Herniated pancreatic body within a paraesophageal hernia

Megan Coughlin, Medhat Fanous, Vic Velanovich

INTRODUCTION
A hiatal hernia can be classified as one of four types according to the position of the gastroesophageal (GE) junction and the extent of herniated stomach. Type I, or sliding hernias, account for up to 95% of all hiatal hernias and occur when the GE junction migrates into the posterior mediastinum through the hiatus. Types II–IV, paraesophageal hernias (PEH), together account for 5% of all hiatal hernias and occur when the GE junction migrates into the posterior mediastinum through the hiatus. Types II–IV, PEH, are characterized by displacement of the stomach and other organs into the chest.

CASE REPORT
The patient is a 61-year old female with a past medical history of gastroesophageal reflux disease, peptic ulcer disease, breast cancer, and hyperthyroidism, who was referred to our clinic for elective repair of a paraesophageal hernia. She had symptoms of chest pressure and discomfort associated with occasional dysphagia, especially to solid foods, and occasional heartburn and regurgitation. A computed tomography scan showed an almost completely intrathoracic stomach with the mid-body of the pancreas herniated up through the hiatus (Figure 1A and B). The mid-body of the pancreas herniated up through the hiatus (Figure 1A and B). The
patient otherwise had no signs of gastric volvulus. Aside from mild epigastric tenderness on abdominal examination, her physical examination was normal.

The patient was taken to the operating room for an elective paraesophageal hernia repair with Alloderm mesh and Nissen fundoplication. Upon exploration of the abdomen, a large paraesophageal hernia was found with the entire stomach rotated into the mediastinum in an organo-axial fashion. Posterior to the herniated stomach was the herniated pancreas (Figure 2). The hernia sac was dissected from the mediastinum and with this the stomach and pancreas were reduced into the abdomen and the hernia sac excised. The hiatal hernia was closed and the wrap performed.

The patient tolerated the procedure well. Her hospital course was uncomplicated. An esophagram on post-op day three was negative for leakage and the patient was put on a diet, which she tolerated. She was discharged home on post-op day four in good condition.

**DISCUSSION**

Type IV paraesophageal hernias are very rare, representing 5%-7% of all PEH\[^4\]. The most cost common organ to accompany the stomach into the chest is the colon, most often the splenic flexure. Other more common organs include loops of the small bowel and omentum. It is extraordinarily rare for the pancreas to herniate in paraesophageal hernias, there being only five reported cases in the English literature. Most cases included the body and tail of the pancreas, with one case of the head of the pancreas herniating into the thorax. The majority were symptomatic\[^5-7\]. Our case is unusual in that only the mid-body of the pancreas was herniated, not the tail and spleen.

It is controversial whether or not surgery is necessary for asymptomatic hiatal hernias, although it is agreed that surgery is the best choice for symptomatic PEH\[^8\]. In asymptomatic patients, the potential risk of incarceration and strangulation is used by some as an indication for surgery\[^9\]. Others claim that progression of symptoms is slow and seldom leads to emergency surgery, and therefore advocate a watchful approach for patients with large but asymptomatic PEH\[^10\]. There is debate as to whether a transthoracic, transabdominal, or laparoscopic approach is best, but the underlying surgical principles for successful repair include reduction of hernia contents, removal of the hernia sac, closure of the hiatal defect, and an antireflux procedure.

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