Sequential endoscopic drainage and clip closure of an intrathoracic esophagogastric anastomotic dehiscence

Fig. 1 Endoscopic ultrasound (EUS) view of the hypoechoic lesion in the submucosa of the distal esophagus.

Fig. 2 Thoracic computed tomography (CT) scan showing a posterior mediastinal collection (arrow).

Fig. 3 Endoscopic views showing: **a** the esophagogastric anastomosis with an 8-mm long dehiscence; **b** two double-pigtail plastic stents passing through the fistula orifice to drain the mediastinal collection; **c** the application of argon plasma coagulation at the fistula orifice.

Fig. 4 Gastrografin swallow after placement of a metal clip confirming that the fistula orifice had been successfully closed.

A 69-year-old man underwent an upper gastrointestinal endoscopy, which revealed a large submucosal lesion in the distal esophagus with normal overlying mucosa. Endoscopic ultrasound (EUS) showed a hypoechoic lesion measuring 80×40×30 mm in the submucosa (● Fig. 1). A subtotal esophagectomy was performed. Histopathological examination of the resected tissue revealed a duplication cyst.

The patient developed sepsis 3 weeks after surgery. A computed tomography (CT) scan revealed evidence of dehiscence of the esophagogastric anastomosis with a large mediastinal collection (● Fig. 2). Upper gastrointestinal endoscopy confirmed the presence of a dehiscence affecting an 8-mm section of the esophagogastric anastomosis (● Fig. 3a). Pus was aspirated through the fistula orifice and two double-pigtail plastic stents were placed endoscopically to drain the abscess

(● Fig. 3b). There was rapid improvement in the patient's clinical condition.

After 1 week, the stents were removed and an over-the-scope clip (OTSC) was applied to close the fistula. Unfortunately, despite this, a Gastrografin swallow revealed persistence of the fistula.

A third upper gastrointestinal endoscopy was performed and after removing the OTSC, we applied argon plasma coagulation (APC) and three through-the-scope clips, which effectively sealed the fistula (● Fig. 3c). Resolution of the mediastinal abscess as well as the fistula was confirmed on a further thoracic CT scan and Gastrografin swallow (● Fig. 4).

This case highlights the potentially useful role of endoscopic drainage and clipping devices in the management of a rare but serious adverse event of esophageal surgery.

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**Samuel Costa¹, Carlos Ferreira¹,
Rui Esteves², Patrícia Lages²,
Paulo Costa², Luis Ribeiro¹, José Velosa¹**

¹ Department of Gastroenterology and
Hepatology, Hospital de Santa Maria,
Lisbon, Portugal

² Department of Surgery 1, Hospital de
Santa Maria, Lisbon, Portugal

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Corresponding author

Samuel Costa, MD
Hospital de Santa Maria
Avenida Professor Egas Moniz
1649-035 Lisboa
Portugal
samuelpcosta@hotmail.com