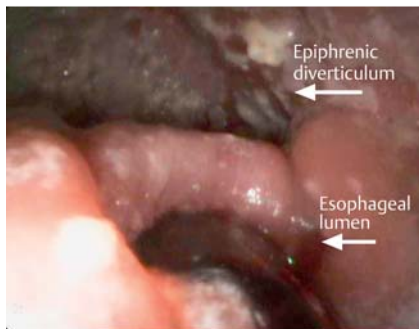


## Endoscopic treatment of an epiphrenic diverticulum using a fully covered self-expanding metal stent



**Fig. 1** Endoscopic view of the 5-cm epiphrenic diverticulum in a frail 87-year-old woman.

Pulsion diverticula develop over the distal 10cm of the esophageal body and generally project from the right side [1]. Disabling dysphagia and regurgitation are the most common symptoms; recurrent pulmonary complications from aspiration occur in up to 45% of affected patients [2]. An underlying motility disorder is demonstrated in 81% of the patients [3]. Surgical therapy is mandatory when symptoms are incapacitating or if life-threatening respiratory complications occur. The ideal operation includes diverticulectomy, myotomy, and fundoplication through a laparoscopic or thoracoscopic approach.

Although the long-term results of such an operation are satisfactory, esophageal leaks can occur and may cause mortality [1]. Pneumatic dilation of the cardia has been the only viable option in high-risk patients, but this procedure may result in perforation and the overall clinical results have been disappointing [4].

An 87-year-old woman with a history of cardiac arrhythmia and previous implantation of a pacemaker was admitted to our department with a 5-cm epiphrenic diverticulum (● Fig. 1). She had a 5-year history of worsening dysphagia for solid food, regurgitation, and more than 10% weight loss. Multiple previous endoscopic dilations had been unsuccessful. Her American Society of Anesthesiologists (ASA) score was 3, and both the patient and her family refused consent for a laparoscopic resection of the diverticulum.

A fully covered 12-cm self-expanding metal stent (Hanarostent, M.I. Tech Co. Ltd, Seoul, Korea) was deployed across the cardia with the proximal cup at the distal margin of the neck of the diverticulum to allow for more direct emptying of the esophagus and the pouch. A chest radiograph confirmed the correct positioning of the stent (● Fig. 2). The patient

was discharged home on the second postoperative day with prescription of a proton pump inhibitor (PPI) twice daily. Over a follow-up period of 6 months, her dysphagia score improved from 3 (able to swallow liquids only) to 1 (able to swallow some solid food) [5]. A 3-kg weight gain was also noted.

To our knowledge this is the first reported case of an epiphrenic diverticulum being successfully managed with an esophageal stent in an elderly patient who was unfit for surgery.

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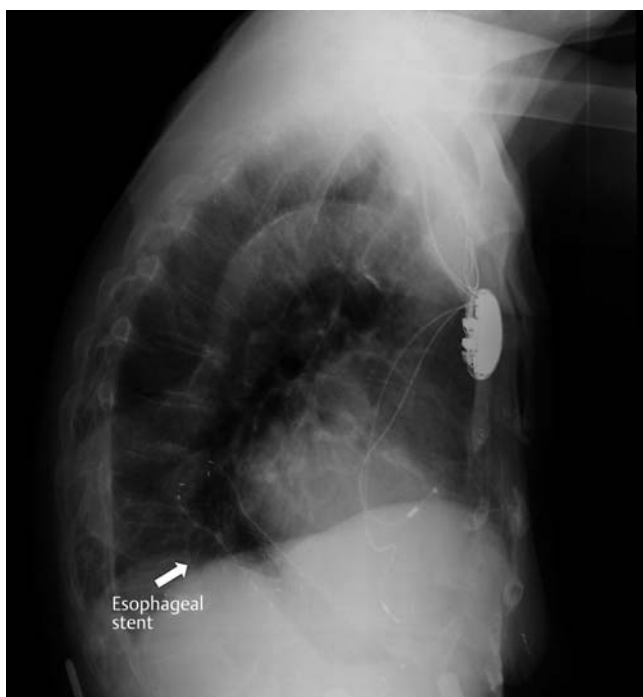
**Competing interests:** None

**A. Aiolfi, D. Bona, L. Bonavina**

Division of General Surgery, Department of Biomedical Sciences for Health, University of Milan, IRCCS Policlinico San Donato, Milan, Italy

### References

- 1 Bonavina L. Surgical management of esophageal diverticula. In: Yeo C, Matthews JB, McFadden D et al., eds. Shackelford's Surgery of the Alimentary Tract. 7th. edn.; Philadelphia: Elsevier; 2012: volume 1; 362–374
- 2 Altorki N, Sunagawa M, Skinner DB. Thoracic esophageal diverticula: why is an operation necessary? *J Thorac Cardiovasc Surg* 1993; 105: 260–264
- 3 Tedesco P, Fisichella PM, Way LW et al. Cause and treatment of epiphrenic diverticula. *Am J Surg* 2005; 190: 891–894
- 4 Peracchia A, Bonavina L, Rosati R, Bona S. Thoracoscopic resection of epiphrenic esophageal diverticula. In: Peters J, DeMeester TR, eds. Minimally Invasive Surgery of the Foregut. St. Louis: QMP Inc; 1994: 110–116
- 5 Bona D, Laface L, Bonavina L et al. Covered nitinol stents for the treatment of esophageal strictures and leaks. *World J Gastroenterol* 2010; 16: 2260–2264



**Fig. 2** The lateral chest radiograph showing correct placement of the 12-cm fully covered self-expanding metal stent.

### Bibliography

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### Corresponding author

**L. Bonavina**  
 Policlinico San Donato  
 via Morandi 30  
 20097 San Donato Milanese (Milano)  
 Italy  
 Fax: +39-02-52774622  
 luigi.bonavina@unimi.it