

## Lumboperitoneal shunt: a foreign body detected in the small bowel by capsule endoscopy

Ventriculoperitoneal or lumboperitoneal shunts have a high rate of complications (23.8%) [1], of which gastrointestinal complications account for 10%–30% [2]. Small-bowel perforation secondary to ventriculoperitoneal shunt is reported in 0.1%–1% of cases [3], with a 15% risk of mortality [4]. Infection and chronic inflammation can lead to perforation of the bowel [2,4], and acute traumatic or foreign body-type allergic reaction to

the tubing material has been implicated in some cases [4]. Patients present asymptotically, or with abdominal pain, diarrhea, shunt dysfunction, fever, leukocytosis or seizures [4]. The condition often causes peritonitis and other complications such as meningitis, which can be fatal if unrecognized [4], and which may require surgical, endoscopic, or a combination of surgical and endoscopic management [5].

A 63-year-old woman with a history of pseudotumor cerebri requiring a lumboperitoneal shunt since 2000 presented with a 2-month history of abdominal pain and diarrhea without fever or blood. Video capsule endoscopy (VCE) was performed and identified a white, elongated, and smooth foreign body located approximately in the jejunum/ileum (► **Video 1**). The contrast computed tomography scan of the abdomen and pelvis showed the lumboperitoneal shunt entering the jejunum/ileum, from where it followed an intraluminal route through multiple small-bowel loops (► **Fig. 1**, ► **Fig. 2**).

To the best of our knowledge, the current case is the first bowel perforation by a lumboperitoneal shunt catheter to be observed by VCE.

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### Competing interests

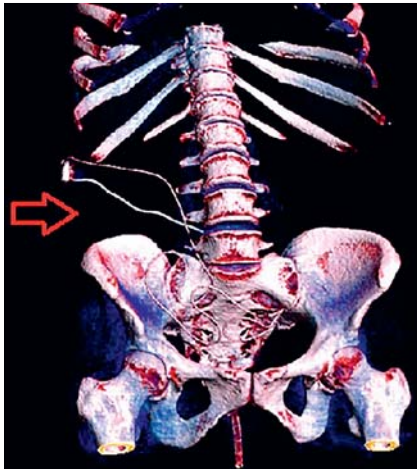
None



► **Video 1** A lumboperitoneal shunt detected in the small bowel by capsule endoscopy.



► **Fig. 1** Contrast computed tomography scan of the abdomen and pelvis. **a** Axial plane. Maximum intensity projection (MIP) reconstruction. The lumboperitoneal shunt can be seen at its exit from the canal (yellow arrow), following the course of the subcutaneous fat up to the entrance in the abdominal cavity (red arrow). **b** Axial plane. Shunt within multiple small-bowel loops (red circle). **c** Coronal plane. MIP reconstruction. Shunt inside the intestinal loops (red circle).



► **Fig. 2** Volume rendering reconstruction allows the entire length of the catheter to be tracked (red arrow).

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