,8,11} The results of the operative treatment are good, unless there are other malformations of the central nervous system. In our case a subtotal removal of the cyst wall was performed.

References


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