



Reusing an electrocautery-enhanced stent deployment catheter to place additional pigtail stents for walled-off necrosis with disconnected duct

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The development of an electrocautery-enhanced delivery system for lumen-apposing metal stents (Axios; Boston Scientific, Natick, Mass, USA) has simplified creation of a cystgastrostomy tract for the management of pancreatic walled-off necrosis. These larger-caliber transgastric metal stents are beneficial in terms of allowing for digestion and lavage of necrotic debris and to permit direct endoscopic necrosectomy.^{1,2} When disruption of the pancreatic duct is suspected, there remains a question of how to best manage the collection because there is a risk of recurrence of the collection, as well as highly morbid percutaneous fistulization if percutaneous drainage is attempted.³ Transpapillary pancreatic duct stent placement has been reported to result in resolution of a disrupted pancreatic duct in up to 58% of cases, which leaves something to be desired.⁴ As an alternative approach, creation of a second transduodenal drainage gateway may be helpful

because this potentially leads to long-term cyst-duodenal fistulization given the thinner, less muscular wall of the duodenum as compared with the stomach, and it may therefore prevent recurrence of the collection. Although double (transgastric and concurrent transduodenal) access has been reported, transduodenal access is more difficult because of endoscope position and stiffness of the requisite 19-gauge needle for transduodenal cyst access.⁵

A 45-year-old woman presented for endoscopic management of symptomatic walled-off fluid collection with necrosis after a prior episode of necrotizing gallstone pancreatitis. The size of her collection and cross-sectional imaging were concerning for pancreatic duct disruption.

This video ([Video 1](#), available online at www.VideoGIE.org) demonstrates the use of an electrocautery-enhanced stent deployment catheter to first place a transgastric (cystgastrostomy) lumen-apposing metal stent, and then to reuse the same electrocautery-enhanced catheter for simple transduodenal cyst wire access ([Fig. 1](#)). Other reports have detailed the reuse or replacement of the lumen-apposing metal stent itself but not reuse of the deployment catheter.⁶ After placement of the lumen-apposing metal stent, the device catheter is inspected to ensure that the moving, inner, electrocautery deployment portion is not deformed or bent ([Fig. 2](#)). This is then reloaded into the therapeutic echoendoscope, and electrocautery-enhanced transduodenal cyst puncture is performed. A wire (which may be preloaded to further stiffen the moving portion of the electrocautery-enhanced stent delivery catheter) is fed through the bare stent delivery catheter and coiled within the collection. Over this wire, a plastic double-pigtail stent is placed, with another placed after wire-guided cannulation alongside it, to create the durable cystduodenostomy ([Fig. 3](#)). This technique may simplify placement of these additional transduodenal pigtail stents, reducing the need for FNA needle puncture and through-the-scope balloon dilation of the transduodenal tract, which is otherwise costly and technically challenging. This technique may reduce both the technical demands and the cost of the procedure. It remains to be seen whether this technique reduces the risk of collection recurrence.

The patient's collection was nearly completely resolved on follow-up cross-sectional imaging 4 weeks after this

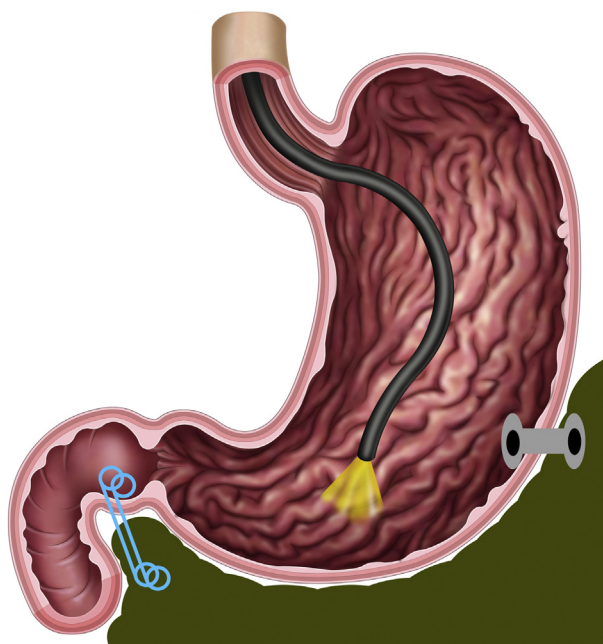


Figure 1. Dual gateway approach to draining peripancreatic fluid collections with suspected disconnected duct. A larger transgastric lumen-apposing metal stent is placed for debridement, and 2 plastic double-pigtail stents are placed to create a more durable transduodenal fistula to prevent recurrence of the collection.

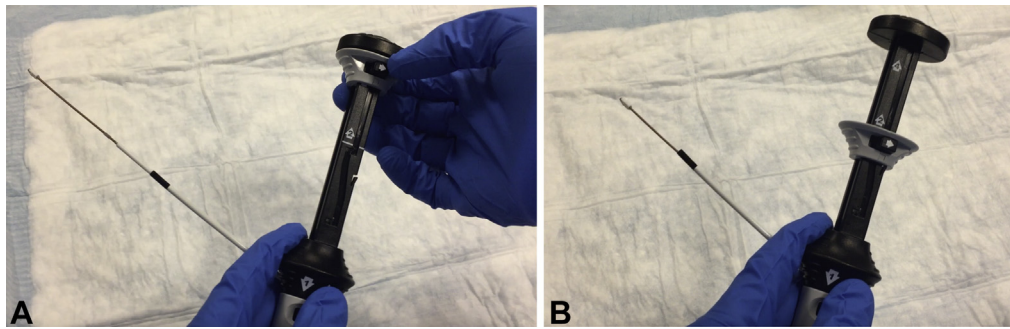


Figure 2. **A**, Electrocautery-enhanced stent delivery catheter is unlocked. **B**, Catheter is then retracted after metal stent placement to be reloaded into the endoscope to simplify placement of transduodenal double-pigtail stents.

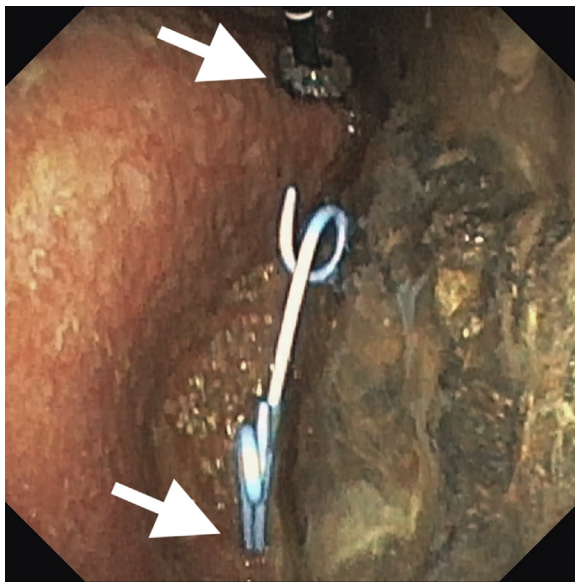


Figure 3. Retroflexed view within a necrotic peripancreatic collection showing both the transgastric lumen-apposing metal stent (*top arrow*) and 2 transduodenal double-pigtail stents (*bottom arrow*).

initial procedure, with only a small walled-off collection of fluid in communication with the double-pigtail stents. The transgastric lumen-apposing metal stent was removed at that time, and the 2 double-pigtail stents were left in place to ensure durable fistula formation between the site of the collection and the duodenum, in an effort to prevent collection recurrence. These 2 stents were removed 2 months later, and at 6 months, the patient has not

reported any symptoms to suggest recurrence of her collection.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

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