An Unusual Cause of Profound Weight Loss in a Middle-Aged Male: Case Report and Review

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Hernia through the foramen of Morgagni is the rarest form of diaphragmatic hernia. The herniating viscus in usually the transverse colon, but rarely stomach. Though clinical presentation depends on the obstruction and or ischemia of the viscus involved, weight loss is not a well described clinical feature of this condition. We present an interesting and unusual case of acute profound weight loss due to herniation of the stomach through the foramen of Morgagni in a male patient and review of the literature.

INTRODUCTION

First described in 1761 by Giovanni Morgagni, Professor of Anatomy, Padua, Italy (1) hernia through the foramen of Morgagni is an anteriorly placed hernia arising from a defect between the septum transversum and the costal attachments of the diaphragm. It is the rarest form of diaphragmatic hernia accounting for <1% of surgically treated diaphragmatic hernias.

Transverse colon is the most common herniating viscus in this condition while herniation of the stomach is rare (2). The clinical presentation is contingent upon the presence or absence of viscus obstruction or ischemia (1,8). We describe a case of acute profound weight loss due to herniation of the stomach through the foramen of Morgagni and review of the literature.

CASE PRESENTATION

A 41-year-old Hispanic male was referred to the Division of Gastroenterology at Lincoln Hospital New York, for evaluation of three weeks history of post prandial epigastric pain with non-projectile emesis. The epigastric pain occurred about five minutes after ingesting food; it was dull in character and non-radiating and was relieved by vomiting. He reported a weight loss of 34 pounds since the onset of his complaint. His bowel motion was unchanged at four times per week and there was no progressive increase in abdominal girth or dyspnea.

There was no history of coronary or peripheral atherosclerosis, no history of connective tissue disorder, no history of chronic remittent epigastric pain. He
had not undergone any surgical procedure; there were no symptoms of hyperthyroidism. HIV antibody and skin tuberculin tests were negative. His primary care physician treated with proton pump inhibitors with no symptom improvement.

Physical examination revealed an asthenic male not in distress. Vitals signs and anthropometric measurements were as follows: blood pressure 110/60 mm Hg, pulse rate 78 per minute and regular, respiratory rate 20 per min, height 5 feet 6 inches and weight 120 lbs.

Conjunctiva was pink, oral mucosa moist and skin turgor normal. There was no icterus or lymphadenopathy. Abdomen was scaphoid with no surgical scars, no visible peristaltic wave, no succussion splash, no bruit, no palpable mass, and bowel sounds were normal. Digital rectal exam revealed normal colored and well formed stool.

A non-contrast enhanced computerized tomography (CT) of the abdomen showed no abnormality. Esophagogastroduodenoscopy (EGD) was performed which showed an hour glass distortion of the stomach due to a mid-gastric corpus extrinsic compression with occlusion of more than 95% of the gastric lumen, and gastric folds converging to the point of constriction. No mass or mucosal ulceration was noted.

An upper gastro intestinal barium study was performed for further delineation of the anatomy which showed mid-gastric obstruction with gastroesophageal reflux (Figure 1).

He underwent an exploratory laparotomy and a diaphragmatic hernia of Morgagni containing the stomach which was constricted in the middle and also a loop of the transverse colon was found. The hernial sac contents were not spontaneously reducible due to fibrosis and scarring at the base of the hernia. Adhesions were lysed and the hernia contents reduced into the abdominal cavity with repair by suturing of the foramen of Morgagni. There was no associated Para esophageal hernia. The patient has recovered with complete resolution of his post prandial pain and emesis and has gained six pounds since surgery.

**DISCUSSION**

This case demonstrates the clinical course of a patient with incomplete gastric obstruction due to herniation through the foramen of Morgagni. Post-prandial epigastric pain with significant weight loss is typically due to chronic mesenteric ischemia, gastric ulcer and gastric malignancy (1). Herniation of the stomach through the foramen of Morgagni is not common (2) and it is not a well characterized cause of this clinical presentation. There have been <10 cases of gastric herniation described in the literature (2,5). Herniation of the stomach presents with symptoms suggestive of gastric volvulus and gastric outlet obstruction (2,5). However, our review indicates that this is the first instance of acute profound weight loss in a middle-aged person as the key feature of presentation. This may be due to lack of reporting.

About 90% of cases of hernia of the foramen of Morgagni occur on the right side of diaphragm, as the left side of the diaphragm is enhanced by the heart and pericardium. In adults, the pathology is seen more in females and individuals after age 50 years. Transverse colon is the most common viscus herniating through the foramen. Other intraabdominal structures described as herniating through the foramen include the greater omentum, liver (3,8–10). Obese patients
An Unusual Cause of Profound Weight Loss

A CASE TO REMEMBER

tend to have predominance of abdominal symptoms and non-obese patients have respiratory symptoms.

The diagnosis is usually suspected on thoraco-abdominal CT which shows an intraabdominal viscus with oral contrast in the anterior chest usually inside the right hemithorax (4,6–8). EGD is usually not helpful in diagnosis. In our case, CT was not useful; however EGD suggested extrinsic compression of the stomach with an hour glass deformity.

Once diagnosis is confirmed surgical correction is mandatory. Laparoscopic and open trans-abdominal or trans-thoracic repair have been described. Excision of the hernia sac is optional, leaving it behind is believed to reduce pleural and pericardial injury and prevent escape of CO₂ into the thorax (2,3,7,9). Direct interrupted or running suture repair can be used for small defects. Suturing with mesh prosthesis is the method of repair for large diaphragmatic defects.

CONCLUSION

Our case illustrates a very rare presentation related to hernia of Morgagni in a middle-aged individual. Clinicians must consider this potentially curable condition related to hernia of the foramen of Morgagni in the differential diagnosis of individuals with no risk factors for chronic mesenteric ischemia or acid peptic disorder, presenting with profound weight loss and upper gastrointestinal obstructive symptoms.

References