



Use of multiple covered metal esophageal stents for treatment of Boerhaave syndrome in achalasia

Theodore W. James, MD, MSc, Bryan B. Brimhall, MD, Todd H. Baron, MD

A 93-year-old woman with known achalasia and remote Heller myotomy presented with chest pain after an episode of emesis. CT showed a dilated esophagus with pneumomediastinum. Upper endoscopy confirmed a large perforation 30 cm from the incisors.

A 23-mm × 12.5-cm fully covered metal stent was placed. An esophagram demonstrated extravasation of contrast material around the stent (Fig. 1). Upon transfer, repeated upper endoscopy showed a large transmural esophageal tear and extraluminal cavity (Fig. 2). The preexisting esophageal stent was removed, and an attempt was made to close the opening to the cavity with an over-the-scope clip and multiple through-the-scope clips.

An esophagram after clip placement demonstrated continued extravasation of contrast material. A new approach was thought to be warranted (Video 1, available online at www.VideoGIE.org). Two 7F × 15-cm double-pigtail plastic stents were placed into the cavity with their distal ends extending into the stomach. Two side-by-side 23-mm × 15.5-cm partially covered metal stents

were placed, but space remained between the stents and esophageal wall; therefore, a third 18-mm × 15.3-cm partially covered stent was placed alongside the first 2 stents (Fig. 3).

Injection of contrast material under fluoroscopy showed no extravasation (Fig. 4). A clear liquid diet was initiated. Because of the patient's multiple comorbidities, she was

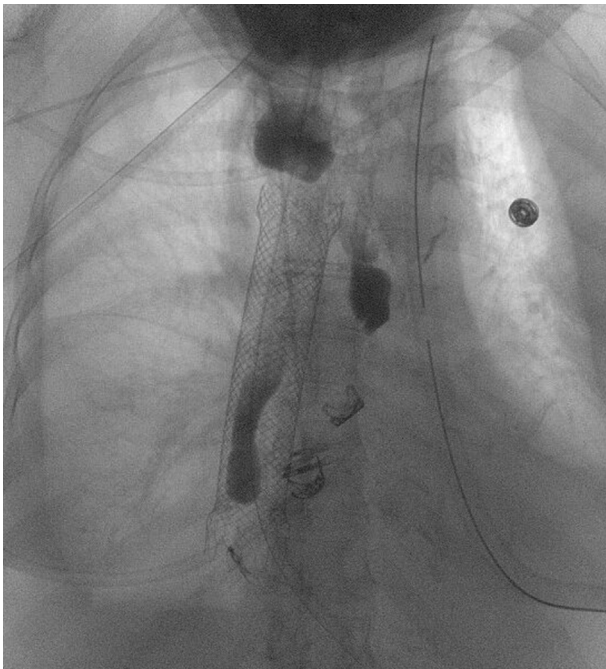


Figure 1. Esophagram with water-soluble contrast material demonstrating a single esophageal stent with incomplete coverage of a large esophageal perforation leading to contrast extravasation.

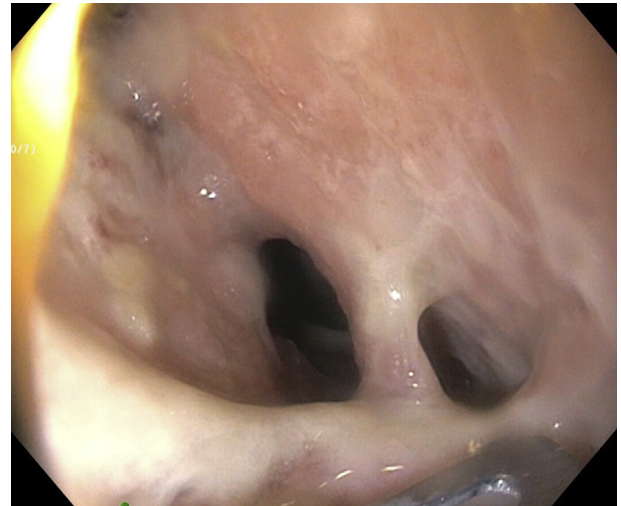


Figure 2. Endoscopic view of transmural esophageal tear and extraluminal cavity.



Figure 3. Endoscopic view of side-by-side esophageal stents used to close the mural defect.

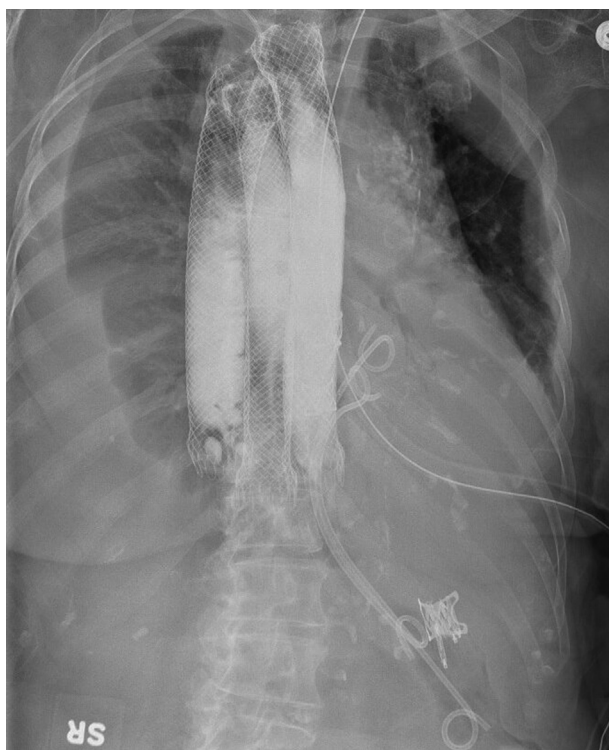


Figure 4. Repeated esophagram with water-soluble contrast material demonstrating 3 esophageal stents in tandem with complete coverage of the mural defect. Two double-pigtail stents are seen draining the extraluminal cavity into the stomach.

transitioned to hospice care and she died 4 weeks after the procedure. Boerhaave syndrome has a high mortality rate from mediastinal infection and sepsis; management in achalasia is challenging because of the dilated esophagus. The use of multiple stents in this case allowed for closure of the defect.

DISCLOSURE

Dr Baron is a consultant for Medtronic and a consultant and speaker for Olympus America, Boston Scientific, W.L. Gore, and Cook Endoscopy. Dr James receives research and training support, in part, by a grant from the National Institutes of Health (T32 DK007634). Dr Brimball disclosed no financial relationships relevant to this publication.

Division of Gastroenterology and Hepatology, University of North Carolina, Chapel Hill, North Carolina, USA.

If you would like to chat with an author of this article, you may contact Dr Baron at todd_baron@med.unc.edu.

Copyright © 2019 American Society for Gastrointestinal Endoscopy. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.vgie.2019.07.018>
