



EUS biliary drainage with a lumen-apposing metal stent through a pre-existing duodenal metal stent

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EUS-guided biliary drainage (EUS-BD) is an alternative procedure to percutaneous transhepatic biliary drainage (PTBD) after ERCP failure. Success rates with EUS-BD are estimated to be around 95%, depending on the endoscopist's experience, and a recent meta-analysis has demonstrated that EUS-BD provides equivalent technical success with lower rates of adverse events in comparison with PTBD.¹⁻⁴ There are limited data on EUS-BD in patients with an indwelling duodenal stent; only a few articles have suggested that EUS-BD is safe and effective in this patient population.⁵⁻⁸

We report the case of a successful EUS-guided choledochoduodenostomy in an 89-year-old woman with cholangitis. The procedure was performed by deployment of a lumen-apposing metal stent (LAMS) between the mesh of a covered duodenal metal stent (Video 1, available online at www.VideoGIE.org).

Our patient was known to have metastatic duodenal adenocarcinoma and had undergone placement of a duodenal stent 9 months before her admission for progressive jaundice. A prophylactic biliary stent had not been placed along with the duodenal stent because the papilla was not visible owing to neoplastic obstruction. After admission, ERCP was attempted and failed because the duodenal stent covered the papilla. Three days later, the patient experienced cholangitis and went into septic shock. Transabdominal US showed extreme dilation of the intrahepatic and extrahepatic bile ducts with debris in the common bile duct. The patient was transferred to our center for EUS-BD.

Linear EUS (UCT-180; Olympus, Center Valley, Pa, USA) revealed dilated intrahepatic bile ducts and an unusually

large common bile duct (30 mm) (Fig. 1). A distal stricture was also noted. An 8- × 8-mm LAMS stent (Hot-Axios; Boston Scientific, Marlborough, Mass, USA) was deployed into the bulb by use of the intrachannel release technique and a transduodenal approach. The proximal phalange of the Axios stent was deployed in the operating channel of the endoscope. The stent was then opened between the mesh of the closed-mesh duodenal stent, which had been cauterized by the Hot-Axios system, and spontaneous drainage of pus occurred (Fig. 2). Because pus drainage was effective, the LAMS was not dilated. After the procedure, the patient recovered well, with no adverse effects and without any biliary obstruction relapse. The stent will be left in place indefinitely, given the patient's palliative orientation. At her 1-month follow-up visit, total bilirubin was normal.

Biliary drainage in patients with a nonaccessible papilla is a challenging endeavor, and no formal recommendations exist on how to proceed when biliary access is not possible because of the pre-existing placement of a duodenal metal stent. Two recent case series suggest technical and clinical success with the use of EUS-BD in patients with an indwelling duodenal metal stent.⁵⁻⁸

In our case, we preferred to use EUS-BD over PTBD because the important dilation of the common bile

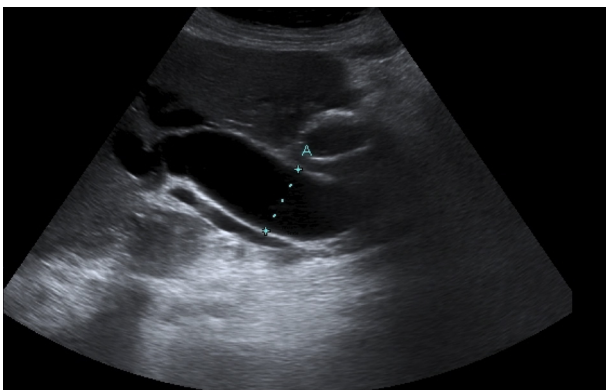


Figure 1. 30-mm common bile duct seen by EUS.

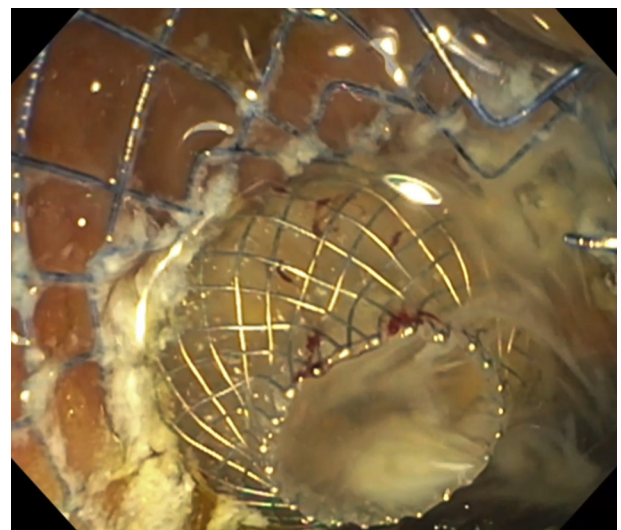


Figure 2. Spontaneous drainage of pus seen after the opening of the Axios stent.

duct made it an easy target for an extrahepatic approach and because we wanted to try to maintain internalized biliary drainage. We used the Hot Axios system to reduce the number of steps in an attempt to avoid dilation and fistulization of the tract before placement of the stent, thus preventing intraperitoneal bile leak. We believe that the presence of a duodenal metal stent did not increase the level of difficulty of the technique, inasmuch as US vision remained good and stent deployment was easy.

Obstruction of the papilla, either by a neoplastic mass or by a duodenal stent, often impairs biliary decompression by ERCP. This case demonstrates the feasibility of an EUS-BD intervention in the presence of a duodenal metal stent and is, to our knowledge, one of the few described with a LAMS.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviations: EUS-BD, EUS-guided biliary drainage; LAMS, lumen-apposing metal stent; PTBD, percutaneous transhepatic biliary drainage.

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