



Fully covered self-expandable metallic stent as treatment of a large postsurgery mediastinal cavity fistulized to the trachea and esophagus

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A 61-year-old man with esophageal squamous cell carcinoma underwent a scheduled partial esophagectomy, gastric pull-up, and esophagogastric cervical anastomosis. Two weeks after surgery he experienced dysphagia with solid food and recurrent pneumonia. CT identified a 50-mm × 34-mm × 120-mm air-containing intramediastinal cavity (Fig. 1).

In this scenario, emergency fibrobronchoscopy and gastroscopy were performed to evaluate a probable post-surgery leak (Video 1, available online at www.VideoGIE.org). In the bronchoscopy, a fistula was observed adjacent to the carina (Fig. 2), through which the cavity was accessed. In the gastroscopy, an esophageal anastomotic stricture was diagnosed. After balloon dilation with a 15-mm CRE balloon (Boston Scientific, Marlborough, Mass, USA), a 5.9-mm caliber gastro-scope (Olympus Medical, Tokyo, Japan) was inserted, which revealed an esophagogastric fistula (Fig. 3) that gave access to the mediastinal cavity. While exploring it we identified the tracheal fistula giving access to the respiratory tract. As treatment, a 20-mm × 100-mm fully covered self-expandable metal stent (FCSEMS) (Hanarostent; M.I. Tech, Seoul, Korea) was placed over the esophageal fistula and the anastomotic stricture, ensuring its correct fixation with intrastent balloon dilation and clips.

Subsequently, the patient experienced resolution of the pneumonia and adequate tolerance of a bland diet. He was discharged 2 weeks after stent placement.

Four weeks later, an endoscopic re-evaluation showed resolution of the anastomotic stricture. After stent removal, the esophageal mucosa was thoroughly examined, and no sign of the esophageal fistula was seen. Additionally, fibrobronchoscopy showed the tracheal fistula to be closed as well, with no bubbling after saline solution infusion. Finally, CT showed the mediastinal cavity to be collapsed, with a markedly decreased size. During follow-up, no more episodes of pneumonia occurred, although a second stent was placed because of stricture recurrence.

Although less technically complex than intrathoracic anastomosis, cervical anastomosis has a higher rate of secondary esophageal fistula.¹ Esophageal fistula is a potentially life-threatening surgical adverse event,² mainly resulting from severe mediastinal infection. In our case, a complex situation was faced: a large mediastinal cavity with 2 independent fistulas. By placing an FCSEMS, the esophageal fistula was sealed, achieving collapse of the cavity and closure of the tracheal fistula.



Figure 1. CT view in coronal plane showing an air-containing intramediastinal cavity (red line) next to the gastric plasty (green line).

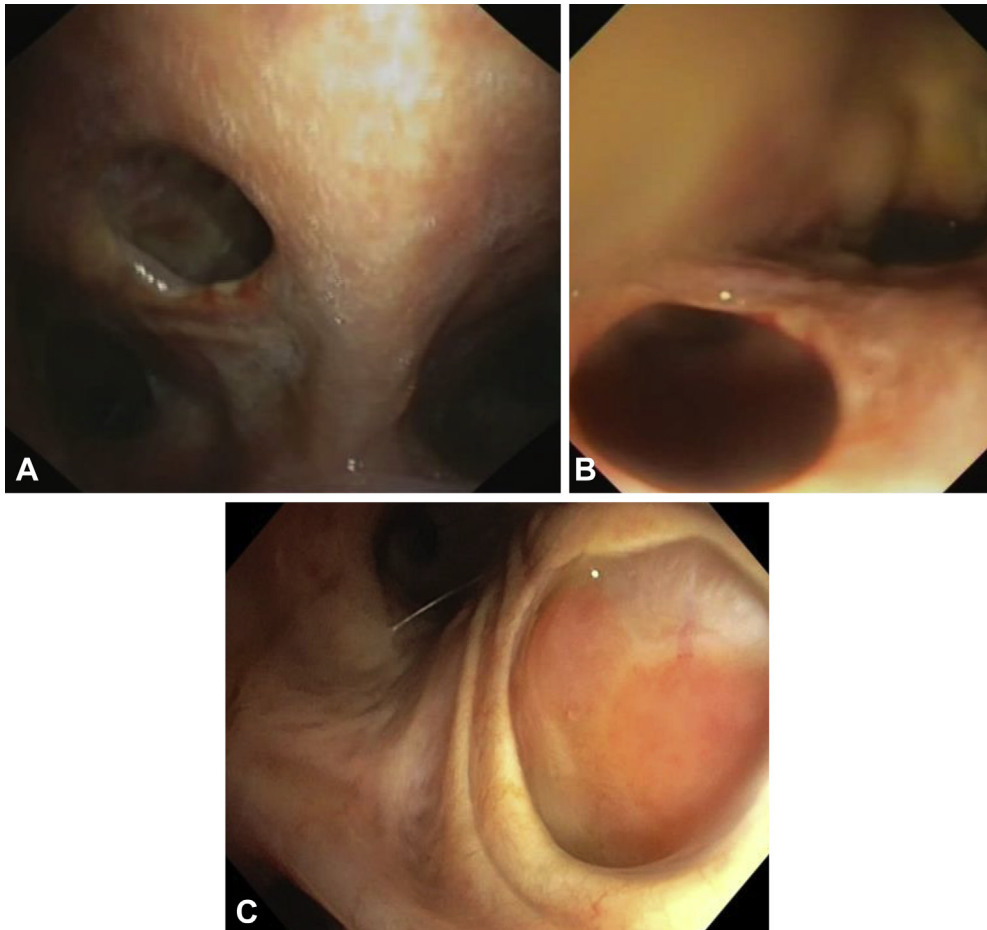


Figure 2. **A**, Bronchoscopic view of tracheal fistula adjacent to the carina. **B**, Tracheal fistula identified from the cavity, which was accessed by a pediatric gastroscop through the esophageal fistula. **C**, Bronchoscopic view of tracheal fistula closed.

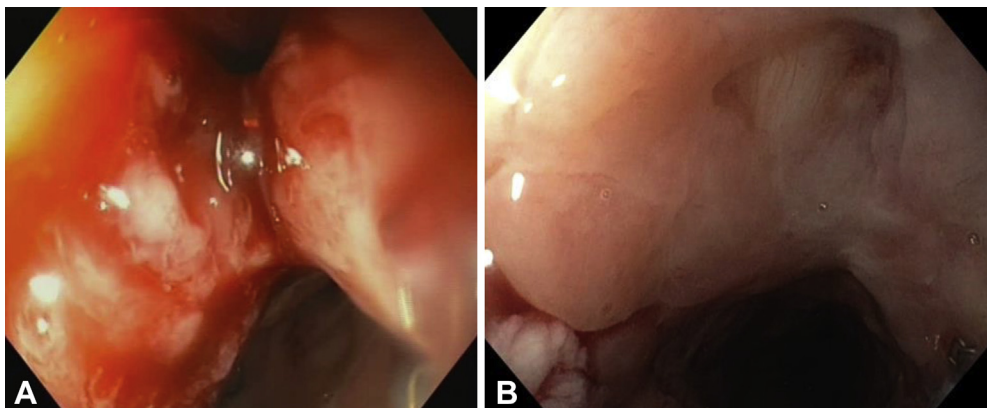


Figure 3. **A**, Esophageal fistula. **B**, Esophageal fistula closed.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: FCSEMS, fully covered self-expandable metal stent.

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