

Laparoscopic repair of large paraoesophageal hernia with totally intrathoracic stomach

Johnny Martin O'Mahony,^{1,2} Simon Rajendran,¹ Micheal Murphy,³ Deirdre O'Hanlon¹

¹Department of General Surgery, South Infirmary Victoria University Hospital, Cork, Ireland

²Department of Plastic Surgery, St James's Hospital, Dublin, Ireland

³Department of Radiology, South Infirmary Victoria University Hospital, Cork, Ireland

Correspondence to

Dr Deirdre O'Hanlon,
deirdreohanlon@hotmail.com

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DESCRIPTION

A 55-year-old man presented with haematemesis on a background of 6 months of nausea, vomiting and 15 kg weight loss. He was clinically emaciated and dehydrated.

Chest X-ray demonstrated intrathoracic stomach with air–fluid levels within (figure 1A). Oesophagogastrosocopy was performed, which demonstrated a large hiatus hernia with no evidence of bleeding. Follow-up CT and barium meal confirmed herniation of the entire stomach into the posterior mediastinum with associated mesenteroaxial volvulus (figure 1B, C).

The patient underwent successful laparoscopic reduction of volvulus and repair of diaphragmatic hernia.

Gastric volvulus is defined as an acquired 180° rotation of the stomach creating a closed loop obstruction. It can present with gastric outlet obstruction, ischaemia and/or perforation.^{1 2} Borchardt's triad of epigastralgia, retching and inability to pass a nasogastric tube are classical symptoms. Gastric volvulus can be classified into three types based on the axis of rotation (figure 2A, B, C). Organoaxial is the most common type and occurs when the stomach rotates along its long

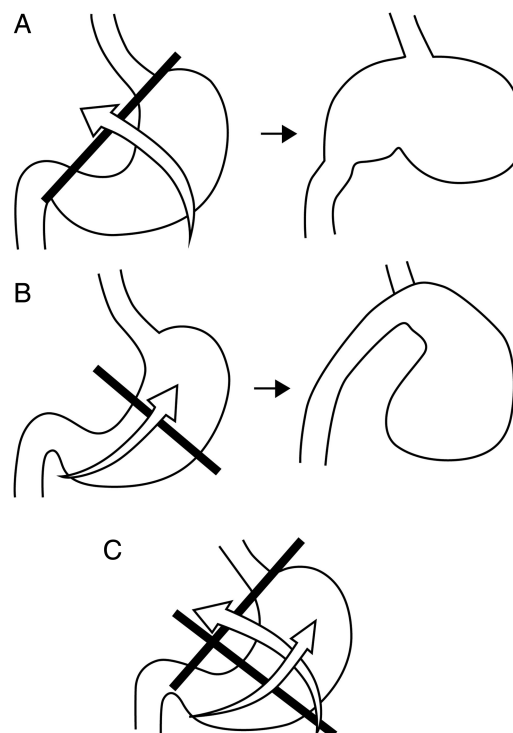


Figure 2 (A) Organoaxial volvulus (stomach rotates along its long axis). (B) Mesenteroaxial volvulus (the stomach rotates around the transgastric/short axis (a line connecting the middle of the lesser curvature with the middle of the greater curvature)). (C) Mixed volvulus.

Learning points

- ▶ Gastric volvulus is defined as an acquired 180° rotation of the stomach creating a closed loop obstruction.
- ▶ Gastric volvulus can be classified based on the axis of rotation into organoaxial, mesenteroaxial and mixed types.
- ▶ Stable patients with no evidence of perforation can be successfully managed laparoscopically.

axis. Predisposing factors are a diaphragmatic defect or paraoesophageal hernia. Mesenteroaxial occurs when the stomach rotates around the transverse axis. Risk factors include abnormalities to gastric anchoring structures, for example, a long gastrohepatic ligament. The third type combines features of both. Ischaemia is more likely in mesenteroaxial and mixed types. Upper gastrointestinal



Figure 1 (A) Erect chest X-ray demonstrating intrathoracic stomach with air–fluid levels. (B and C) Coronal CT image and barium meal demonstrating complete gastric herniation into posterior mediastinum with associated volvulus and outlet obstruction. Gastro-oesophageal junction and fundus of stomach (arrow) seen at the same level as the duodenal bulb (arrowhead).



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tract contrast studies and CT are the imaging modalities of choice. Stable patients with no evidence of perforation can be managed laparoscopically with repair of hernial defect,³ while unstable patients require urgent open intervention.

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Competing interests None.

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REFERENCES

- 1 Toydemir T, Cipe G, Karatepe O, *et al*. Laparoscopic management of totally intra-thoracic stomach with chronic volvulus. *World J Gastroenterol* 2013;19:5848–54.
- 2 Targarona EM, Grisales S, Uyanik O, *et al*. Long-term outcome and quality of life after laparoscopic treatment of large paraesophageal hernia. *World J Surg* 2013;37:1878–82.
- 3 Lew PS, Wong AS. Laparoscopic mesh repair of parahiatal hernia: a case report. *Asian J Endosc Surg* 2013;6:231–3.

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