



## CASE REPORT

### OBSERVATIONS DE CAS

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# A large splenic epidermoid cyst in rural Labrador

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## INTRODUCTION

Splenic cysts are rare clinical entities, reportedly occurring in only 0.5%–2.0% of the population.<sup>1</sup> The first splenic cyst was reported in 1829 by Andral,<sup>2</sup> and with the increasing use of diagnostic imaging, splenic cysts are now more commonly being diagnosed incidentally.<sup>3</sup> We report the case of a splenic cyst in an 18-year-old man who initially presented to a remote nursing station in Labrador with non-specific abdominal complaints. After being transferred to a community hospital, the patient was found to have a very large splenic cyst and he subsequently underwent a total splenectomy with the removal of an associated epidermoid cyst.

## CASE

This 18-year-old man initially presented with a 2-day history of abdominal pain. He described it as sudden onset, localized to the left upper quadrant, and aggravated by movement and breathing. He had no history of similar pain. There was no history of abdominal trauma, gastrointestinal problems or genitourinary problems. Physical examination showed tenderness in the left upper quadrant that radiated to the umbilicus area. The patient's vital signs were all within normal limits, and no abdominal mass was palpable. A urine dipstick was also normal. When the patient's abdominal pain failed to resolve over the 24 hours following his presentation, he was transferred to the regional referral centre. When assessed by the emergency department physician, the patient was pain-free and had

no significant clinical findings. Routine screening investigations — urinalysis, complete blood count and fecal occult blood test — were all reported as normal. Stool samples for ova and parasites were negative. The patient subsequently underwent abdominal imaging with ultrasound and CT scan. These showed a large 12.6 × 10.8 × 13.4-cm splenic cyst with associated satellite peripheral small cysts (Fig. 1). Serology for *Echinococcus granulosus* infestation was requested<sup>3,4</sup> and was reported as negative. The patient subsequently underwent an open total splenectomy. About 1500 mL of fluid was evacuated from the cyst before attempting mobilization of the spleen for splenectomy. Partial splenectomy, which was desirable and had been offered as an option to the patient if technically feasible, was not attempted because the cyst was based on almost the entire anteromedial aspect of the spleen, extending from the superior to the inferior pole. The patient made an uneventful recovery after surgery. Pathology showed a 422 g epidermoid splenic cyst (Fig. 2).

The patient received Pneumovax, Hemophilus influenza B and meningococci vaccinations before surgery.

## DISCUSSION

When a splenic cyst is encountered, the differential diagnoses include congenital splenic cysts, cysts secondary to parasitic infestations, splenic trauma, splenic infarction and splenic abscess.<sup>5</sup> A history of even remote trauma should be sought. Splenic cysts can be classified as either parasitic or nonparasitic.<sup>4,6</sup> Worldwide, the majority of splenic

cysts are parasitic and are due to *Echinococcus granulosus* infestation.<sup>3,4</sup> Based on the presence or absence of an epithelial lining, nonparasitic splenic cysts can be further classified into true cysts (also called primary or epithelial) or false cysts (also called secondary or pseudocysts).<sup>5-7</sup> About 30%–40% of all splenic cysts are true cysts, which are encountered most commonly in children and young adults.<sup>4</sup> Many authors have reported that the incidence of splenic cysts is higher in females than in males.<sup>2</sup> Depending on the pattern of the inner surface cell layer, true splenic cysts can be further divided into mesothelial, dermoid or epidermoid subtypes.<sup>4,6</sup> The epidermoid cyst accounts for about 10%–20% of all splenic cysts.<sup>1,2</sup>

In patients with an asymptomatic, small, true



Fig. 1. CT scan showing a large splenic cyst.



Fig. 2. Splenic cyst after drainage and removal.

splenic cyst, conservative management may be reasonable.<sup>5</sup> However, when a splenic cyst is symptomatic, or if the diagnosis is uncertain, surgical exploration is warranted.<sup>5</sup> Some authors advocate surgery for splenic cysts larger than 4–5 cm because of the increased risk of complications.<sup>4</sup> If surgery was warranted in the past, splenic cysts were managed with open total splenectomy. Currently, there has been a trend toward partial splenectomy, when it is technically feasible, because of the association of post-splenectomy sepsis with total splenectomy.<sup>4</sup> Minimal access surgery is also feasible. “Limited” treatments, such as catheter drainage or sclerosis, are associated with high rates of recurrence and infection (or both), and have largely been abandoned.<sup>4,5</sup> Total splenectomy, partial splenectomy and cystectomy have all been reported as adequate treatments for splenic cysts.<sup>5</sup>

Decisions about the optimal surgical procedure are tailored to the clinical situation, and the final decision is frequently made during surgery. The surgical options are based on the size of the cyst, its relation to the splenic hilar vessels and parenchyma, and the amount of healthy splenic tissue that remains.<sup>7</sup> Any type of procedure that preserves the spleen is technically difficult to perform if the cyst is very large, if it is located in the splenic hilum, if it is covered completely by the splenic parenchyma, or if there are multiple cysts.<sup>4</sup> In these cases, a complete splenectomy should be performed using either the open or the laparoscopic approach.<sup>4</sup>

**Competing interests:** None declared.

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