An uncommon cause of abdominal pain:
Mesenteric cyst

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Abstract: Mesenteric cysts are benign cystic lesions. Here, we present the case of a patient with abdominal pain, which was diagnosed as a mesenteric cyst.

A 28-year-old male patient was admitted to the emergency department (ED) with abdominal pain and distention. Abdominal palpation revealed a smooth-surfaced mass palpable in the left upper quadrant. Ultrasonography depicted a hypoechoic heterogeneous mass-like structure with a size of 15 × 12 cm. Because the ultrasonographic findings were not diagnostic for a particular disorder, abdominal ultrasonography depicted a hypoechoic heterogeneous mass-like structure with a size of 12 × 12.5 cm near to the duodenum and pancreas. The patient underwent a control CT with contrast, which revealed the catheter at the site of the operation and no cystic lesion after procedure. He was discharged 1 week after the procedure.

Mesenteric cysts are extremely rare benign lesions of the abdomen, and emergency physicians must consider this disease in the differential diagnosis of abdominal pain. The percutaneous drainage technique performed on our patient is a safe technique for the treatment of selected patients.

Keywords: mesenteric cyst, abdominal pain, emergency, interventional radiology

Introduction
Mesenteric cysts are benign cystic lesions in the mesentery of the small bowel, most commonly seen in the ileal mesentery, with an incidence of <1/100,000 [1]. Here, we detail the case of a patient who presented with abdominal pain in our emergency department (ED), which was diagnosed as a mesenteric cyst, a very rare cause of abdominal pain.

Case
A 28-year-old male patient was admitted to the ED having suffered from abdominal pain and distention localized in the upper part of the abdomen for 1 week. There was no significant past or family history and no history of drug usage affecting the bowel movements. His vital signs were within normal limits on admission. On physical examination, there were normal bowel sounds. Examination with abdominal palpation revealed a solitary, smooth-surfaced, well-defined mass palpable in the left upper quadrant of the abdomen. Laboratory tests were also within normal limits. Abdominal ultrasonography depicted a hypoechoic heterogeneous mass-like structure on the left upper quadrant near the inferior pole of the left kidney with a size of 15 × 12 cm. Because the ultrasonographic findings were not diagnostic for a particular disorder, abdominal computed tomography (CT) with both oral and intravenous contrast were ordered. Abdominal CT showed dilated left renal pelvis and proximal ureter compared to the right side, due to the mass effect of a well-defined cystic structure with a size of 12 × 12.5 cm near to the fourth part of the duodenum and pancreas also near the anteroinferior pole of the left kidney (Fig. 1). These imaging findings suggest a gut duplication cyst or mesenteric cyst in the
differentials of the patient’s abdominal pain and distention (Table 1). The patient was admitted to the general surgical ward, and the cystic structure was drained with a percutaneous drainage catheter inserted by the interventional radiologist; then, ethanol sclerotherapy was performed with the aid of ultrasonography. The material was sent to the pathology lab and revealed negative results for a mucinous tumor. The patient underwent a control upper abdominal CT with contrast. The CT revealed the catheter in the area of the operation site and no cystic lesion after the procedure (Fig. 2). The patient was discharged from the general surgery service 1 week after the procedure.

Discussion

Mesenteric cysts are benign cystic lesions in the mesentery of the small bowel and most commonly seen in the second decade of life. They are more common in women than men, with a 1:2 ratio [2]. Mesenteric cysts are most commonly seen in the mesentery of the ileum [3]; uncommon sites are the mesocolon and the mesentery of the jejunum. There are two types of classifications for mesenteric cysts: one is based on its histopathologic characterization and the other is related to the etiology of the cyst [2–6]. Ros et al. have extensively reviewed the correlation of histological classification and imaging correlation of mesenteric and omental cysts [5]. According to these authors, a nonpancreatic pseudocyst is usually a unilocular or multilocular cyst located in either the mesentery or the omentum, with abundant debris sonographically and wall enhancement on CT. An enteric duplication cyst is a unilocular cyst with wall enhancement on CT. Such striking features help understand the diverse nature of mesenteric and omental cysts. Meso-

| Thoracic causes | Cardiac pain |
|-----------------|-------------|
| Thoracic causes | Left lower lobe pneumonia |

| Abdominal causes | Aortic aneurysm |
|------------------|-----------------|
| Abdominal causes | Ruptured spleen |
| Abdominal causes | Splenic infarction |
| Abdominal causes | Acute splenic sequestration |
| Abdominal causes | Splenic infiltration |
| Abdominal causes | Splenic cyst |
| Abdominal causes | Gastritis |
| Abdominal causes | Gastric ulcer |
| Abdominal causes | Renal colic |
| Abdominal causes | Pyelonephritis |
| Abdominal causes | Horseshoe kidney |
| Abdominal causes | Diverticulitis |
| Abdominal causes | Inflammatory bowel disease |
| Abdominal causes | Constipation |
| Abdominal causes | Irritable bowel syndrome |
| Abdominal causes | Colonic tumours |
| Abdominal causes | Pancreatitis |
| Abdominal causes | Pancreatic tumors and cysts |
| Abdominal causes | Gut duplication cyst |
| Abdominal causes | Mesenteric cyst |
| Abdominal causes | Retroperitoneal tumors |

| Medical causes | Diabetic ketoacidosis |
|----------------|----------------------|
| Medical causes | Septicemia |
| Medical causes | Hypercalcemia |
| Medical causes | Henoch-Schönlein purpura |
| Medical causes | Hereditary angioedema |
| Medical causes | Porphyria |
Mesenteric cyst as a rare cause of abdominal pain

Epithelial and enteric cysts are anechoic, thin-walled cysts. A variety of diagnostic modalities is applied to confirm the presence of a mesenteric cyst, but ultrasonography and CT of the abdomen tend to be the favored methods [7]. Ultrasonography of the abdomen reveals a hypoechoic cystic mass with or without intense echoes and can also show septa, debris, and abdominal fluid levels. The CT allows the size, the point of origin of the mass, and the relation to the neighboring organs to be determined and depicts better wall calcification [8]. Typically, the treatment of choice is surgery [9, 10]. The intervention performed on our patient represents the application of a standardized radiological technique in a new context, namely, a mesenteric cyst, and there is increasing literature evidence for this method [11]. In our case, we obtained an optimal result, with complete regression of the treated cyst and the patient discharged from the hospital for follow-up.

Conclusion

Mesenteric cysts are extremely rare benign lesions arising from various sites, and emergency physicians must consider this disease in the differential diagnosis of abdominal pain and vague abdominal symptoms, especially in young populations.

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