CSF pseudocyst: an unusual cause of back pain

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DESCRIPTION
A 27-year-old woman presented with a 10-month history of right-upper back pain that radiated anterolaterally along the right chest wall and was aggravated by coughing and deep inspiration. She had surgical resection of a low-grade cerebellar astrocytoma 21 years previously. Since that time, she had a ventriculoperitoneal (VP) shunt.

MRI of the cervicothoracic spinal cord failed to demonstrate any spinal abnormality to account for pain. However, there was a 15×8 cm cystic collection in the right-upper abdominal quadrant (figure 1A, B; black star). CT of the abdomen was performed for further evaluation. Scout (figure 2A) and axial CT (figure 2B) images revealed the distal tip of the VP shunt coiled in the right subphrenic space (arrows) and surrounded by a large simple cystic collection compressing the liver. A large amount of clear, serous fluid was drained percutaneously using ultrasound guidance. Laboratory analysis of the fluid was consistent with cerebrospinal fluid (CSF). The shunt was repositioned and her symptoms subsequently resolved.

CSFoma is a rare complication of VP shunts particularly in adults.1 A thin fibrous capsule without...
epithelial lining forms around the shunt tip and CSF accumulates within, hence the term pseudocysts. Low-grade shunt infection, peritoneal adhesions or chronic inflammation are the aetiological factors. Children typically present with symptoms of raised intracranial pressure while abdominal distension or pain predominates in adults. Shunt repositioning and percutaneous drainage or surgical excision is important in both diagnosis and management of pseudocysts.

Competing interests None.
Patient consent Obtained.
Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

Images in…

Learning points

- This case highlights two important principles in the evaluation of radiological images:
  - It is essential to examine the “edge of the film” for unexpected findings.
  - It is crucial to identify and confirm satisfactory position of the tip of all catheters.
- Cerebrospinal fluid (CSF) pseudocysts are rare complications of ventriculoperitoneal shunts, which are used in the treatment of hydrocephalus and are characterised by CSF fluid collections forming at the shunt tip.

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