EUS-guided choledochoduodenostomy and duodenal stenosis: A marriage doomed to fail?

Malignant biliary obstruction and gastric outlet obstruction (GOO) may occur simultaneously in patients with gastroduodenal or pancreatic malignancies, complicating retrograde biliary drainage. Over the years, the endoscopic armamentarium has been expanded with the development of EUS-guided biliary drainage techniques, such as EUS-guided hepaticogastrostomy and choledochoduodenostomy. In May 2022, the video case report by Raffaele Salerno and colleagues1 was published, illustrating the difficulties of maintaining adequate biliary drainage in patients with an EUS-guided choledochoduodenostomy and GOO. We agree with the authors that EUS-guided biliary drainage should be first choice in patients with inoperable pancreatic adenocarcinoma and failed ERCP. However, several crucial remarks are needed regarding this specific group of patients with both malignant biliary obstruction and GOO.

First, EUS-guided choledochoduodenostomy was performed in a patient with a duodenal stenosis, which was managed by surgical gastroenterostomy. Despite the resolution of GOO, the proximity of the lumen-apposing metal stent (LAMS) to the neoplastic duodenal occlusion has been recently highlighted as a potential risk factor for ascending cholangitis or impaction by food remnants.2,3 The authors also recognized this potential cause of LAMS occlusion and attempted to resolve this problem by placing a duodenal stent. However, duodenal stenting itself has been proven to be a non-durable solution for neoplastic duodenal obstruction because of the high risk of re-occlusion owing to neoplastic invasion or hyperplastic tissue ingrowth.4,5 In line with these findings, our recent analysis of outcomes of various approaches in patients with both biliary and duodenal obstruction (CABRIOLET-study) identified the combination of EUS-guided choledochoduodenostomy and duodenal stenting as an independent risk factor for stent dysfunction.5 This increased risk was independent of GOO being resolved by another procedure (as for example EUS-guided or, as in this case, surgical gastroenterostomy), underlining the crucial role of an adequate duodenal transit in the prevention of LAMS dysfunction.

Furthermore, EUS-guided hepaticogastrostomy holds potential advantages over a choledochoduodenostomy in the context of GOO, as it is placed at a greater distance from the tumor and is less susceptible to food impaction. In the same (CABRIOLET) analysis by our group, no stent dysfunction occurred in patients treated with the EUS-guided gastroenterostomy (EUS-GE) plus hepaticogastrostomy combination, whereas patients who underwent EUS-GE plus choledochoduodenostomy or duodenal stenting plus EUS-guided choledochoduodenostomy had stent dysfunction in 31% and 83% of cases respectively. In clinical practice, EUS-guided choledochoduodenostomy is still frequently used in the setting of GOO, since it is regarded as easier and safer when compared to EUS-guided hepaticogastrostomy.6-8 This approach may thus lead to unnecessary events of stent dysfunction.9

The multitude of treatment options currently available for those with combined obstruction complicate the extraction of lessons that can be learned. Considering the advantages of EUS-GE over surgical gastroenterostomy (lower adverse event rate and shorter hospital stay)10-12 as well as over duodenal stenting (improved clinical outcomes and reduced stent dysfunction),4,5 we are especially keen to learn about the outcomes of various biliary drainage strategies in patients treated with EUS-GE.3,8 Although the data supporting EUS-GE are becoming increasingly overwhelming, physicians should still be aware that EUS-GE remains an off-label indication while randomized confirmation is sought. More prospective data are also warranted to provide a definite answer to the question of how to optimally drain patients with both GOO and biliary obstruction. However, based on recent data that suggest EUS-guided choledochoduodenostomy and a duodenal stenosis are an ill-suited combination, we believe that this marriage is doomed to fail and we discourage the use of EUS-guided choledochoduodenostomy in the setting of GOO.

DISCLOSURE

The authors disclosed no financial relationships.

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Abbreviations: GOO, gastric outlet obstruction; LAMS, lumen-apposing metal stent

REFERENCES