Thalamic and Ganglionic Abscesses: A Report of Two Cases: Letter to Editor

Thalamic and basal ganglia abscesses are much rarer than the abscesses in the other locations in the brain. Only a few series of such lesions have been reported. Stereotactic aspiration is the treatment of choice,1-3 however, this facility is not available at many neurosurgical centres in our country and a critically ill patient may not reach such an equipped centre. In this scenario, many patients may still have to be managed with conventional surgical methods. We present management of such two patients.

Case 1: A 15 years old girl presented with history of fever of three weeks, headache and vomiting of one week and altered sensorium of two days duration. She was febrile. Neurologically, she was drowsy with Glasgow coma scale (GCS) score of 13/15. She also had right 6th and 7th nerve palsy, left hemiparesis and frank meningeal signs. Hemogram showed mild leucocytosis (TLC 11,800/cmm) with increased polymorphs (84%). Biochemical tests and X-ray chest were normal. Elisa test for HIV was normal. Contrast enhanced CT scan of head showed a ring lesion in the right thalamus with obstructive hydrocephalus and enhancement of meninges (Fig. 1a). Cardiac echo study was normal. She did not respond to antibiotics in view of hydrocephalus and meninitis, external ventricular drainage (EVD) through right frontal burr hole was instituted. CSF was initially under high pressure and clear but later become turbid and then stopped. A gentle aspiration resulted in removal of 1cc of thick pus; and thereafter EVD started functioning well. Her sensorium started improving after the EVD. Post operative scan showed the ventricular catheter in the abscess cavity (Fig. 1b). Pus culture grew pseudomonas aeruginosa, sensitive to cefotaxime and ceftazidime. Patient was put on ceftazidime, flagyl and vancomycin and continued on EVD for 12 days, with decrease in the ventricular pressure after CSF drainage. Initially the CSF was clear but later pus was drained. We feel the abscess ruptured due to intraventricular rupture of abscess. The reported incidence varies from 1.3 to 6% of the brain abscesses.2 These are metastatic lesions, underlying sources of infection being congenital heart disease, intrathoracic sepsis, abdominal sepsis, dental caries, otitis media or sinusitis.1,2 Immuno-compromised state is also a predisposing factor. However, no source of sepsis or any predisposing factors may be found.4 We also did not find any sources of infection or predisposing factors in our patients, despite detailed search, though the second case was chronic alcoholic and poorly nourished. Most of patients present with features of raised intracranial pressure. Meninitis associated with these abscesses has been reported.5 The treatment options for basal ganglia and thalamic abscess include stereotactic aspiration with or without continuous drainage, repeated aspirations through a burr hole and total excision along with systemic antibiotics.1,5,6 Ventriculoperitoneal shunt may be required in 50% of the cases, after stereotactic aspiration or drainage.5 We used only systemic antibiotics in adequate dosages and resorted to EVD in the first case because of hydrocephalus. Initially the CSF was clear but later pus was drained. We feel the abscess ruptured due to decrease in the ventricular pressure after CSF drainage. In the second case, simple tap through a burr hole drained the abscess. In a case of basal ganglia abscess with hydrocephalus, whether abscess should be drained first or the hydrocephalus, has really not been resolved, though hydrocephalus has also been drained before abscess drainage. In case of pre operative evidence of ventriculitis, EVD has to be resorted. In the absence of ventriculitis, it will be rational to drain the abscess first to avoid intraventricular rupture of abscess. The most common organisms in the reported thalamic and basal ganglia abscess has been streptococci and anaerobes.5 Mortality of 7% has been reported in these cases.2 Mortality after rupture of abscess into the ventricles has been reported to be high.5 However, our case had good outcome, probably because rupture occurred after external ventricular drainage, which drained out the pus. The outcome in the second case was also good, with only mild residual hemiparesis. Stereotactic aspiration with or without ventricular drainage, depending on the disturbance of CSF dynamics, is the treatment of choice for thalamic and
basal ganglia abscess. However, as yet, facilities for stereotactic aspiration are available in only a few neurosurgical centres in the country. A critically ill patient can still be managed successfully even with conventional methods, when stereotaxis facilities are not available.

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References