

# Bowel ischemia

Small-bowel ischemia and necrosis due to knotting of the [peritoneal catheter](#) is an extremely rare complication related to a ventriculoperitoneal shunt (VPS). A 3-month-old girl, with a history of Chiari II malformation and myelomeningocele (MM) after undergoing right occipital VPS insertion and MM repair at birth, presented to the emergency department with a high-grade fever. Examination of a CSF sample obtained via shunt tap raised suspicion for the presence of infection. Antibiotic therapy was initiated, and subsequently the VPS was removed and an external ventricular drain was placed. Intraoperatively, as attempts at pulling the distal catheter from the scalp incision were met with resistance, the distal catheter was cut and left in the abdomen while the remainder of the shunt system was successfully removed. While the patient was awaiting definitive shunt revision surgery to replace the VPS, she developed abdominal distension due to small-bowel obstruction. An emergency exploratory laparotomy revealed a knot in the distal catheter looping around and strangulating the distal ileum, causing small-bowel ischemia and necrosis in addition to the obstruction. A small-bowel resection with ileostomy was performed, with subsequent placement of ventriculoatrial shunt for treatment of hydrocephalus. The authors report this exceedingly rare clinical scenario to highlight the fact that any retained distal catheter must be carefully managed with immediate abdominal exploration to remove the distal catheter to avoid bowel necrosis as pulling of a knotted peritoneal catheter may strangulate the bowel and cause ischemia, with significant clinical morbidity and possible mortality <sup>1)</sup>.

<sup>1)</sup>

Tan LA, Kasliwal MK, Moftakhar R, Munoz LF. Ventriculoperitoneal shunt with a rare twist: small-bowel ischemia and necrosis secondary to knotting of peritoneal catheter. J Neurosurg Pediatr. 2014 Sep;14(3):234-7. doi: 10.3171/2014.6.PEDS1418. Epub 2014 Jul 4. PubMed PMID: 24995817.

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