During EUS imaging, there is frequently a twist! This looks like a pancreatic pseudocyst, but could it be a GIST?

A 68-year-old man underwent EUS for a perigastric mass. On EGD and EUS imaging, a subepithelial compression and a large well circumscribed unilocular perigastric cystic lesion was seen, reminiscent of a pancreatic pseudocyst (A, B). On further dynamic EUS imaging, the mass was seen to be larger, 14 cm × 8 cm, and was heterogeneous with multiple large cystic components and scattered hypoechoic/isoechoic solid areas (C). On careful examination, the mass was seen to be contiguous with the muscularis propria (D, arrowhead). EUS-guided FNA for cytologic examination was performed on a portion of the solid component while completely avoiding aspiration of the cystic component to minimize risk of infection (E). Two passes were made with the 25-gauge needle, showing spindle cells, and another 2 passes were made for a cell block. Immunoperoxidase staining performed on the cell block sections showed that the tumor cells stained positive for CD117, DOG-1, SMA, and focally positive for CD34 but negative for desmin. These findings were diagnostic of a GI stromal tumor. Polymerase chain reaction–based DNA sequencing on EUS-FNA material revealed positivity for PDGFRA gene but not for c-KIT gene. The tumor was removed surgically with a gastric wedge resection.
Commentary
Gastrointestinal stromal tumors (GISTs) arise from the interstitial cell of Cajal within the muscularis propria in the wall of the GI tract. As with any other tumor, when a GIST grows, degeneration and necrosis lead to liquefaction of the mass content, resulting in cyst formation. On rare occasions, the entire lesion can be replaced with the cystic component, leaving a thin rim of tumor resembling a pancreatic pseudocyst wall. It is extremely important to make the distinction between pancreatic pseudocysts and GISTs with cystic degeneration because the management is entirely different. Cyst drainage of a cystic GIST is inappropriate and may cause several adverse events such as bleeding or tumor spreading. This case illustrates the importance of being cautious before attempting drainage of a presumed pancreatic pseudocyst. Obtaining a detailed medical history and adequate confirmation of the cyst content is recommended before endoscopic drainage. Other differential diagnoses to keep in mind are cystic neuroendocrine tumor, mucinous cystic tumor of the pancreas, and serous oligocystic adenoma of the pancreas.

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Perforation of the duodenum 2 weeks after lumen-apposing metal stent placement for malignant pyloric stricture

A 54-year-old woman with a medical history of autoimmune hepatitis, idiopathic thrombocytopenic purpura, and postoperative splenectomy presented with 1 week of postprandial abdominal pain, vomiting, and mild epigastric tenderness. CT of the abdomen demonstrated gastric outlet obstruction with thickening of the pylorus and marked gastric distension. EGD revealed a <1-cm pyloric stricture, and examination of a biopsy specimen gave negative results for malignancy (A). EUS revealed thickening of the muscularis propria in the pyloric region, and FNA was performed. A 15 mm × 10 mm lumen-apposing metal stent (LAMS) (Axios stent, Boston Scientific, Marlborough, Mass, USA) was deployed across the pyloric stricture over a wire (B) through a therapeutic upper endoscope.

An abdominal radiograph after stent placement showed normal results. The patient was discharged with resolution of her symptoms. EUS-FNA histologic analysis revealed poorly differentiated adenocarcinoma with infiltrating signet ring cells, and chemotherapy was started. Two weeks later, she presented to the emergency department with acute abdominal pain. CT of the abdomen demonstrated free intraperitoneal air and stranding around the duodenal bulb (C). Emergent laparotomy revealed the rim of the distal LAMS flange perforating through the anterior duodenal wall into the peritoneal cavity (D). The LAMS was endoscopically removed, and the duodenal wall defect was surgically repaired with an omental patch.

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Commentary
It would not be an overstatement to say that LAMSs have revolutionized much of therapeutic endoscopy. LAMSs allow for transluminal drainage of pseudocysts, walled-off pancreatic necrosis, the biliary tree, and the gallbladder, and they can be