Tension Pneumocephalus: A Neurosurgical Emergency

A 41-year-old male, known case of valvular heart disease on anticoagulants was operated for chronic subdural hematoma 4 days back at another facility (Fig. 1).

Despite hematoma evacuation, patient did not show the expected neurological recovery, rather his clinical condition had deterioration.

At the time of admission, patient was drowsy with Glasgow coma score of E2V2M3 and had pupillary asymmetry. CT head plain showed bilateral tension pneumocephalus with ventricular effacement and obliteration of basal cisterns (Fig. 2). He was immediately taken for surgery and the entrapped air was drained via frontal burr hole (Fig. 3).

Post operatively, patient showed complete neurological recovery and was discharged in fully conscious state (Glasgow coma score 15).

“Tension Pneumocephalus” is the term used to describe the trapping of air intracranially. Usually it occurs in patients whose brains do not expand after removal of chronic subdural hematoma, but it can also occur as a part of traumatic pneumocephalus without overt CSF leakage. It is a serious complication if coupled with clinical deterioration and requires management on urgent basis. Simple procedure like burr hole and air drainage can be life saving.

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