Giant Fourth Ventricular Cyst: Diagnostic and Therapeutic Dilemmas

This 30 years patient presented with features of raised intracranial pressure and was referred for shunt surgery for hydrocephalus on CT scan. The 4th ventricle however was disproportionately enlarged suggesting a fourth ventricular outlet obstruction. This was confirmed on MRI with CSF dynamics (Figs. 1, 2, and 3). The MRI showed an intra-fourth ventricular Glial or Parasitic cyst. Serum ELISA for cysticercal antigen was positive, so strong possibility of giant neuro-cysticercal cyst (NCC) was kept. A midline posterior fossa craniectomy was done and lesion was approached through vermis. A large ballooned whitish thin walled cyst filled with dirty colored fluid, appeared to be hydatid cyst, was removed without any spillage. Histopathology of cyst wall lining suggested being a Cysticercosis (Figs. 4 and 5). So direct cyst removal was done with full recovery. Large fourth ventricular cyst results in dilemma in diagnosis and treatment. Diagnostic confusion ranges from communicating hydrocephalus to cysts due to hydatid, glial and NCC.

There is debate for surgical versus medical treatment of giant NCC. The clinical course of patients with giant subarachnoid neurocysticercosis who underwent shunt surgery to control increased intracranial pressure (ICP) or cyst removal has been compared. Results were favouring shunt surgery. Cyst removal was advised only if it exhibits tumour-like behaviour or diagnosis is uncertain. In patients with medical therapy in giant NCC, there is need for repeated course of single (albendazole) or combined (albendazole+praziquantel) cysticidal drugs and about 50% still needs shunt surgery, and 15% can land up with a permanent deficit. That is why the surgical treatment is at priority.

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