Endoscopic retrieval of a buried lumen-apposing metal stent through an indwelling lumen-apposing metal stent

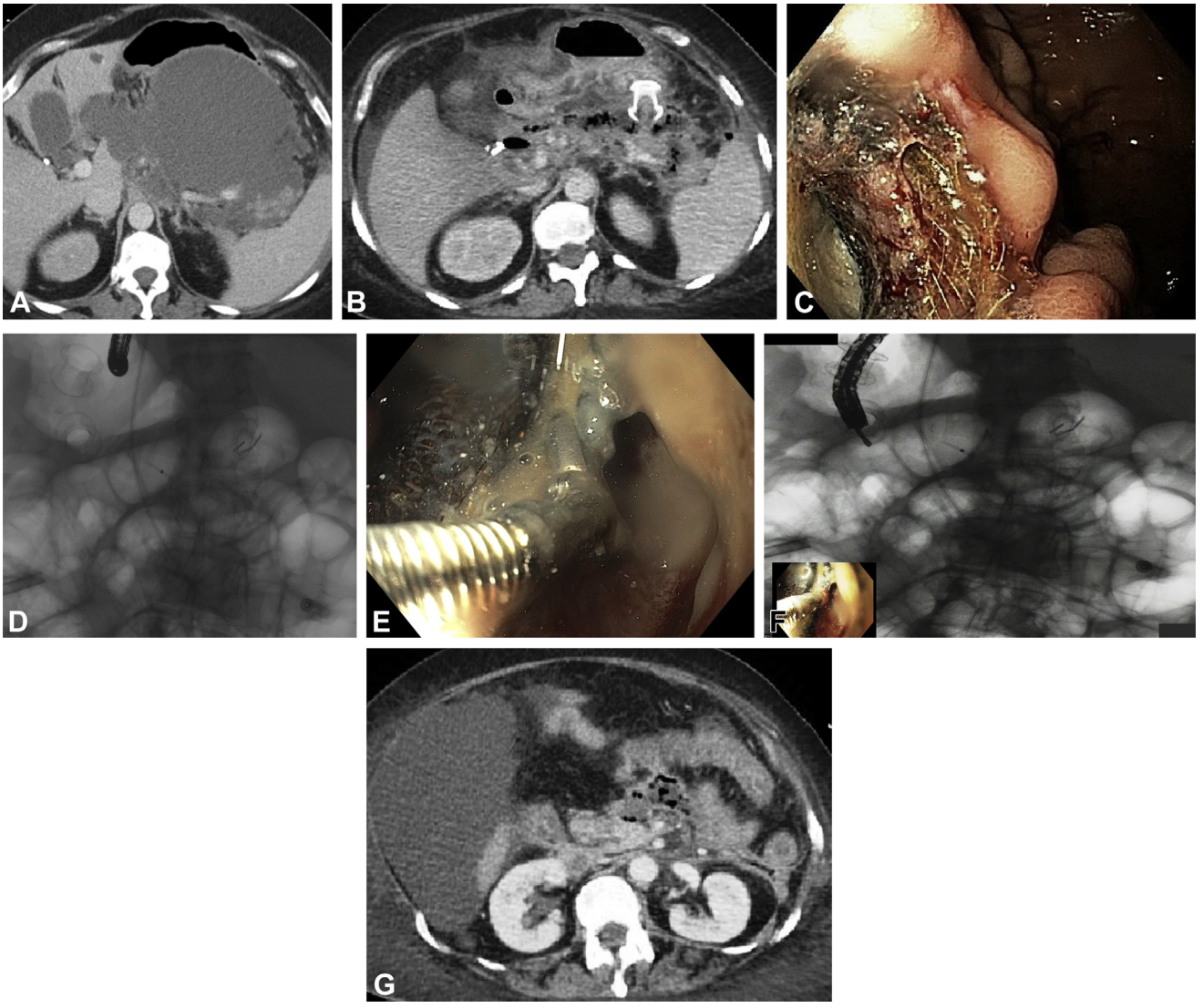

Figure 1. A, Axial plane of CT view of abdomen and pelvis with intravenous contrast medium showing an 11-cm × 13-cm walled-off necrosis (WON) compressing the posterior wall of the stomach. **B,** Axial plane of CT view of abdomen and pelvis with intravenous contrast medium showing 1 of 2 cystgastrostomy lumen-apposing metal stents (LAMSs). The image was obtained 6 weeks after placement of the second cystgastrostomy LAMS, and interim improvement in the size of the WON is seen: 1 cm × 8 cm. **C,** Endoscopic visualization of the gastric flange of the second (indwelling) cystgastrostomy LAMS. In the background, healed gastric mucosa is seen at the previous site of the initial cystgastrostomy LAMS. **D,** Fluoroscopic visualization of the 2 LAMSs. The inferiorly located LAMS is buried in the WON. **E,** Endoscopic visualization of a rat-tooth forceps deployed toward the buried LAMS from within the WON. Endoscopic access to the buried LAMS was achieved by way of the indwelling cystgastrostomy LAMS. **F,** Fluoroscopic imaging of a 29F therapeutic endoscope grasping the buried LAMS from within the WON. The endoscope is seen traversing the indwelling cystgastrostomy LAMS. **G,** Axial plane of CT view of abdomen and pelvis with intravenous contrast medium obtained 4 weeks after retrieval of the buried LAMS and removal of the indwelling LAMS. Significant size reduction of the WON is seen: 1 cm × 3 cm. *WON*, walled-off necrosis; *LAMS*, lumen-apposing metal stent.

Written transcript of the video audio is available online at www.VideoGIE.org.

A 43-year-old woman presented with worsening epigastric abdominal pain and postprandial nausea and vomiting, occurring 1 month after hospitalization for post-ERCP necrotizing pancreatitis. CT of the abdomen revealed an 11-cm × 13-cm walled-off necrosis (WON) compressing the posterior wall of the stomach (Fig. 1A). An EUS-guided cystgastrostomy was created by use of an electrocautery-enhanced 15-mm × 10-mm lumen-apposing metal stent (LAMS) (Hot Axios stent and delivery system; Boston Scientific Corp, Marlborough, Mass). Abdominal pain, nausea, and vomiting improved after EUS-guided transgastric drainage of the WON, and the patient was discharged.

