Thorascopic Resection of Esophageal Heterotopic Pancreas
Debra M. Lowry, MD, Takman E. Mack, MD, Brett J. Fartridge, MD, Brian C. Barbick, MD, Robert M. Marks, MD, and Joshua T. Kindelan, MD
Departments of Cardiothoracic Surgery, General Surgery, Radiology, and Gastroenterology, Naval Medical Center San Diego, San Diego, California

Heterotopic pancreas is normal pancreatic tissue that lacks anatomic and vascular continuity with the main body of the pancreas. Heterotopic pancreatic tissue is a rare congenital anomaly found usually in the stomach, duodenum, or jejunum and is rarely seen in the esophagus. This is a case of heterotopic pancreas found in the esophagus that was removed thorascopically.

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Heterotopic pancreas is defined as histologically proven tissue that is not connected to the pancreas. It is most frequently found in the stomach, duodenum, or jejunum. It can also be found anywhere in the digestive tract, intraabdominally, in the mediastinum, or the thorax [1]. Rarely has it been found in the esophagus, with only 13 cases reported in the literature. Surgical management through a minimally invasive approach has not been previously described, to our knowledge.

A 25-year-old man with no significant medical history presented with right upper quadrant and epigastric abdominal pain. Evaluation included a computed tomographic scan that revealed a 4.4-cm mass of unknown cause, closely approximated to the esophagus (Fig 1). Positron emission tomography revealed fluorodeoxyglucose avidity, which aroused concern for a tumor rather than an inflammatory process. An esophagogastroduodenoscopy was performed, which revealed multiple fistulous tracts 3 cm proximal to the gastroesophageal junction (Fig 2), in addition to a nodule in the antrum of the stomach. Biopsy specimens were taken from both areas. The antral biopsy specimen revealed pancreatic heterotopia, and the esophageal biopsy specimen was nondiagnostic. Endoscopic ultrasonography revealed a well-circumscribed mass abutting the aorta and inferior pulmonary vein (Fig 3). Repeated biopsy specimens were obtained and were nondiagnostic. An upper gastrointestinal study showed a submucosal mass in the region of the distal esophagus, demonstrating tiny contrast medium–filled extensions to the mass, without communication into the mass itself or the lung parenchyma. After comprehensive imaging and repeated biopsies, the differential diagnosis remained broad and included both benign and malignant processes.

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Address correspondence to Dr Kindelan, Department of Cardiothoracic Surgery, Naval Medical Center San Diego, 34800 Bob Wilson Dr, Ste 403, San Diego, CA 92134; e-mail: joshua.kindelan@med.navy.mil.
was noted to be attached to the esophagus by a broad stalk. There appeared to still be a layer of muscle fibers between the stalk and the mucosa, so division of the stalk with an endo-GIA stapler seemed like a feasible option. The concern in doing this was that if the mucosal tracts did indeed communicate with the mass, then the stapled mucosa that remained would present a risk of leak. Our plan if that were to occur was to ensure satisfactory mucosal closure and to cover the site of resection with an intercostal muscle flap, because a two-layered closure would be compromised by our need to resect a significant portion of the adjacent muscular layer with the specimen. We performed the resection over a lighted 56-Fr bougie to prevent unintentionally entraining mucosa into our staple line and to detect perforation. After resection, intraoperative endoscopy revealed smooth mucosa, with no evidence of disruption or remaining fistulous tracts, making it likely that these findings were actually traction dimples. Pathologic examination demonstrated pancreatic heterotopia with a negative margin of resection at the staple line.

The patient had an uneventful recovery. A swallow study performed on postoperative day 3 showed no evidence of leak. He was advanced to a soft diet and discharged home. The patient returned for a 2-month follow-up visit and was tolerating a regular diet with no recurrence of epigastric pain.

Comment
Heterotopic pancreas is found in 0.6% to 13.6% of autopsies [1]. It is more common in male individuals and has the highest incidence in the fourth to the sixth decades of life. It is uncommon to find heterotopic pancreas in the esophagus. Only 13 cases of esophageal heterotopic pancreas have been reported. Although the condition is mostly asymptomatic, symptoms associated with esophageal heterotopic pancreas include epigastric pain, dysphagia, and upper gastrointestinal bleeding [2]. The most common site is the distal esophagus. It can be associated with other anomalies. Two cases have been associated with malignancy [3, 4].

Management has varied from observation to more radical surgical procedures such as Ivor-Lewis esophagectomy. Resection by VATS has not previously been described, to our knowledge. Because of the presence of malignancy in previously reported cases, it is prudent to remove the abnormal tissue surgically instead of relying on observation. Diagnosis is often difficult and is usually determined once the specimen is removed in its entirety [5].

In this case, multiple biopsy specimens were nondiagnostic and the imaging studies inconclusive, making preoperative diagnosis impossible. The differential diagnosis included both benign and malignant causes, although the patient's age argued for a benign cause. Although the lesion looked benign under direct visualization from the left hemithorax, its complete surgical resection was indicated, given the patient's symptoms, the failure to obtain a tissue diagnosis by less invasive means, and the malignant potential of the lesion.

References

Leiomyoma Presenting as a Massive Calcified Circumferential Esophageal Mass
Dustin M. Walters, MD, Natalie H. Vaughn, BS, James M. Isbell, MD, Susanne K. Jeffus, MD, Kristen A. Atkins, MD, Bryan G. Sauer, MD, and David R. Jones, MD

Departments of Surgery, Pathology, and Gastroenterology, University of Virginia, Charlottesville, Virginia

Esophageal leiomyoma is the most common benign esophageal neoplasm and often presents as an incidental finding or with nonspecific symptoms such as dysphagia.