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A RARE CASE OF ABDOMINAL CEREBROSPINAL FLUID PSEUDOCYST (CSFOMA) : A RARE COMPLICATION OF VENTRICULO-PERITONEAL SHUNT IN PREVIOUSLY TREATED TUBERCULOUS MENINGITIS HYDROCEPHALUS

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ABSTRACT

Ventriculo-peritoneal shunt is a common neurosurgical procedure used in treatment of hydrocephalus in which shunt is created for draining excess of cerebrospinal fluid into peritoneal cavity for its absorption through the peritonium. One of its rare but dangerous complication is abdominal pseudocyst which occurs mainly due blockage or obstruction of the shunt and may present as acute abdomen. Here we present a case of post tubercular hydrocephalus treated with ventriculo-peritoneal shunt at the age of 2 years, later developed abdominal cerebrospinal fluid pseudocyst (CSFoma) at the age of 14 years. He presented with abdominal distension, ultrasonography showed pseudocyst formation which was confirmed with contrast enhanced computed tomography of abdomen. Ventriculo-peritoneal shunt was later diverted to right pleural cavity forming ventriculo-pleural shunt. Gradually pseudocyst resolved. On further follow up he was found to be doing well with no further complications.

KEYWORDS

Ventriculo-peritoneal shunt, CSFoma, Pseudocyst, Hydrocephalus, Ventriculo-pleural shunt

INTRODUCTION

Ventriculo-peritoneal (VP) shunt is the most common surgical procedure done for hydrocephalus management. Its aim is to divert excess CSF into peritoneal cavity for its absorption. It has numerous complications like shunt obstruction, shunt infection, migration, malposition, erosion, perforation, disconnection and abdominal CSFoma [1]. Csfoma is a rare but important complication with low incidence of 1-4.5% [2]. Here we report a case of post tubercular hydrocephalus treated with VP shunt who later developed abdominal CSFoma and was treated with ventriculo-pleural shunt.

Case Report

A 14 year old boy from Maharashtra, India was brought to out patient department with complaints of abdominal distension since last 20 days which was gradually progressive, painless, involving all the quadrants. No complaints of constipation or icterus or decreased urine output. He had a significant past history. At the age of 2 years he had an episode of Generalised tonic clonic seizure. CT brain on contrast showed irregular peripherally enhancing lesions in left basal ganglion ? tuberculoma + enhancing basal exudates with communicating hydrocephalus. CSF tapping and study was done which was tubercular in nature. He was diagnosed as TB meningitis with communicating hydrocephalus. Started on AKT, but sensorium didn't improve. After few days he was referred to neurosurgeon for further treatment, where VP shunt was done. Later sensorium gradually improved and was discharged with AKT and anticonvulsant. During course of hospital stay he was found to have diminished vision, fundoscopy showed bilateral optic atrophy. Next 11 years were uneventful until this. USG abdomen-pelvis was done for distension, it showed large abdominal CSFoma extending from inferior surface of liver to superior surface of bladder with VP shunt tip within it, which was later confirmed with CECT abdomen. Ascitic fluid tapping and study was done which was insignificant, fluid CBNAAT was negative, culture sensitivity for mycobacterium yielded no growth. He was referred to neurosurgeon where shunt revision and insertion into right pleural cavity was done. Discharged after 20 days. Follow up done after 1 month, Chest x ray PA view showed ventriculo-pleural shunt insitu with tip lying in right chest without any evidence of pleural effusion. USG chest showed ventriculo-pleural shunt in right lower pleural cavity anteriorly. USG abdomen showed minimal ascites. On follow up after 6 months he was found to be leading healthy life without recurrence of pseudocyst.

DISCUSSION

CNS tuberculosis is one of the common form of extrapulmonary TB. One of its dangerous complication is hydrocephalus. If hydrocephalus is progressive and signs of raised ICT are seen VP shunt is preferred treatment option. It has many complications, most common being shunt obstruction followed by infection which in turn may cause obstruction. Common organisms causing infection belong to staphylococcus group [3]. One more rare but well known complications is abdominal pseudocyst or CSFoma. It typically develops months to years after the surgery [4]. It usually manifests as abdominal pain, abdominal distension or loss of appetite [5]. Usually diagnosed with USG abdomen which shows cystic mass with shunt tip insitu, which can be confirmed with CT abdomen. Treatment usually is reversing cause of obstruction if possible otherwise conversion to ventriculo-atrial shunt or ventriculo-pleural shunt and even external drainage rarely. Sometimes percutaneous aspiration of cyst or laparotomic removal of cyst may be needed for acute abdomen management especially if compressive symptoms due to fluid are present.

CONCLUSION

Abdominal CSFoma is a rare but life threatening complication of VP shunt as it may present with acute abdomen. It should be suspected in all the patients of VP shunt presenting with abdominal complaints. It is easily diagnosable with help of USG abdomen and CECT abdomen. It is generally treated with shunt revision into atrium or pleural cavity. So early diagnosis and treatment has very good prognosis.

Consent – Prior written consent was taken from patients parents about publication,

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