Ventriculogallbladder shunt fracture: bile peritonitis

Case illustration

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A 9-year-old girl presented with worsening lower abdominal pain and emesis of 10 hours’ duration. She had a history of a ventriculogallbladder shunt (VGBS) placed 18 months after failure of peritoneal shunting for posthemorrhagic hydrocephalus. Examination revealed a diffusely tender abdomen; she was at her neurological baseline. Serology demonstrated borderline leukocytosis without hepatobiliary abnormalities. A radiographic shunt series (Fig. 1) showed a fracture of the catheter just below the valve. The catheter below the fracture site had retracted into the lower abdomen. The distal catheter remained in place in the gallbladder dome. CT of the abdomen/pelvis (Fig. 2) revealed a moderate amount of free fluid with peritoneal thickening consistent with peritonitis. The patient was taken urgently to the operating room. Laparoscopy revealed intraperitoneal bilious fluid. The gallbladder was noted to be extensively adherent to the surrounding tissue, so the catheter was ligated just outside the gallbladder due to concern for complication with cholecystectomy or catheter removal (Fig. 3). The proximal ventricular shunt and valve were explored and noted to be working well; a distal atrial catheter was placed. The patient was discharged home on postoperative Day 4. At 3-month follow-up she showed no signs or symptoms of shunt malfunction.

Described VGBS-specific malfunctions include bilious reflux resulting in ventriculitis2 or meningitis1 and cholecystic complications including atony, biliary tract infection, and cholecystitis.3,4 Bilious peritonitis due to intrabdominal catheter fracture is previously undescribed. Herein we present such a complication and a successful and efficient management strategy.

References


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