Endoscopic closure of acute Boerhaave's syndrome with an over-the-scope clip

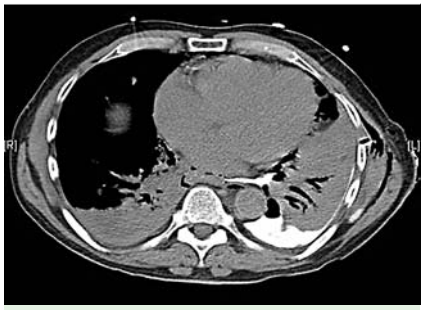

Fig. 1 Computed tomography scan showing contrast leak into the left pleural space from the esophagus.

Fig. 2 Endoscopic view of esophageal perforation with fistula at the 7 o'clock position (Day 3).

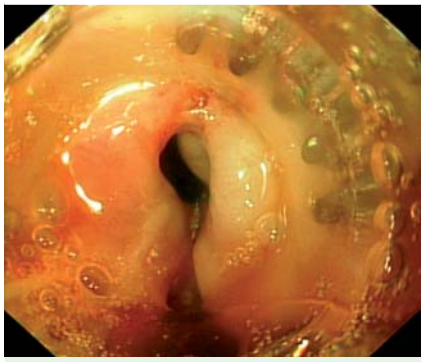

Fig. 3 Esophageal perforation seen through the loaded over-the-scope clip.

Fig. 4 Twin grasper retracting the edges of the perforation.

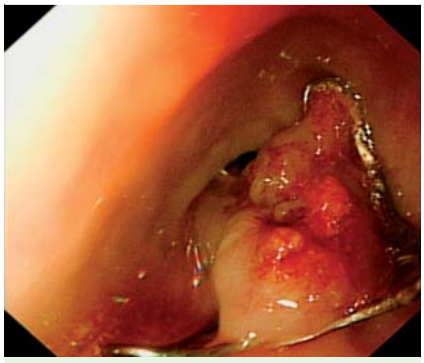

Fig. 5 Over-the-scope clip deployed, closing the perforation.

Fig. 6 Computed tomography scan following clip placement, confirming no esophageal leak.

A 63-year-old man attended the accident and emergency department with chest pain and breathlessness following an episode of severe vomiting after excess alcohol intake. Clinical examination and chest radiography confirmed a left-sided tension pneumothorax requiring an emergency thoracocentesis and chest drain placement. Computed tomography (CT) scan with intravenous contrast showed a left-sided pneumothorax and pneumomediastinum, which suggested the possibility of an esophageal rupture in the absence of external trauma. A CT scan with oral contrast performed subsequently, showed leakage of contrast from the lower esophagus into the left pleural space, consistent with lower esophageal leak due to Boerhaave's syndrome (**Fig. 1**).

After fluid resuscitation, administration of antibiotics, and stabilization in intensive care, the patient was started on total parenteral nutrition. An elective endoscopy was performed under conscious sedation using fentanyl and midazolam. Endoscopy confirmed a 1-cm tear at 40 cm from the incisors, confirming the site of esophageal perforation (**Fig. 2** and **Fig. 3**). An over-the-scope clip (Ovesco Endoscopy AG, Tübingen, Germany) was deployed after retracting the edges of the tear with a twin grasper forceps (**Fig. 4**). The perforation was closed successfully (**Fig. 5**). A nasojejunal feeding tube was placed endoscopically for enteral nutrition and total parenteral nutrition was discontinued. A repeat CT scan with oral contrast confirmed no further leak and an oral diet was started (**Fig. 6**). Multiple loculated pleural effusions were managed with chest drains. The patient was discharged on antibiotic and proton pump inhibitor therapy. He was asymptomatic on clinical follow-up at 3 months.

Acute esophageal perforation secondary to Boerhaave's syndrome with mediastinal complications has traditionally been managed surgically, with its associated morbidity [1,2]. Placement of covered metal or plastic stents is also widely practiced; however, this is associated with a significant need for re-intervention due to stent migration and persistent leaks [3–5]. Endoscopic closure of Boerhaave's syndrome with over-the-scope clips under conscious sedation is associated with significantly less morbidity, and facilitates early introduction of enteral nutrition and rapid recovery.

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Competing interests: None

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