

## Giant Incarcerated Paraesophageal Hernia Involving the Stomach and Sigmoid Colon

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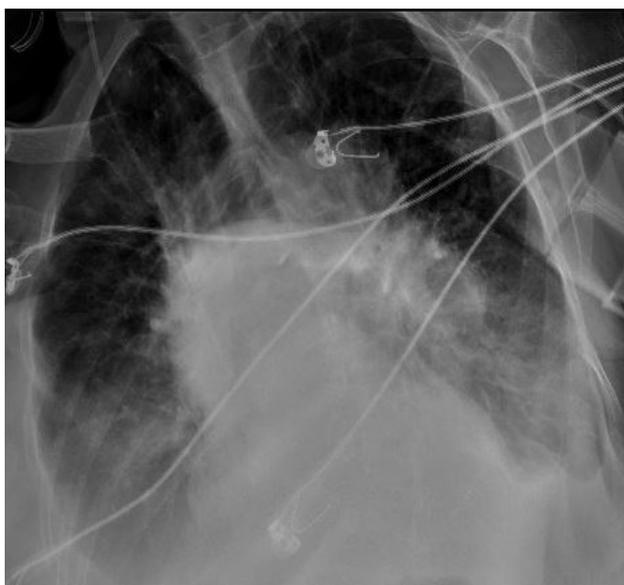
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Dear Editor,

Approximately 10%-15% of the general population have hiatal hernia (HH) (1). HHs are more common in older women and are classified into four types according to the herniated organ or structure (Table 1) (2). Type II-IV hernias are usually named as paraesophageal hernias (PHs) and represent 5%-15% of all HHs (3). Giant PH has no certain definition; however, herniation of >30%-50% of the stomach is often reported as giant hernia (4).

An 88-year-old woman presented to the emergency room with a 1-week history of nausea, vomiting, constipation, and minimal abdominal distension. She also suffered from dyspnea for several months. She had no history of abdominal or thoracic surgery. On physical examination, minimal epigastric tenderness, decreased lung sounds, and tympanic bowel sounds were detected. Chest X-ray showed large air-liquid shadows superior to the central diaphragm (Figure 1). Computed tomography demonstrated a giant PH containing dilated colon and the upper part of the stomach (Figure 2). Routine blood tests were normal except increased inflammatory markers including leukocyte count ( $12.2 \times 10^3/\mu\text{L}$ ) and C-reactive protein (52.5 mg/L). At laparotomy, the upper part of the stomach and sigmoid colon were herniated into the thorax through a 4-5-cm paraesophageal defect. The migrated structures were reduced into the abdomen. There was no necrosis in the organs, and primary repair of the defect was easily performed. The patient was discharged without complications on day 7. Written informed consent was obtained from patient who participated in this study.



**FIGURE 1.** Large air-liquid shadows belong to the stomach and colon, superior to the diaphragm



**FIGURE 2.** Computed tomographic image of dilated sigmoid colon and the upper part of the stomach herniated into the thorax through the paraesophageal defect

**TABLE I.** Classification of Hiatal Hernias (I)

Type	Definition
Type I (Sliding hernia)	Gastroesophageal junction is herniated through the hiatus Stomach is in its normal localization.
Type II (Rolling hernia)	Fundus is herniated through the hiatus
Type III	Combination of types I and II
Type IV	Herniation of organs or structures other than the stomach

Most patients with PH are asymptomatic or have mild symptoms. On the other hand, as in our case, approximately one-fifth of patients may present with findings of acute intestinal obstruction due to incarcerated organs, requiring emergency surgery. As a general rule, all symptomatic patients should also be surgically treated to prevent life-threatening complications including obstruction, strangulation, and perforation (1). However, poor health status can sometimes be a contraindication for surgery. Such patients can be conservatively treated, with nasogastric decompression and supportive therapy. Surgery can be performed via laparotomy or laparoscopy, and the application of synthetic material is recommended for hiatus defects of >5 cm (5). In summary, all clinicians should be aware of this dangerous condition, especially in older patients with abdominal complaints accompanying respiratory problems, and detailed physical and radiological examinations should be a part of the diagnostic workup. It should also be kept in mind that any delay in diagnosis is highly associated with life-threatening complications.

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**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

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