EUS-guided biliary drainage: Moving beyond the cliché of prime time

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Endoscopists are conversant with biliary drainage (BD) for about five decades now, and the initial excitement that we all felt about ERCP has not yet faded. ERCP remains “The procedure” for most of us interested in pancreato-biliary interventions. Over the past two decades, EUS-guided BD (EUS-BD) has appeared on the horizon. EUS-BD is technically an attractive proposition due to its capability to access the biliary system from multiple points including the duodenum and liver. Thus, it takes away the compulsion which ERCP has, of the papillary route access alone, and expands upon the available access routes of percutaneous transhepatic BD (PTBD), which are predominantly intrahepatic. EUS-BD also provides us with the possibility of BD without traversing through the actual obstruction, much like surgical bypass. After initial skepticism and fear about adverse events, mostly borne out of the aversion that we gastroenterologists have, of traversing through retroperitoneal and intraperitoneal spaces, and potential bile leaks and perforations, multiple studies have shown EUS-BD to be an effective and safe alternative.¹¹⁻¹⁰ Recently published randomized studies and meta-analyses have shown EUS-BD to be as effective as ERCP and PTBD for distal malignant obstruction.¹²⁻¹⁴ Over the past decade, the technique has become more or less standardized, the success rates have gone up, and the adverse events have come down. EUS-BD appears to be here to stay, at least for obstructive jaundice due to malignancy. Newer literature is appearing about the utility of EUS-BD for common bile duct stones, hepatico-jejunostomy strictures, and other benign indications.¹⁶⁻¹¹ We believe that EUS-BD is complementary to ERCP, both of them together bringing the success rate of the endoscopist in managing biliary obstruction to near 100%. As the technique is becoming accepted, EUS-specific accessories and stents are becoming available, thus improving the chances of success and reducing the adverse events. The increased skepticism and scrutiny accorded to EUS-BD is understandable, given the availability of two well-proven and widely available methods, ERCP and PTBD. There appeared to be little need of an additional procedure in this area. However, as the EUS-BD procedure matured, it became obvious that there is a niche for this procedure in the endoscopy suites. It was found useful in patients with postsurgical anatomy and duodenal stenosis, both of the latter making approach to papilla difficult if not impossible.¹² Another area was difficult biliary cannulation, those rare instances where selective biliary drainage would have been otherwise impossible.

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cannulation was not possible. As ERCP literature has matured, it is obvious that “prodding and pushing” at the papilla in the hope of a successful cannulation may be counterproductive, with increased pancreatitis rates. Current recommendations suggest 5 min or five attempts as the safe limit.[13] With the availability of EUS-BD, all we need is to change the endoscope and utilize EUS-BD in these cases.[14] This appears to be a better approach than waiting for a radiologist to come and perform PTBD.

Another area where EUS-BD has shown much promise is gallbladder drainage in acutely ill patients unfit for cholecystectomy. The technique is straightforward, takes little time, and results in prompt relief, with few adverse events. Comparative studies have shown EUS-GB drainage to have better results compared to percutaneous drainage.[15]

Endoscopic management of hilar obstruction is challenging due to anatomical-, technical-, and disease-related issues and ERCP is often found wanting, especially in complex Type III and Type IV obstructions. EUS-BD appears to be well suited to help us achieve better and more complete drainage.[16] Initial studies are encouraging, but bigger and better studies are needed.

Thus, it appears that EUS-BD is past the initial hiccups, and is ready to occupy a regular place in the endoscopy suites. Much more needs to be done in the coming decade to establish algorithms which benefit the patients the most. We are fortunate to have not one, not two, but three excellent techniques to choose from while deciding about BD. We need to tailor the different techniques and access routes to specific indications and try to develop a uniform cost-effective strategy for BD, with the goal of evidence-based patient-centric application of ERCP, EUS-BD, and PTBD in a synergistic fashion.

This special issue dedicated to EUS-BD celebrates the coming of age of EUS-BD. The issue has contributions from those who have helped take EUS-BD forward with their innovations coupled with rigorous studies. We believe this issue will serve as an important reference material for all those who are interested in BD.

Conflicts of interest
There are no conflicts of interest.

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