



Can endoscopic ultrasound-guided gastroenterostomy be used as a first-line modality for endoscopic management of malignant gastric outlet obstruction?

We congratulate Kastelijin et al. on their manuscript entitled, “Patency of endoscopic ultrasound-guided gastroenterostomy in the treatment of malignant gastric outlet obstruction” [1]. This is an international multicenter study to evaluate the feasibility and safety of a novel, minimally invasive endoscopic procedure, endoscopic ultrasound-guided gastroenterostomy (EUS-GE). Although the authors report both high rates of technical success and stent patency, they also note a relatively high number of adverse events (AEs) compared to prior reports [2]. Our comments address this high AE rate and attempt to clarify the role of EUS-GE in management of malignant gastric outlet obstruction (GOO).

First, we note that the EUS-GE procedures were performed over a 4-year period between 2015 and 2019. Furthermore, 33% of the procedures were completed in the first 2 years, between 2015 and 2016. A recent study evaluating the learning curve for EUS-GE in a single operator found that the majority of the AEs occurred within the operator’s first 39 cases [3]. When measuring mastery using cumulative sum analysis, Jovani et al. found that 25 cases were needed to achieve proficiency in EUS-GE, while 40 cases were needed to achieve mastery [3]. Given these findings, we seek clarification on three particular issues: whether the authors noted higher rates of AEs in the earlier years (since the technique for EUS-GE has evolved over the last 5 years), whether the rate of AEs decreased as operators gained more experience, and whether there was any substantial difference in AEs among the technique of EUS-GE (balloon assisted versus direct technique). We would also highlight the fact that 35.7% of patients included in the study had ascites, which is a relative contraindication among most experts for EUS-GE placement.

Second, the authors appropriately note in their discussion that EUS-GE is an excellent addition to the armamentarium of advanced endoscopists for management of malignant GOO. However, a key question not addressed is whether EUS-GE is an appropriate modality for first-line management of malignant GOO, or whether it should be used as salvage therapy in patients who either do not achieve clinical success after placement of an enteral stent, or in those for whom enteral stent placement is not technically possible. While the majority of studies evaluating the efficacy of EUS-GE are single-arm studies, two studies have compared EUS-GE with enteral stent placement [2,4]. Both these studies showed similar rates of technical success as well as AE rates, but the study by Ge et al. found a higher rate of stent failure and need for reintervention in the enteral stent group [2]. As such, we agree with the authors’ conclusion that, in expert hands and among very select patients, EUS-GE in 2020 has an acceptable safety profile to be considered a durable first-line therapy in select patients with malignant GOO. However, patients chosen to undergo EUS-GE should have an expected life expectancy of more than 2 months – when enteral stent failure tends to occur.

In summary, EUS-GE is a promising new procedure for palliation of malignant GOO. However, before the global endoscopic community can adopt it as the first-line standard of care treatment, more information is needed regarding safety profile, learning curves, standardization of technique, patient selection, and outcomes in the hands of novice advanced endoscopists.

Competing interests

The authors declare that they have no conflict of interest.

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References

- [1] Kastelijin J, Moons L, Garcia-Alonso F et al. Patency of EUS-guided gastroenterostomy in the treatment of malignant gastric outlet obstruction. *Endosc Int Open* 2020; 8: E1194–E1201
- [2] Ge PS, Young JY, Dong W et al. EUS-guided gastroenterostomy versus enteral stent placement for palliation of malignant gastric outlet obstruction. *Surg Endosc* 2020; 33: 3404–3411
- [3] Jovani M, Ichkhanian Y, Parsa N et al. An assessment of the learning curve for EUS-guided gastroenterostomy for a single operator. *Gastrointest Endosc* 2020; 20: 34843–34844

- [4] Chen YI, Itoi T, Baron TH et al. EUS-guided gastroenterostomy is comparable to enteral stenting with fewer re-interventions in malignant gastric outlet obstruction. *Surg Endosc* 2017; 31: 2946–2952

Bibliography

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