A 3-YEAR-OLD boy was referred to the pediatric gastroenterology department for evaluation of abdominal pain and vomiting. The patient had a 1-year history of recurrent, acute, episodic abdominal pain that was often associated with vomiting. The episodes occurred infrequently and typically lasted for 48 to 72 hours. There was no nocturnal awakening with abdominal pain or emesis. There was no associated fever, diarrhea, rash, headache, or altered consciousness. The child has maintained growth at the 25th percentile both for height and weight.

Findings from physical examination were normal except for the abdomen. Mild abdominal distension was present with a sense of fullness to palpation, but no mass was felt. There was no tenderness to deep palpation. Results of rectal examination were normal, and a stool sample was guaiac negative. The following laboratory studies were performed and revealed normal results: complete blood cell count, erythrocyte sedimentation rate, amylase, lipase, urinalysis, and urine culture. An abdominal computed tomographic scan was obtained (Figure 1). Surgery was performed, and a large cystic mass was removed (Figure 2).
Mesenteric Cyst

Figure 1. An abdominal computed tomographic scan revealed a large cystic mass displacing the bowel superiorly.

Figure 2. Surgically resected specimen revealing a thin-walled, bilobed cyst containing clear amber fluid.

Based on the findings of the abdominal computed tomographic scan, surgery was planned. A large, bilobed mesenteric cyst was found, involving the ileum. The cyst was removed, and segmental intestinal resection with primary anastomosis was necessary. The pathologist identified the cyst as a cystic lymphangioma of the mesentery.

Mesenteric cysts are rare, benign, intra-abdominal tumors, and fewer than 1000 cases are reported since Beneveni’s original description in 1505.1,2 One third of reported cases involve children younger than age 10 years.3,4 The incidence of mesenteric cysts in children ranges from 1 per 11250 to 1 per 34000 hospitalizations.2,3 Most are considered congenital in origin. Proposed mechanisms of development include sequestration or obstruction of lymphatic vessels and ectopic lymphatic tissue.6-8 Mesenteric cysts may arise from trauma, infection, or neoplasm.9 They are grouped with omental and retroperitoneal cysts because of a common origin and histologic features.9

Mesenteric cysts are described in the mesentery from the duodenum to the rectum; however, half are found in the small intestine mesentery, usually near the ileum.2,4,9 The patterns of presentation include specific abdominal signs and the incidental finding of an abdominal mass.10 Presentation relates to size, location, and associated complications. Most children with mesenteric cysts are asymptomatic; only 20% of mesenteric cysts in children are asymptomatic.2 A palpable mass is found on physical examination in 30% to 50% of affected children.2,3,9,11 Occasionally, these patients are surgical emergencies, particularly when there is intestinal obstruction or appendicitis.9,12 Other presentations include acute abdomen due to hemorrhage, rupture, or torsion of the cyst, which may predispose to volvulus with resultant intestinal infarction.13,14

Diagnosis is not made by history, clinical features, or findings from laboratory examination; radiological evaluation is necessary. Findings from abdominal radiographs are normal or show bowel displacement by the mass. Sometimes calcifications are seen in the cyst wall. The more useful modalities that demonstrate the cystic nature of the mass are abdominal ultrasound or computed tomographic scan.10

The treatment of choice for mesenteric cysts is complete surgical excision. In 33% to 60% of children with mesenteric cysts, segmental bowel resection is required to fully excise the cyst.2,3,5 Although the greatest experience is with open surgery, laparoscopic surgery has been used.15,16 Marsupialization is performed in approximately 10% of the cases.2,5 Neither partial resection nor cyst aspiration is adequate treatment, and both result in a high recurrence rate, while patients with total excision have a negligible risk of recurrence.

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