Extruded ventriculo-peritoneal shunt: An unusual complication

Sir,

An 18-month-old male presented with extruded peritoneal end of Ventriculoperitoneal (VP) shunt through the mouth [Figure 1]. The patient was shunted for congenital hydrocephalus at the age of one month. He had no complaints of convulsions, unconsciousness or headache.

Records showed past history of VP shunt done for sutural separation, increased head circumference and biparietal diameter. Ultrasonography and computerized tomography scan had confirmed it to be communicating congenital hydrocephalus.

Clinically shunt chamber was positioned over the mastoid

Figure 1: Photograph showing 18-month-old male with extruded peritoneal end of VP shunt through the mouth
process and it was functioning normally. Investigation showed percentage of hemoglobin to be 9.8. ABG was within normal limits. Blood culture showed no growth. Skull ultrasonography (USG) showed moderately dilated ventricles without internal echoes. Abdominal USG was normal.

The child was taken up for surgery and the shunt was removed through an incision behind the ear. The Shunt chamber was in-continuity and the tip was sent for culture that grew *Escherichia coli* sensitive to cefotaxime and amikacin. Patient had an uneventful post-operative period. Postoperatively diamox was started after 7 days as anterior fontanelle was tense and full. As clinical findings revealed abnormal increase of head circumference and ultrasonography scan showed dilated ventricles with VH ratio of >0.5, shunt revision was done after one month.

VP shunt in paediatric patients is done by paediatric surgeons and neuro-surgeons. On an average, each patient is likely to have 2-3 operations throughout their childhood for shunt revision. About 80% of the shunts develop complication at some stage. One third of these complications occur within the first year of shunt placement.[1]

Complications of VP shunt are various; migration of distal end of the tube is the commonest. Migration can occur in various sites like scrotum,[1] intrahepatic, intrathoracic, retrograde, anal canal, heart and cranium. Complete migration of VP shunt into ventricle is also reported.[2] Upward migration of shunt catheter is rarely reported, but probably involves patient motion that creates a "windlass" effect. We are presenting an unusual transoral migration of peritoneal end of VP shunt. Only few case reports of extrusion of peritoneal end through mouth are reported.[3]

Shunt can cause perforation of various viscera's such as intestine, bladder and stomach.[4] The incidence of bowel perforation is 0.1-0.7%.[1] Hydrocele, hydrothorax,[5] ascites and pseudocyst in abdomen can occur due to cerebrospinal fluid collection at these sites. Abscesses have been noted along shunt tract, liver and abdominal wall.

Three cases with late complications of mineral deposits consisting of hydroxyapatite are reported. Plain X-ray and operative findings showed that the most extensive calcification was present in the neck, where the catheters were subject to heavy mechanical stress.[6]

REFERENCES


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