# The duodenal stent-in-stent: a stent at the crossroads

Self-expanding metallic stents (SEMSs) are effective in the palliation of malignant biliary and intestinal obstruction.[1] Yet patients with obstruction of the proximal duodenum and the bile duct present a particularly difficult challenge to endoscopists. This is because of the limitations in access to the ampulla posed by the intestinal obstruction and/or a duodenal stent placed across the ampulla. In this issue of *Gastrointestinal Endoscopy*, Moon et al[2] describe the placement of a modified nitinol duodenal stent to facilitate ampullary access after deployment.

Eight patients were studied. The strictured area of duodenum involved the ampullary region in 5 patients and was proximal to the ampulla in 3 patients. The modified SEMS was placed across the duodenal stricture successfully in all patients. Markers on the duodenal SEMSs delineated the modified portion, and fluoroscopic guidance was used with previously placed biliary SEMs or percutaneous drains assisting as landmarks. We agree with the authors that assessment of the durability of the modified stent will require longer follow-up.

Relieving the biliary obstruction posed a greater challenge. In an unspecified number of cases, the duodenoscope could not traverse the stent on the initial attempt, and a repeat procedure was performed several days later. Drainage of the bile duct was achieved in all but 1 patient (87.5% success rate), but the ability to achieve biliary drainage through the modified stent when across the ampullary region was quite limited. Of 5 patients with strictures across the ampulla, biliary cannulation was accomplished in only 2 with a papillotome and wire through the modified stent (40%) (it was unclear whether either of these patients had a previously placed biliary SEMS that may have facilitated cannulation). A rendezvous procedure was required in 3 patients and was successful in 2 patients.

The authors state potential advantages with the modified enteral stent including the ability to deploy a biliary SEMS through the enteral stent without requiring opening of the mesh with rat-tooth forceps, balloon dilation, or argon plasma coagulation. In patients with duodenal obstruction but no biliary obstruction, our practice is to place a biliary stent first. If the authors' modified enteral stent were to allow adequate access in the future, biliary drainage could be postponed until needed with less potential for the biliary SEMS to become occluded over time because of debris or tissue hyperplasia. In patients requiring percutaneous biliary access, the rendezvous procedure through the modified stent may provide greater endoscopic access for endoscopic reintervention should it prove necessary.

In one half of cases in this series, the authors performed ampullary balloon dilation to facilitate biliary SEMS placement because maneuverability to allow biliary sphincterotomy is limited through a duodenal SEMS. In patients without pancreatic duct obstruction, this may increase the risk of pancreatitis. The necessity of biliary sphincterotomy or dilation before biliary SEMS placement is controversial.[3] We favor a biliary sphincterotomy, particularly in the absence of pancreatic ductal obstruction; however, we are aware of the increased risk.

Patients with obstruction of the proximal duodenum and the bile duct present a particularly difficult challenge to endoscopists because of limitations in accessing the ampulla posed by the intestinal obstruction and/or a duodenal stent placed across the ampulla.

The authors are to be commended for their creativity and their advancement of a novel design to trial in patients. Activity in these areas is critical for the development of new therapeutic techniques and for the realization of optimal endoscopic outcomes. While improving the endoscopic tools for combined biliary and duodenal obstruction, an important comparison will be with a radiologically placed percutaneous biliary SEMS followed by an enteral stent placement at the same juncture.

## DISCLOSURE

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*Abbreviation: SEMS, self-expandable metal stents.*

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