



Transpapillary nasocystic tube placement to allow gallbladder distention for EUS-guided cholecystoduodenostomy

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A 39-year-old woman with a history of Crohn's disease and multiple bowel resections presented with 2.5 months of right upper-quadrant pain. Transabdominal US demonstrated multiple gallstones and cystic duct obstruction. The surgical consultation noted that the patient's multiple prior operations significantly increased the risk of morbidity with cholecystectomy. The gastroenterology service was consulted for endoscopic management of chronic cholecystitis and cystic duct obstruction (Video 1, available online at www.VideoGIE.org).

On EUS evaluation of the gallbladder, it was not appreciably distended, making placement of a lumen-apposing metal stent (LAMS) technically challenging and at a high risk for procedure-related adverse events. The EUS endoscope was exchanged for a duodenoscope, and ERCP was performed with guidewire placement into the cystic duct (Fig. 1). A 7F nasobiliary tube was advanced over the guidewire (Fig. 2), attached to an irrigation pump, and infused with a mixture of saline solution and contrast material. The duodenoscope was exchanged for the linear EUS endoscope and advanced alongside the tube.



Figure 1. Cholangiogram demonstrating cystic duct obstruction.

On endosonographic view, the gallbladder was seen to distend considerably (Fig. 3), increasing the target for safe EUS-guided cholecystoduodenostomy. The gallbladder was punctured under endosonographic guidance by use of an LAMS with an electrocautery-enhanced delivery system, and a 10-mm × 10-mm stent was deployed with the distal end in the gallbladder lumen and the proximal end in the duodenum. A



Figure 2. Nasocystic tube placement into the gallbladder over a guidewire to allow fluid distention.

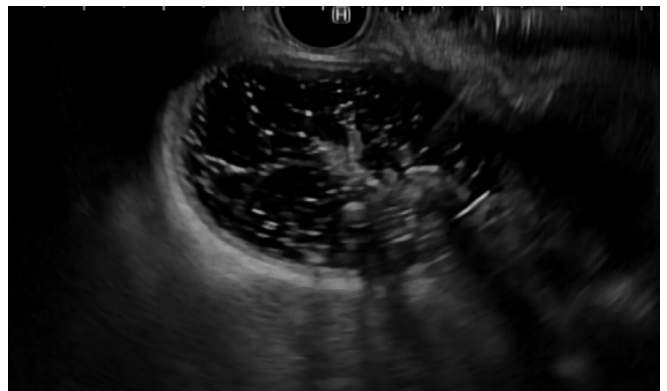


Figure 3. EUS view of the fluid-distended gallbladder after infusion by irrigation pump.

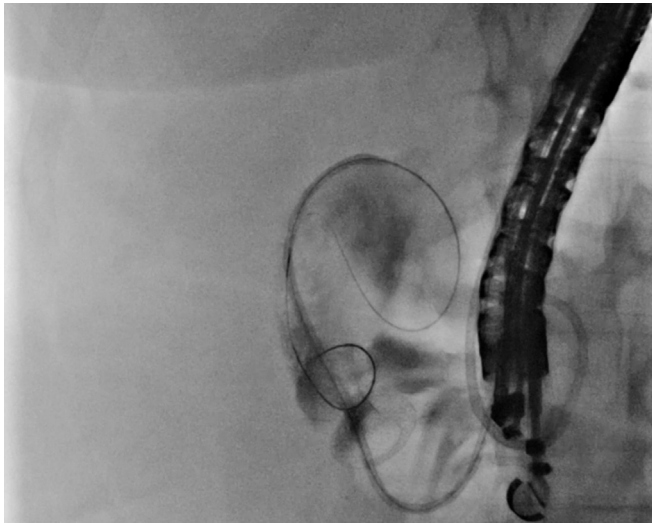


Figure 4. Fluoroscopic view after EUS-guided cholecystoduodenostomy with a lumen-apposing metal stent (LAMS). A double-pigtail plastic stent was placed coaxially within the LAMS to decrease the risk of stent occlusion.

7F × 4-cm double-pigtail plastic stent was placed within the LAMS to reduce the risk of occlusion (Fig. 4). The patient was discharged home after the procedure and had remained free of recurrent symptoms of chronic cholecystitis at the time of her last follow-up visit.

EUS-guided biliary drainage is associated with a higher quality of life when compared with percutaneous drainage¹; however, this approach is limited in the case of a nondistended gallbladder. Conversion of transpapillary drainage to EUS-guided gallbladder drainage has previously been described; however, our technique demonstrates that ERCP-assisted gallbladder distention can be safely used to improve the technical success of EUS-guided cholecystoduodenostomy.² Other modes of distention have been described to assist in EUS-guided biliary drainage, including injection of a percutaneous transhepatic biliary drain under fluoroscopy.^{3,4} This case demonstrates the safety and efficacy of ERCP-assisted gallbladder distention with use of

an irrigation pump to improve the technical success of EUS-guided cholecystoduodenostomy.

DISCLOSURE

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Abbreviation: LAMS, lumen-apposing metal stent.

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