The patient was readmitted for management of sepsis resulting from infected WON 4, 5, and 9 weeks after the index drainage procedure. Endoscopic intervention was performed at each encounter, including recanalization of the LAMS, direct endoscopic necrosectomy, and lavage with 1.5% hydrogen peroxide. Antimicrobial agents were administered throughout this period. At repeated CT of the abdomen at week 9, the WON measured 10 cm × 8 cm. Because of ongoing infection and inadequate size reduction of the WON, a second EUS-guided cystgastrostomy was created with an electrocautery-enhanced LAMS (15 mm × 10 mm). Six weeks after the second EUS-guided transgastric drainage procedure, the size of the WON significantly improved (Fig. 1B). Removal of the 2 LAMSs was planned to decrease the risk of adverse events associated with long-term indwelling metal stents (Video 1, available online at www.VideoGIE.org).

A 29F therapeutic endoscope (GIF-H180; Olympus America, Center Valley, Pa) was inserted and advanced to the stomach. Inspection of the gastric wall revealed the gastric flange of the newest cystgastrostomy LAMS (Fig. 1C). The gastric mucosa was completely healed at the site of the first cystgastrostomy. Fluoroscopy showed the missing LAMS buried within the WON (Fig. 1D). Under endoscopic and fluoroscopic visualization, the endoscope was advanced through the indwelling LAMS and into the WON. The internally migrated LAMS was localized and retrieved under endoscopic and fluoroscopic guidance (Figs. 1E and F). The indwelling LAMS was removed from the gastric wall with a rat-tooth grasping forceps. The cystgastrostomy site closed without the need for endoscopic suturing. No procedural adverse events occurred. Four weeks later, CT of the abdomen demonstrated nearly complete resolution of the WON (Fig. 1G).

DISCLOSURE

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Matthew R. Krafft, MD, *Section of Digestive Diseases,* **Sardar Momin Shah-Khan, MD,** *Department of Medicine,* **William Hsueh, MD, John Nasr, MD,** *Section of Digestive Diseases, West Virginia University, Morgantown, West Virginia, USA*

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