Outside the scope of our practice: an unexpected thoracoscopy and pleurocentesis during gastroscopy

Fig. 1 Computed tomography (CT) scan showing the dilated, fluid-filled intrathoracic stomach and a left-sided pleural effusion.

A 56-year-old man described 2 weeks of regurgitation of ingested liquids, dyspnea, and chest pain. He had undergone laparoscopic esophagectomy with cervical anastomosis 1 year previously for esophageal adenocarcinoma; this had been complicated by a stricture at the esophagogastric anastomosis that required serial endoscopic dilations. Shortly after admission, a computed tomography (CT) scan demonstrated a dilated, fluid-filled intrathoracic stomach. There was obstruction to the passage of oral contrast at the level of the intrathoracic duodenum, and a left-sided pleural effusion was seen (● Fig. 1).

At gastroscopy, 1 L of fluid was aspirated from the intrathoracic stomach. There was an angulated deformity of the intrathoracic junction of the first and second part of the duodenum in association with a perforated ulcer on the posterior duodenal wall (● Fig. 2a). The gastroscope was inserted through this perforation and into the left pleural space, from which 2 L of turbid fluid were aspirated (● Fig. 2b). Fibrinopurulent exudate (● Fig. 2c) was seen on the surfaces of the lung and dia-

Fig. 2 Endoscopic views showing: **a** a perforated ulcer in the posterior wall of the intrathoracic first part of the duodenum; **b** turbid fluid in the pleural space; **c** fibrinopurulent exudate in the pleural space; **d** the left lung, diaphragm, and pleural space as visualized during the gastroscopy; **e** sterile saline lavage of the pleural space being performed.

Video 1

This video taken during gastroscopy begins with views of the left pleural space containing turbid fluid and fibrinopurulent exudate. At time 0:28, the gastroscope is withdrawn through the perforated duodenal ulcer back into the intrathoracic stomach, before being re-inserted into the pleural space at 1:00.

phragm (► **Fig. 2d**; ► **Video 1**). The pleural cavity was lavaged with sterile saline (► **Fig. 2e**). A percutaneous pleural drain and a nasogastric tube were then inserted. The perforation was closed at thoracotomy and a transdiaphragmatic omental patch was mobilized to cover the defect. The patient was discharged 2 weeks after admission.

Intrathoracic leakages are well described post-esophagectomy [1,2], as well as post-gastrectomy [3], usually due to breakdown of the anastomosis. In this unusual case, perforation occurred 1 year post-operatively through an ulcer in the intrathoracic duodenum, such that the pleural space was accessible with a gastroscop, which therefore enabled pleurocentesis and lavage to be performed. While therapeutic insertion of flexible endoscopes into the pleural space via percutaneous drainage tubes has been described [4], we report the first case in the literature where this has occurred via the upper gastrointestinal tract.

Endoscopy_UCTN_Code_CCL_1AB_2AG

Competing interests: None

Sern Wei Yeoh, Christopher Middleton

Department of Gastroenterology
and Hepatology, Royal Hobart Hospital,
Hobart, Tasmania, Australia

References

- 1 *Profilii S, Feo CF, Cossu ML et al.* Effective management of intrathoracic anastomotic leak with covered self-expandable metal stents. Report on three cases. *Emerg Radiol* 2008; 15: 57–60
- 2 *Alanezi K, Urschel J.* Mortality secondary to esophageal anastomotic leak. *Ann Thorac Cardiovasc Surg* 2008; 10: 71–75
- 3 *Yonggang L, Yuan S, Yun J et al.* Management of intrathoracic leakage after radical total gastrectomy. *J Thorac Dis* 2010; 2: 180–184
- 4 *Wang Z, Wang L, Jian H.* Electronic endoscope insertion into a thoracic drainage tube is a new technique in the treatment and diagnosis of pleural disease. *Surg Endosc* 2009; 23: 1671–1673

Bibliography

DOI <http://dx.doi.org/10.1055/s-0042-103927>
Endoscopy 2016; 48: E82–E83
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

Sern Wei Yeoh, MBBS
48 Liverpool Street
Hobart
Tasmania
Australia 7001
Fax: +61-3-62227809
syeh58@hotmail.com