

Answers to Medical Quiz

A1. Dilated bowel loops with air fluid levels in the plain abdominal x-ray in figure 1; intraperitoneal fluid in the CT scan in figure 2.

A2. Intestinal obstruction and infected ventriculoperitoneal shunt.

A3. Ventriculoperitoneal shunt peritoneal pseudocyst.

A4. Ventriculoperitoneal shunt.

DISCUSSION

Ventriculoperitoneal shunting are the most frequently performed operations in the management of hydrocephalus. Cystic formation of cerebrospinal fluid (CSF) at the distal end of the ventriculoperitoneal shunt tube occurs due to adhesions¹.

Bowel adhesion around the tip of ventriculoperitoneal shunt prevents absorption of cerebrospinal fluid (CSF) from the abdomen¹.

Abdominal complications of ventriculoperitoneal shunt include blockage of the shunt, infection of peritoneal cerebrospinal fluid and pseudocyst.

Abdominal complications are reported to occur in 47% of cases following ventriculoperitoneal shunt. Abdominal CSF pseudocyst is reported to occur in 1 to 4.5% of ventriculoperitoneal shunt surgery^{2,3}.

Shunt obstruction, progressive abdominal distension, features of intestinal obstruction, with or without features of raised intracranial tension might be indications of abdominal CSF pseudocyst⁴.

Diagnosis of CSF pseudocyst is very difficult, but it can be confirmed by ultrasound or CT scan of the abdomen^{5,6}.

Exploratory laparotomy, removal of shunt or shunt externalization, with or without cyst excision is the usual management of CSF pseudocyst. Laparoscopic management of a CSF pseudocyst is another option which involves excision of a portion of the cyst and repositioning the catheter within the peritoneal cavity. A final option is simple conversion of VP shunt to ventriculopleural shunt or most frequently to VA shunt. Recently ultrasound guided aspiration of CSF pseudocyst is reported in selected cases⁶.

CONCLUSION

Abdominal cerebrospinal fluid (CSF) pseudocysts are uncommon complications of ventriculoperitoneal (VP) shunt operation. CSF pseudocysts can be diagnosed by ultrasound or CT scan. Management of CSF pseudocysts include removal of the shunt or shunt externalization and excision or aspiration of the cyst under ultrasound guidance in selected cases.

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