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A diagnostic twist: imaging of organoaxial gastric volvulus

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A diagnostic twist: imaging of organoaxial gastric volvulus

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Images in medicine

An 81-year-old female presented to the emergency department with no prior history of abdominal trauma, abdominal surgery, or known hiatal hernia. All personal identifiers have been removed to maintain patient confidentiality. She reported acute-onset severe epigastric pain and recurrent non-bilious vomiting for one day, accompanied by abdominal distension and inability to tolerate oral intake. Attempts at nasogastric tube insertion were unsuccessful. On examination, she was dehydrated, with upper abdominal tenderness and mild tympany.

Laboratory investigations were largely unremarkable except for mild leukocytosis. Contrast-enhanced computed tomography of the abdomen and lower chest demonstrated protrusion of the entire stomach along with the gastroesophageal junction through the diaphragmatic hiatus into the intrathoracic cavity. The stomach was twisted along its longitudinal axis, with the antrum and pylorus positioned superior to the gastroesophageal junction and the greater curvature located above the lesser curvature, consistent with organoaxial gastric volvulus. Sagittal images confirmed intrathoracic displacement of the stomach and proximal duodenum. There was no evidence of gastric ischemia, perforation, or pneumatosis. Differential considerations included paraesophageal hernia with gastric obstruction, pyloric obstruction secondary to peptic ulcer disease, and malignant gastric outlet obstruction. A diagnosis of organoaxial gastric volvulus was established. The patient was initially managed with intravenous fluid resuscitation, nasogastric decompression, and supportive care, followed by laparoscopic gastropexy. She showed rapid clinical improvement postoperatively and remained asymptomatic at the three-month follow-up, with normal oral intake and no recurrence.

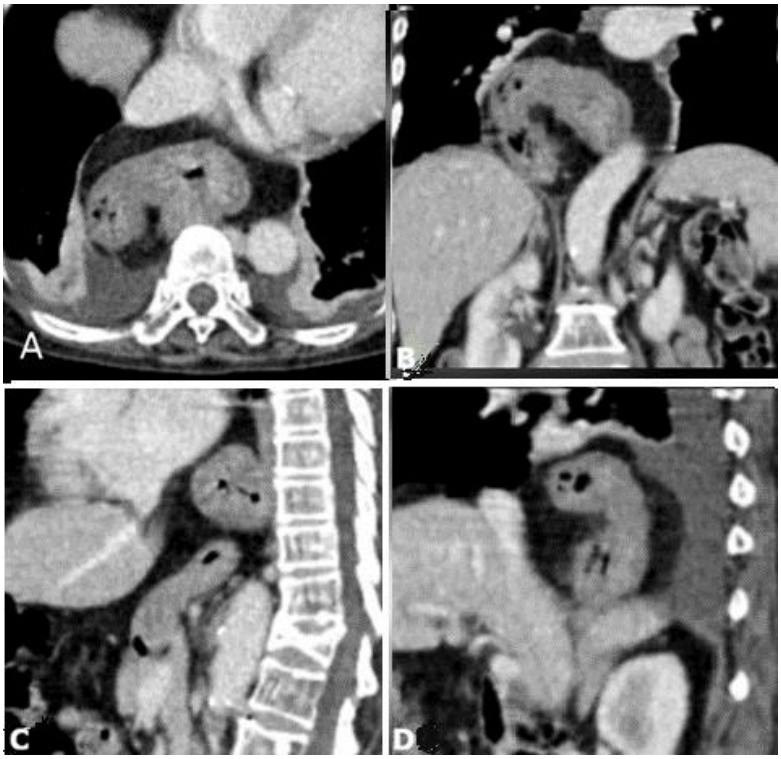


Figure 1: A, B) axial and coronal computed tomography (CT) images showing protrusion of the entire stomach and gastroesophageal junction through the hiatus of the diaphragm in the intrathoracic part of the chest with twisting along its longitudinal axis suggestive of organo-axial gastric volvulus; C, D) sagittal CT images depicting the stomach and the duodenum, and the stomach is in the intrathoracic part of the chest