



# Gastric Volvulus Occurring with an Atraumatic Diaphragmatic Hernia

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## Clinical Image

An 80-year-old man with no past medical history presents to our hospital with a chief complaint of coffee ground emesis and epigastric pain with radiation to his left chest and back. Past surgical history includes an uncomplicated laparoscopic appendectomy 7 year prior to presentation. He denies any history of trauma. Physical exam reveals bowel sounds in the left chest on auscultation and mild tenderness to deep palpation in the epigastric region.

Computed Tomography (CT) of the chest and abdomen shows a diaphragmatic hernia with displacement of the stomach, left colon, pancreatic tail and spleen into the left hemithorax with gastric volvulus and diffuse pneumatosis (Figure 1 and 2). An incidental portal vein aneurysm was also noted. Surgery reveals a 7 mm posterior/lateral diaphragmatic hernia and extensive scar tissue

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**Figure 1:** Coronal plane Computed Tomography (CT) depicting diaphragmatic hernia. **Note:** Arrow depicts pyloric sphincter, 37 mm portal vein aneurysm in view



**Figure 2:** Sagittal plane Computed Tomography (CT) depicting diaphragmatic hernia. **Note:** Arrow depicts pyloric sphincter.

around the herniated organs indicating an acute chronic condition. Based on the evidence, including pathology reports, it was surmised that the patient had a chronic atraumatic diaphragmatic hernia that acutely evolved into gastric volvulus.

A diaphragmatic hernia is a protrusion of abdominal contents into the thoracic cavity. Although this defect is usually congenital and present at birth, it is possible to develop an Acquired Diaphragmatic Hernia (ADH). Approximately 80% of ADH cases are a result of blunt trauma to the thoracoabdominal region [1]. The second most common etiology of ADH is iatrogenic, usually a sequela of surgery [2]. Still yet, a smaller subset of patients develops ADH spontaneously. The location of the defect is most commonly at the esophageal hiatus or at other points of failure of diaphragmatic fusion during

the embryonic stage [3]. The patient likely developed ADH over the course of years, during which his visceral organs slowly herniated into his thorax. Given that he denied any trauma it's unclear what provoked his gastric volvulus.

## References

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