Total migration of a ventriculo-peritoneal shunt catheter into the ventricles

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Dear sir,

Complete proximal migration of an entire ventriculo-peritoneal shunt into the ventricles is a rare complication.[1–3] A 10-month-old male child underwent right ventriculo-peritoneal shunt for congenital hydrocephalus at the age of 6 months. He was doing apparently well after surgery until the mother noticed an increase in the size of the head about 1 month back. Computed tomography (CT) scan showed the coiling of the shunt in the ventricular system and persistence of ventriculomegaly [Figure 1]. X-ray skull lateral view showed complete migration of the shunt system into the ventricles [Figure 2]. The shunt revision was performed and the child is doing well. Cephalad migration requires a potential space (subgaleal or ventricular) and no resistance to movement of the tubing, and mechanism of upward migration of the entire length of distal shunt catheter probably involves patient motion that creates a “windlass” effect.[2,4] Several other mechanisms contributing to the migration of the shunt tubing have been proposed and these include negative sucking intraventricular pressure, positive pushing intra-abdominal pressure, tortuous subcutaneous track and neck movements.[1] Further, a large dural hole around the ventricular catheter may predispose to periventricular CSF collection and easy proximal migration of the valve system.[4,5] It has been suggested that this complication can be prevented by securing the shunt near the site of motion.[2]

References


**Figures and Tables**

**Figure 1**
Skiagram showing the entire ventriculo-peritoneal shunt that migrated into the ventricles

**Figure 2**
Plain radiograph of skull (lateral view) showing complete migration of the shunt system into the ventricles