



A rendezvous approach for ampullary access in a strictured duodenojejunostomy

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ERCP frequently is performed to achieve biliary drainage, which requires identification and cannulation of the biliary orifice at the ampulla.¹ However, access to the biliary orifice can be challenging in some conditions such as postsurgical anatomy or duodenal strictures.^{2,3} This video case report (Video 1, available online at www.videogie.org) demonstrates multimodal ways to achieve ampullary access.

CASE PRESENTATION

A 49-year-old man with a Crohn duodenal stricture requiring resection 4 years earlier presented at another hospital with jaundice and recurrent acute pancreatitis (RAP). Review of his records demonstrated a duodenojejunostomy operative report noting a stenosis in the transverse duodenum with 5 cm of the duodenum resected. At presentation, total bilirubin was 7.5 mg/dL (0-1.2 mg/dL), with MRCP showing a 2.8-cm × 2.4-cm pancreatic mass with cystic component. Initial EUS fine-needle biopsy findings showed only chronic pancreatitis changes, and it was impossible to successfully locate the ampulla using ERCP, prompting transfer to our facility.

ENDOSCOPIC METHODS

Initial endoscopy at our center showed a healthy, patent duodenoenterostomy with a small 4-mm circular opening versus stricture at the level of the anastomosis (Fig. 1). Ampulla was not visualized on thorough endoscopic examination despite using a forward-viewing gastroscope and a side-viewing duodenoscope. To aid with ampulla localization, EUS-guided biliary access via a rendezvous approach

successfully traversed the ampulla, but the guidewire was still not identified on endoscopy, prompting us to speculate that the anatomy was as shown in Figure 2. After placement of a percutaneous biliary drain for decompression, a repeat endoscopy was performed and the circular opening near the anastomosis was dilated via balloon. This revealed a second severe stricture just distal to the first stricture (Fig. 3), which helped establish the patient's anatomy to be as delineated in Figure 4. Once the second stricture was dilated, the percutaneous biliary drain was visualized distally, and a temporary 10-mm × 4-cm fully covered metal stent was placed to traverse both duodenal strictures. An ultrathin endoscope traversed through the stent to grab the wire placed in the percutaneous biliary drain, out through the strictures out of the mouth (Fig. 5). Once the wire was secured from both skin and oral sides, the percutaneous biliary drain was removed externally and a 9- to 12-mm balloon catheter was advanced through the wire on oral side. Occlusion cholangiogram showed diffusely dilated biliary ducts with a stricture in the distal main bile duct (Fig. 6). The previously placed temporary metal stent traversing the duodenal strictures was removed and a new 10-mm × 6-cm fully covered metal stent was placed through the wire to traverse all 3 strictures, the biliary and both duodenal strictures, with resolution of the patient's jaundice noted (Fig. 7). The patient is currently undergoing evaluation regarding the etiology of his RAP (likely autoimmune from Crohn), biliary stricture (likely from RAP), and duodenal stricture (Crohn vs anastomotic). He is planned for a repeat ERCP in 6 months to reassess his strictures for stent exchange.

CONCLUSIONS

This video highlights a multidisciplinary approach for biliary decompression in patients with altered anatomy as the result of surgery or stricture that obscures visualization of the ampulla. Reviewing previous operative reports is crucial, and if the anatomy is unclear, it is best to stop the procedure and gather more information via other methods before a repeat attempt. EUS-guided and percutaneous approaches to biliary access can help locate the ampulla and delineate biliary anatomy. In conclusion, multimodality therapy is warranted in patients with altered anatomy that precludes a straightforward access to the

Abbreviation: RAP, recurrent acute pancreatitis.

