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## Spontaneous externalization of a ventriculoperitoneal shunt tip through the navel

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### ABSTRACT

The authors describe spontaneous externalization of a ventriculo-peritoneal shunt through the navel.

### ARTICLE HISTORY

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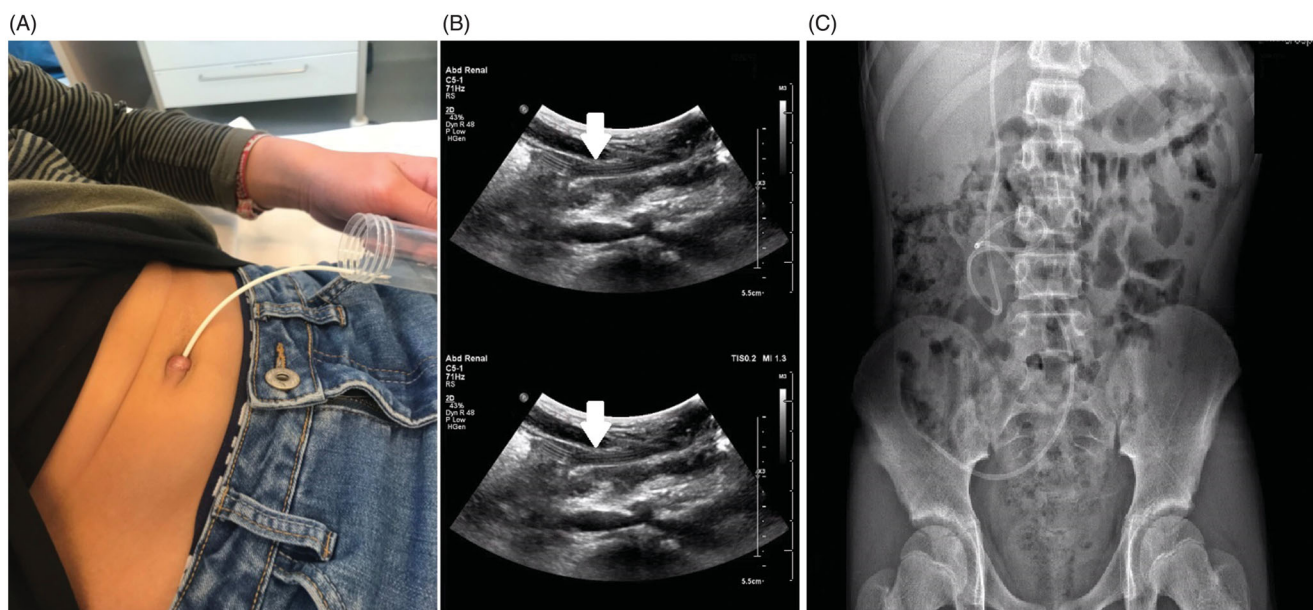
### KEYWORDS

Ventriculoperitoneal shunt (VPS); complication; externalization

A 12-year old boy presented with spontaneous externalization of the ventriculoperitoneal shunt (VPS) through the navel. Two weeks before he noticed a pimple in the same area, but he had no accompanying complaints. The patient had a known arterio-venous fistula (AV) near the transverse sinus left for which the VPS was put in in China. Afterwards, he was adopted and moved to the Netherlands. Eight years prior he underwent shunt revision due to distal disconnection. The patient noted the shunt externalizing (Figure 1(A)). Infection parameters were normal. Ultrasound of the abdomen showed no masses or underlying abdominal wall pathology (Figure 1(B)) and X-ray showed that

the drain trajectory was intact (Figure 1(C)). After admission, the shunt was closed to test for shunt dependency. A day later, the cerebrospinal fluid showed growth of *Staphylococcus* and, therefore, it was removed. Afterwards, the patient showed no symptoms of meningitis and was discharged. Follow-up MRI at 6 months showed no further dilatation of the ventricles and no changes in the AV-fistula.

Spontaneous externalization of VPSs is rare. Reports exist of spontaneous or provoked migration of VPS through the umbilicus, mouth, vagina, ureter and penis, to the colon, the scrotum, the anus and extrusion through the spinal area<sup>1-5</sup>.



**Figure 1.** Extrusion of the distal part of the ventriculoperitoneal shunt through the navel. B Ultrasound imaging shows extrusion from the shunt, without abdominal wall pathology C X-ray shows an intact drain trajectory.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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