

## Imaging Sciences Interesting Cases

### CASE 569

Daniel Ginat, MD, MS

**CLINICAL PRESENTATION:** Patient is a 10-year-old female with ventriculoperitoneal (VP) shunt malfunction.

**IMAGING FINDINGS:** There is a large VP shunt pseudocyst exerting mass effect in the abdomen.



**Figure 1:** Frontal radiograph shows a VP shunt catheter within the abdomen. There is a large density surrounding the distal VP shunt catheter and the loops of bowel are displaced peripherally.



**Figure 2:** Axial CT image shows a large fluid collection surrounding the distal VP shunt catheter.

### **DIAGNOSIS: Ventriculoperitoneal shunt pseudocyst**

**DISCUSSION:** Intraperitoneal pseudocysts associated with VP shunt catheters are localized, walled-off collections of CSF. Nuclear medicine or other shunt studies can demonstrate a communication between the VP shunt and pseudocyst. Pseudocysts are variable in size and appearance. Small, loculated collections tend to be infected, while large cysts tend to be sterile CSF collections. Similar collections can also occur in the subcutaneous tissues and may indicate an underlying discontinuity of the VP shunt tubing. Intraperitoneal pseudocysts may cause bowel obstruction, ventriculomegaly and increased intracranial pressure.

### **REFERENCES:**

1. Mobley LW 3rd, Doran SE, Hellbusch LC. Abdominal pseudocyst: predisposing factors and treatment algorithm. *Pediatr Neurosurg*. 2005 Mar-Apr;41(2):77-83. PMID: 15942277 [PubMed]
2. Goeser CD, McLeary MS, Young LW. Diagnostic imaging of ventriculoperitoneal shunt malfunctions and complications. *Radiographics*. 1998 May-Jun;18(3):635-51. PMID: 9599388 [PubMed]