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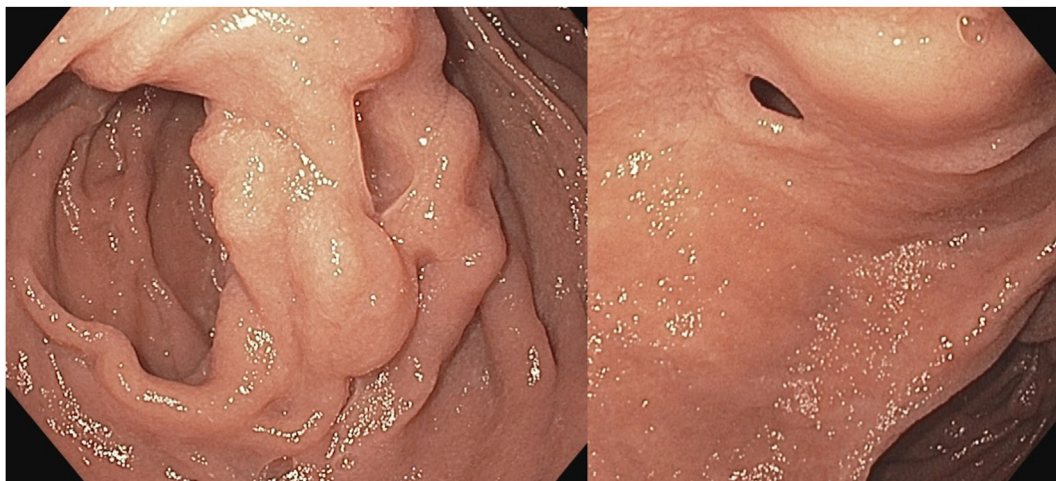


Figure 1. Index endoscopy showing a patent, healthy-appearing duodenoenterostomy site with a circular defect at the level of the anastomosis.

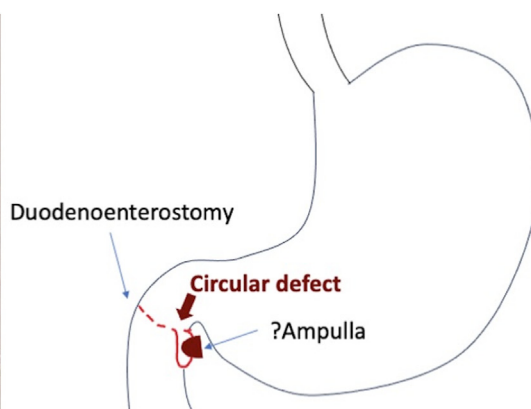
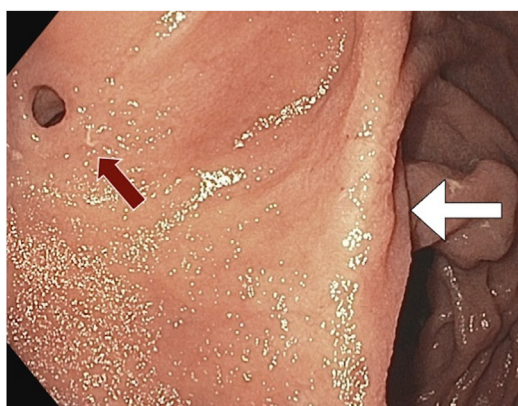


Figure 2. Initial proposed anatomy after being unable to locate the ampulla despite multiple examinations with a forward-viewing gastroscope as well as a side-viewing duodenoscope. *White arrow* indicates duodenoenterostomy site and *red arrow* indicates circular defect.



Figure 3. Second stricture noted after dilating and traversing the first stricture.

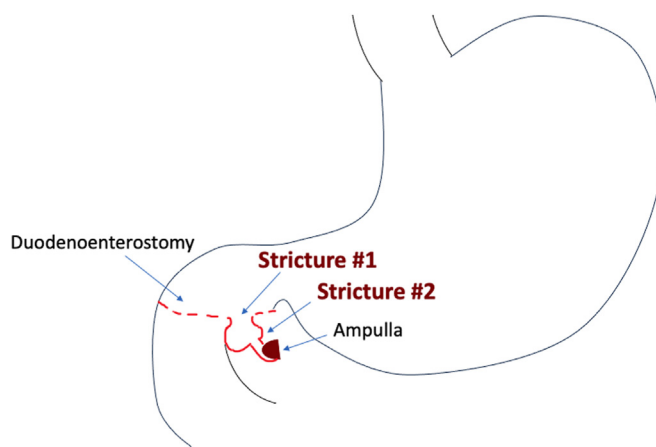


Figure 4. Actual anatomy after dilating both duodenal strictures and locating the internal portion of the percutaneous biliary drain coming out of the ampulla.

