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Case Report

Trans anal Extrusion of VP Shunt: Early Management Produce Better Outcome

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Abstract:

An 11 months old male child, with congenital HCP presented with extrusion of shunt tube form the anus after defecation. He was managed by VP shunt 8 months back; 6 months later lower end was revised for obstruction. Lower end of shunt exteriorized and the distal end was cut and pulled out per rectally. Later ETV done patient discharged uneventfully.Key words: VP Shunt, Trans anal, Extrusion, Management, Outcome.

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Introduction:

V-P shunt is the most frequent method used for CSF diversion where abdominal complication rate is 10-30[1,2]. Spontaneous bowel perforation is a rare complication of VP shunt and occurring from few weeks to several years after placement where the incidence is 0.1-0.7%[3,4].

An 11 months old male child, presented to us with complaints of extrusion of lower end of shunt tube through anus during defecation (Fig.1). Patient had right sided VP shunt surgery for congenital HCP 8 months back, 6 months after first operation he developed lower end obstruction which was managed by lower end revision (Fig.2). During second operation he was malnourished. He presented with abdominal pain and distension which was managed conservatively. Two days later shunt tube was extruded form the anus after defecation. His parents did not notice any symptoms such as nausea, vomiting, malena or sepsis. Signs of intracranial or abdominal infection were absent. Clinical examination revealed no abnormality except malnourishment. CSF spontaneously came out through distal end; CSF study revealed no abnormality. Plain X-ray of the abdomen showed the distal catheter within the lumen of descending colon, traversing the sigmoid colon, , and rectum, but there was no evidence of pneumo peritoneum or fluid level (Fig. 3). Baby was kept nothing per oral for 72 hours, IV antibiotics continued. Lower end of shunt was exteriorized and the distal end was cut, pulled out per rectally & after 3 days EVD was done. Subsequently ETV was done one week later, recovery was uneventful.

Fig.-1: *Distal end of shunt tube extruded through anal opening.*

Fig.-2: *In X-Ray Abdomen, the VP shunt located in the right paracolic gutter and coil itself.*

Fig.-3: *In X-Ray Abdomen, after VP shunt migrated per rectally.*

Discussion:

Extrusion of the distal catheter within the bowel and protrudes through the anus is a relatively rare complication, but it can result in a potentially serious infectious complication, sepsis, or even death[1, 4, 5]. The possible factors responsible for this complication are thin bowel wall in children, sharp and stiff end of the VP shunt,[6,7] use of trocar by operating surgeons,[8] chronic irritation by the shunt,[9] previous surgery, infection and silicone allergy.[10] In a review they found 5.32% patient died with this complication[11]. One

patient each died of peritonitis[12] and intractable seizures,[13] two of continued bacterial ventriculitis[14] and in one patient who died of meningitis, autopsy revealed stomach perforation by VP shunt. It is evident that when the bowel perforation is detected and corrected early & in asymptomatic stage the prognosis is excellent[15]. Here we detect the problem very soon as because patient was admitted during trans anal extrusion, we take measure immediately and ultimately get a good outcome.

Conclusion:

A high index suspicion is needed for this complication for early recognition and management for this potentially lethal complication.

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