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

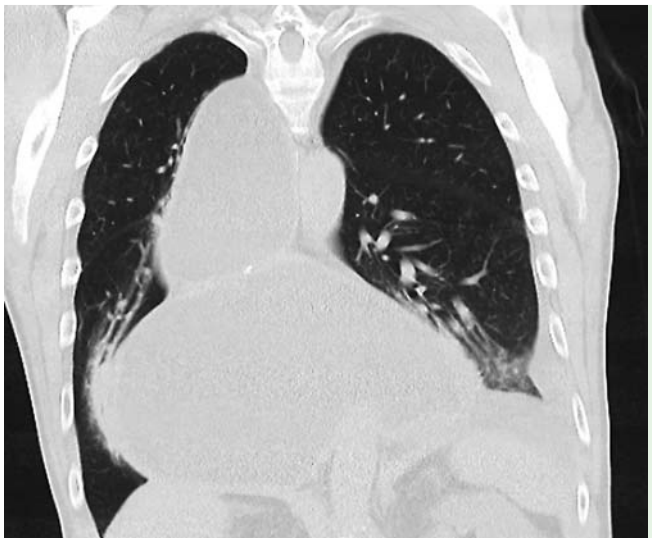


Fig. 1 Computed tomography (CT) scan showing the dilated, fluid-filled intrathoracic stomach and a left-sided pleural effusion.

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-

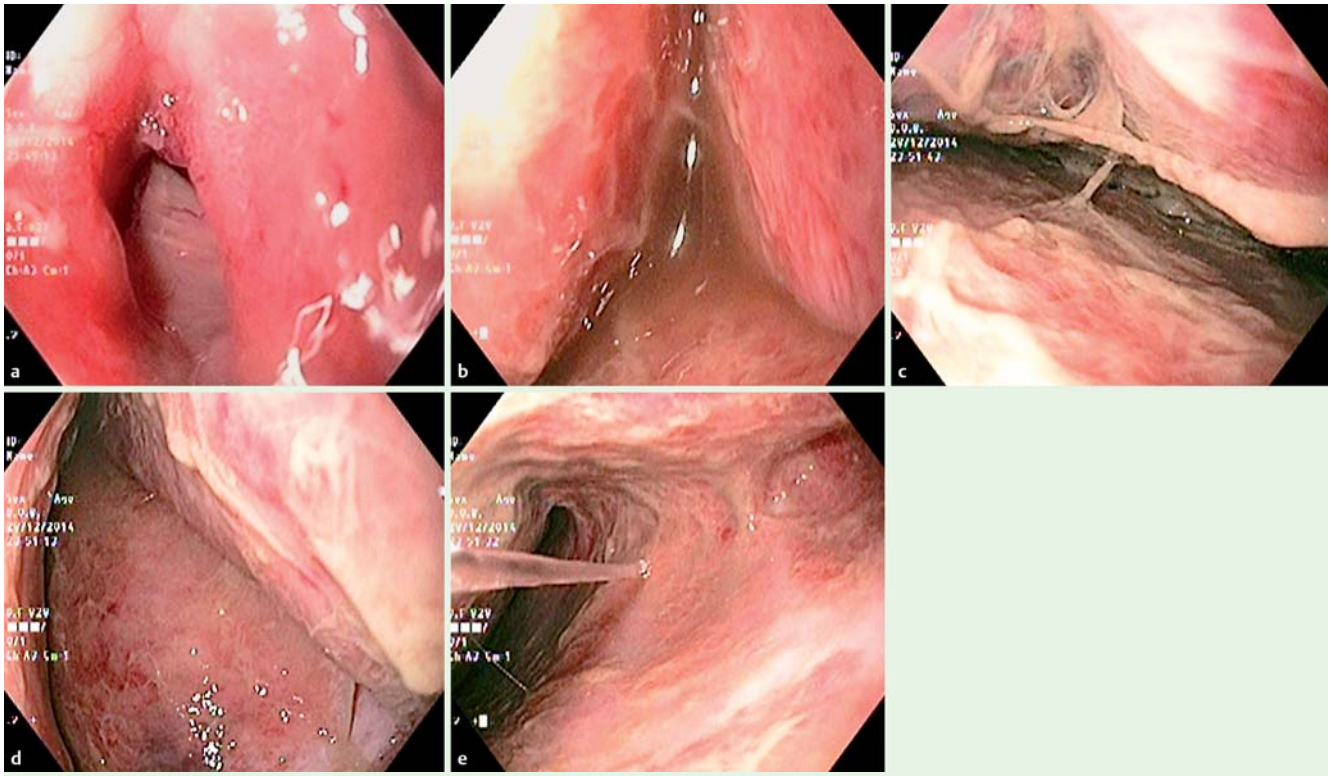
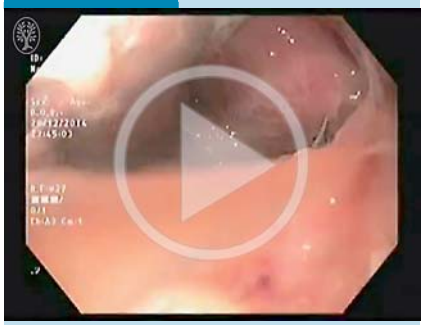


Fig. 2 Endoscopic views showing: **a** a perforated ulcer in the posterior wall of the intrathoracic first part of the duodenum; **b** turbid fluid in the pleural space; **c** fibrinopurulent exudate in the pleural space; **d** the left lung, diaphragm, and pleural space as visualized during the gastroscopy; **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. 2 d**; **Video 1**). The pleural cavity was lavaged with sterile saline (**Fig. 2 e**). 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 gastroscope, 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 *Profili 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

ISSN 0013-726X

Corresponding author
Sern Wei Yeoh, MBBS
48 Liverpool Street
Hobart
Tasmania
Australia 7001
Fax: +61-3-62227809
syeoh58@hotmail.com