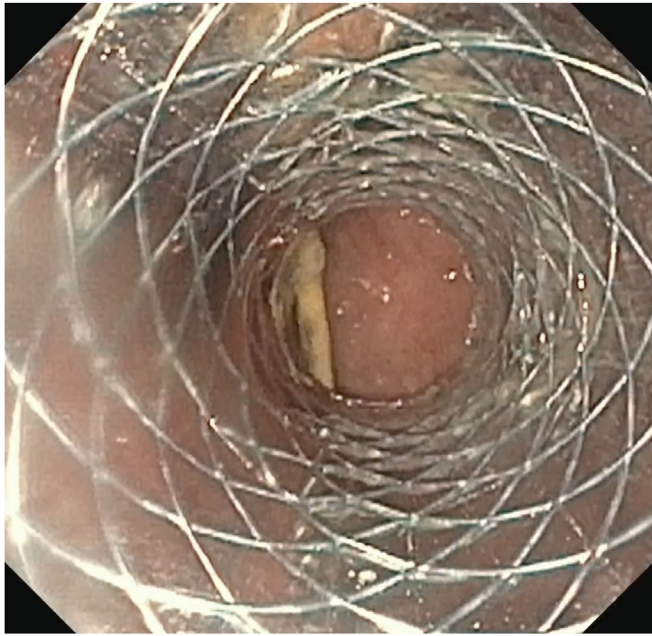


Figure 5. A temporary fully covered metal stent placement through both duodenal strictures to secure the tract and to better visualize the percutaneous biliary drain.



Figure 6. Occlusion cholangiogram showing diffusely dilated biliary tree with distal main bile duct stricture.

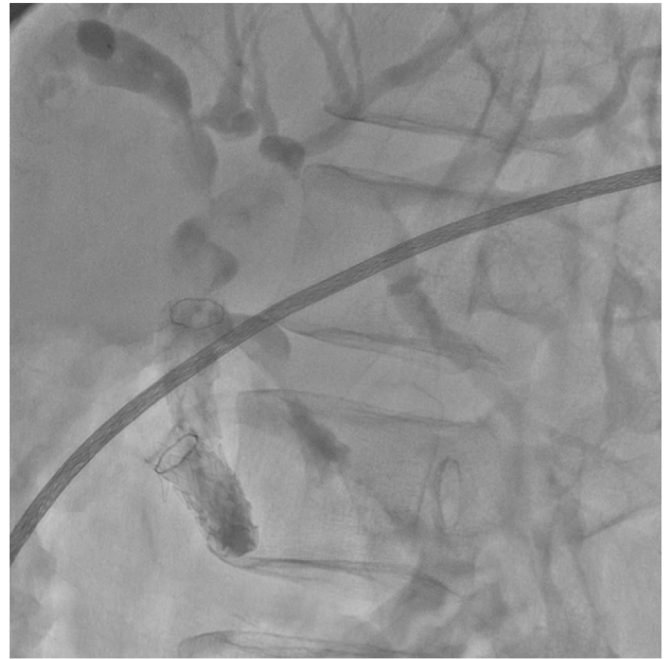


Figure 7. Final fluoroscopy showing the fully covered metal stent traversing biliary stricture as well as both duodenal strictures.

ampulla for biliary drainage. It is important to take a step-wise approach in order to provide the best outcomes for the patient.

PATIENT CONSENT

The patient in this article has given written informed consent to publication of the case details.

DISCLOSURE

All authors disclosed no financial relationships.

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