Letters to Editor

A potentially dangerous complication like subdural hematoma is possible even in a healthy young person because of a seemingly benign activity like head banging.

Z. Neyaz, H. Kandpal, R. Sharma, S. Kale*
Departments of Radiodiagnosis and *Neurosurgery, All India Institute of Medical Sciences, New Delhi, India.
E-mail: raju152@yahoo.com

References


Accepted on 12-05-2006

Intraparenchymal hemorrhage after surgical decompression of a Sylvian fissure arachnoid cyst

Sir,

The management of the sylvian arachnoid cysts is still controversial.1 Both direct opening of the cyst into the subarachnoid space and ‘indirect’ surgical procedures (cysto-peritoneal shunting) are associated with complications. One of the rare complications after rapid decompression of the arachnoid cysts is hemorrhage in surrounding brain. We describe a case of intraparenchymal hemorrhage as a rare complication after surgical decompression of a sylvian fissure arachnoid cyst.

A 15-year-old right-handed female presented with intractable generalized headache. Medical treatment for headache had failed. No neurological deficit or papilledema was seen in her neurological examination. In her preoperative CT scan and MRI, a left large sylvian fissure arachnoid cyst with midline shift was seen [Figure 1]. Considering the mass effect, midline shift and intractable headache unresponsive to the medical management, the patient was admitted to the hospital for surgical decompression.

After left-sided frontotemporoparietal craniotomy, dura was opened and lateral wall of the cyst resected. A large draining vein on lateral wall of the cyst was preserved. The arachnoid cyst was opened to the basal cisterns uneventfully.

After surgery, the patient opened her eyes and obeyed command. An hour later, a right-sided convulsive epilepsy unresponsive to antiepileptics occurred. Anesthetic dose of thiopental and mechanical ventilation began and an emergent computed tomography was performed. In the postoperative CT scan, left frontal, temporal and insular intracerebral hemorrhage with partial obliteration of the cyst space was seen [Figure 2]. Unfortunately, the patient died on the seventh day after surgery with multiorgan failure. We could not do autopsy on the patient.

Intraparenchymal hemorrhage in the underlying brain after decompression of the arachnoid cysts is an uncommon complication.2 A case of brain stem hemorrhage after decompression of a sylvian fissure arachnoid cyst has been reported.3

Intracerebral hemorrhage after rapid decompression of chronic subdural hematomas is well known and hyperperfusion of underlying brain after surgical decompression has been documented.4,5

Sgouros and Chapman have studied three children with middle fossa arachnoid cysts, presenting with nonspecific symptoms and otherwise well, before and after surgery with magnetic resonance and 99Tc-exametaphosphate single photon emission computerized tomography scans and shown that middle fossa

Figure 1: (a) A left large sylvian fissure arachnoid cyst with midline shift was seen in the patient’s CT scan. (b) MRI image (T2W) show the extent of the cyst both sagittally and coronally

Figure 2: Postoperative CT scan showing left frontal, temporal and insular intracerebral hemorrhage with partial obliteration of the cyst space
Brain surface ependymoma in a child

Sir,

Ependymoma is a slow growing glial tumor originating from the ventricular lining or central canal and is composed of neoplastic ependymal cells. Usually, these tumors in children are in the posterior fossa. Exceptionally, they may occur supratentorially, without any connection to the ventricular lining. We report one such tumor in a child, diagnosed as a clear cell ependymoma.

An 11-year-old girl was admitted with a 2-months history of intermittent bouts of generalized headache, often accompanied by vomiting. There was no history of seizures, alteration in sensorium, ataxia or any limb weakness. Clinical evaluation except for bilateral papilledema was unremarkable. MRI brain (T1- and T2-weighted and T1-gadolinium sequences) showed low-intensity intraaxial tumor in right parietal lobe, reaching the surface, on T1-WI with peripheral enhancement with intravenous Gadolinium. The contents had bright signal intensity on T2-WI. A solid contrast-enhancing portion was seen over the medial aspect of the tumor [Figures 1 and 2]. There was no edema of the brain.

Craniotomy revealed cortical and subcortical cystic tumor, containing a straw-colored fluid that could be separated from the surrounding brain without any difficulty. No connection to the ventricular wall was seen. Tumor was totally excised. Postoperative period was uneventful. Histopathology revealed a highly cellular tumor with a sharp tumor-parenchymal surface. The tumor cells had a clear perinuclear halo and were seen to lie within a fibrillary background. Perivascular pseudorosettes were obvious in most of the sections [Figure 3]. No mitotic figures were identified. Immunohistochemistry revealed positivity for GFAP, S-100 and vimentin and negativity for synaptophysin. Based on these

Letters to Editor

arachnoid cysts may cause global impairment of brain function by interfering with its blood supply.[6]

Although the pathophysiology of this complication is unclear, it might be due to re-perfusion injury, implying that there was raised intraarterial pressure before cyst drainage. Other possible pathogenetic mechanisms of this complication are abrupt change in blood circulation, faulty autoregulation and brain decompression as the cause of superficial veins distortion. If this is the case, more gradual decompression of huge sylvian fissure arachnoid cysts using indirect surgical approaches with programmable shunts or more conservative procedures like simple tapping[1] may theoretically decrease the incidence of such rare complications in similar cases.

Babak Esmaeeli, Behzad Eftekhar*
Department of Neurosurgery, Shahrood, *Department of Neurosurgery, Sina Hospital, Tehran University, Iran.
E-mail: esmailibabak@yahoo.com

References


Accepted on 21-04-2006