

## A novel hybrid technique for ventriculo-vesical shunting for traumatic hydrocephalus

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**Introduction** Hydrocephalus due to various causes is usually managed with diversion of cerebrospinal fluid (CSF) in to the peritoneal cavity (VP shunt) or heart (Ventriculo atrial shunt). When patients are no longer candidates for conventional shunts alternative option such as ventriculo vesical shunt to divert the CSF to bladder is considered. This technique carries few challenges including frequent revision and stone formation.

**Case history** A twelve -year-old boy who got a traumatic obstructive hydrocephalus underwent Ventriculo-peritoneal shunt nine years back and multiple revision surgeries on the same year of surgery were performed. He developed recurrent CSF pseudocysts during the last one year and multiple surgeries including laparotomy and excision of pseudocyst were performed. An alternative diversion was considered as a solution to overcome the recurrent pseudocyst formation.

**Technique** Previously created VP shunt was exteriorized at supra pubic region. Bladder was exposed through pfannenstiel incision, the distal tip of the VP shunt was cut and a plastic connector was used to connect the 8F JJ stent. Cystostomy was made at the dome of the bladder and the stent was tunneled in an oblique way. With 2 nonabsorbable ties the connector was anchored with anterior rectus sheath and the bladder.

**Discussion** Technically this method is easy and effective for short duration as it will be needed to revise the tube for lengthening to match with the growth of the child. Conventional VP shunts are straight tubes, so placing the distal end inside the bladder and anchoring it inevitably causes shunt migration. Proximal migration of the shunt during movement of the child or distension of the bladder is overcame by using an intra vesical coiled JJ stent.