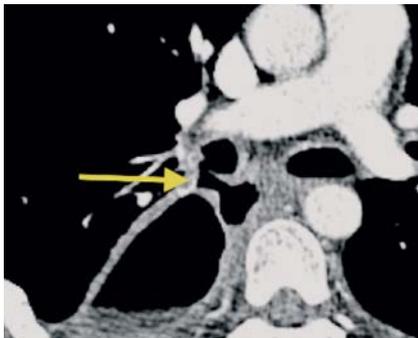


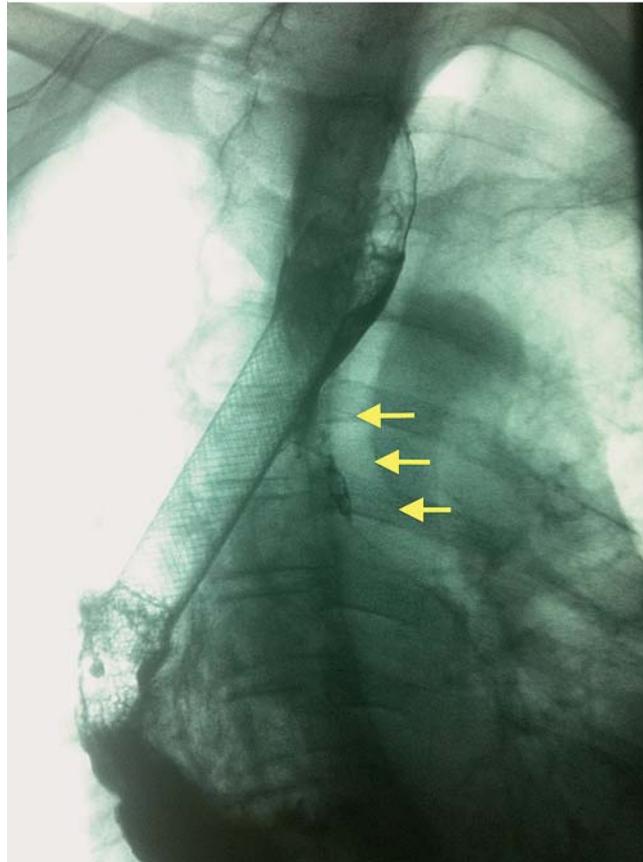
## Esophagobronchial fistula closed by a cardiac septal occluder device



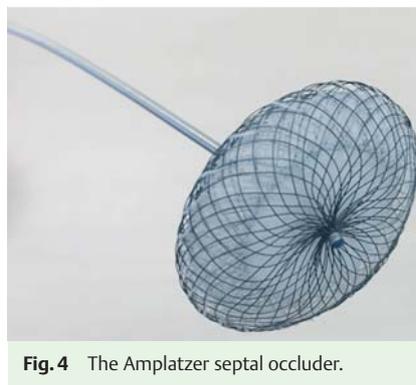
**Fig. 1** Esophageal view of the fistulous orifice.



**Fig. 2** Computed tomography (CT) scan image showing the fistula between the left bronchus and esophagus.

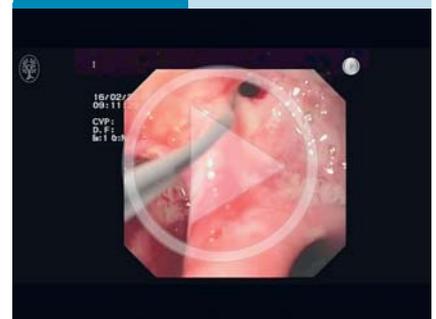


**Fig. 3** Radiographic image showing a covered self-expandable metal stent (SEMS) in position, which proved to be an unsuccessful treatment.



**Fig. 4** The Amplatzer septal occluder.

### Video 1



Closure of an esophagobronchial fistula using an Amplatzer septal occluder device.

Esophageal–respiratory tract fistulas are rare but life-threatening conditions [1]. They may be congenital or secondary to esophageal and bronchogenic neoplasms, radiotherapy, or surgery. Currently, there is a changing paradigm for their management with surgery being replaced by conservative approaches including endoscopic therapy [2]. In fact, fully covered self-expandable metal stents (SEMSs) are currently the preferred therapeutic option; however, their clinical success rate is still poor and the rate of fistula reopening remains high [1,2]. This has led to the appearance of therapeutic alternatives, such as the use of cardiac septal closure devices and others [3–5].

We present the case of a 51-year-old man who had undergone prior chemoradiotherapy and esophagectomy for esophageal cancer. During follow-up, the patient developed mediastinal and brain metastases, as well as a severe cough and respiratory infections due to an esophagobron-

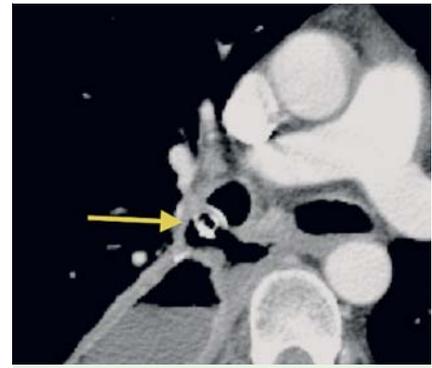
chial fistula (Fig. 1 and Fig. 2). It was decided not to perform surgery but conventional endoscopic approaches were unsuccessful (Fig. 3). We therefore decided to use the Amplatzer septal occluder (St. Jude Medical, Plymouth, Minnesota, USA), a nitinol device commonly used to close cardiac septal defects (Fig. 4).

An upper gastrointestinal endoscopy was performed, which showed a 5-mm fistu-

lous orifice located at the esophagogastric anastomosis. From the esophageal side, a guidewire was inserted through the fistula into the airway and then captured with a forceps to take it back out of the patient, in order to facilitate device positioning (Video 1). A 5-Fr catheter was then introduced and subsequently the occluder was released, firstly on the airway side and then on the esophageal side under



**Fig. 5** Views of the occluder device following insertion into the fistula: **a** from the esophagus; **b** from the bronchus.



**Fig. 6** Computed tomography (CT) scan image showing the correctly positioned occluder device.

endoscopic control (● Fig. 5 and ● Fig. 6). The procedure was safely completed. The patient experienced a significant improvement in his respiratory symptoms. A second occluder was inserted 4 weeks later because of the development of a new fistula and remained in place until his death 9 months later from progressive brain metastases.

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**Competing interests:** None

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