Unfolding the stomach in the chest

A 72-year-old woman with obesity presented with recurrent episodes of emesis, mild abdominal pain, and intolerance to oral intake. Overall, she was in good clinical condition. Her vital signs were normal but physical examination revealed mild epigastric tenderness without peritoneal signs or ileus. Laboratory studies were unremarkable but chest X-rays showed distended mediastinum. Computed tomography of the chest and abdomen revealed herniation of nearly the entire stomach into the mediastinum, compatible with mesenteroaxial gastric volvulus (▶Fig. 1).

During upper gastrointestinal endoscopy, advancement of the endoscope along the greater curvature revealed displacement of the antrum and the pylorus superiorly, almost antidiagonally from the expected position (▶Fig. 2, ▶Video 1). Gastric mucosa was normal with no evidence of ischemia or necrosis. ▶Fig. 3 shows the proper position of the pylorus compared with that of the fundus following reduction of the volvulus with rightward withdrawal maneuver upon intubation of the duodenum. The patient became asymptomatic, started eating, and was discharged after 24 hours.

Gastric volvulus is a rare condition characterized by abnormal rotation of the stomach along its longitudinal (organoaxial) or transverse (mesentero-axial) axis. Acute gastric volvulus classically presents with the Borchardt’s triad consisting of severe epigastric pain, vomiting, and difficulty in passing a nasogastric tube. It is a surgical emergency, as there is a risk of gastric ischemia, which can result in necrosis and perforation with high mortality rates [1]. However, frequently not all signs are evident and early diagnosis can be difficult especially in elderly patients with multiple comorbidities. Clinicians should suspect gastric volvulus in elderly patient presenting with pain, vomiting, and a chest X-ray suggesting significant hiatus hernia [2]. If signs of gastric wall necrosis are not present, acute endoscopic detorsion may be considered. This is particularly relevant in frail patients with high operative risk. Otherwise, immediate surgical consultation should be obtained [3].

The authors

Konstantinos Miltiadou1, Alexandros Chatzidakis1, Lazaros-Dimitrios Lazaridis1, Nikolaos Oikonomopoulos2, Dimitrios Polymeros1, Ioannis S. Papanikolaou1, Konstantinos Triantafyllou1

1 Hepatogastroenterology Unit, Second Department of Internal Medicine-Propaedeutic and Research Institute, Medical School, National and Kapodistrian University of Athens, “Attikon” University General Hospital, Athens, Greece

2 2nd Radiology Department, Medical School, National and Kapodistrian University of Athens, “Attikon” University General Hospital, Athens, Greece

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▶Fig. 1 Computed tomography (CT) scans showing malrotation of the stomach compatible with a mesenteroaxial gastric volvulus. a Coronal CT scan. b Sagittal CT scan. C, corpus; F, fundus; H, heart; P, pancreas; Py, pylorus.

▶Fig. 2 Displacement of the antrum and the pylorus compatible with gastric volvulus.

▶Fig. 3 Proper position of the pylorus after reduction of the volvulus.

Competing interests

The authors declare that they have no conflict of interest.
Corresponding author

Alexandros Chatzidakis, MD
Hepatogastroenterology Unit, Second Department of Internal Medicine-Propaedeutic and Research Institute, “Attikon” University General Hospital, 1 Rimini Street, 12462 Athens, Greece
alexandroshatzidakis@gmail.com

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Video 1 Unfolding the stomach in the chest.

Bibliography

Endoscopy
DOI 10.1055/a-1327-1528
ISSN 0013-726X
published online 2021
© 2021. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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