**Diameter of surgical versus endoscopic ultrasound-guided gastrojejunostomy: that much wider after all is said and done?**

Whereas retrospective literature confirms the comparable clinical success of endoscopic ultrasound-guided gastrojejunostomy (EUS-GJ) and surgical gastrojejunostomy (SGJ) [1, 2], no head-to-head comparison exists of their caliber and long-term patency.

We present one case of a patient receiving both procedures, offering an unusual opportunity for direct comparison (▶Video 1). A 52-year-old patient was diagnosed with gastric outlet obstruction owing to a duodenal B-cell lymphoma. EUS-GJ was performed using a 20-mm lumen-apposing metal stent (LAMS), followed by 18-mm balloon dilation [3] (▶Fig. 1). Upon disease remission with chemotherapy, a blind-ended bulb resulted from scarring of the stenotic duodenal tract. Although the EUS-GJ was wide and patent (▶Fig. 2), erosions were appearing on the jejunal side after 8 months (▶Fig. 2c) and an SGJ was proposed owing to the uncertainty of long-term patency of the EUS-GJ and a potentially wider caliber of the SGJ. Following surgery, gastrointestinal follow-through (▶Fig. 3) showed adequate flow through both anastomoses, but EUS-GJ seemed reduced in diameter 13 months after placement. LAMS extraction was planned, revealing significant granulation tissue overgrowth surrounding a stabilized fistula reduced in caliber (▶Fig. 3).

On that occasion, the SGJ caliber was evaluated. Although the surgeon created an almost 5-cm incision, a 20-mm balloon perfectly fitted the final SGJ (▶Fig. 4). Indeed, SGJ requires a linear incision of stomach and jejunal walls and latero-lateral suturing of their inferior and superior margins [4]. This elliptic anastomosis will become round after maturation and scarring, with a smaller final circular diameter compared to the initial linear cut (▶Fig. 5).

Pending randomized data, this case suggests a comparable caliber of SGJ and EUS-GJ for a substantial part of their history, and therefore an assumed larger diameter should not be used as a reason to prefer SGJ. However, it also suggests that long-term LAMS friction may induce inflammatory responses deserving further elucidation, especially when advocating EUS-GJ use in benign disease.

**Competing interests**

Michiel Bronswijk has consultancy agreements with Prion Medical – Taewoong. Schalk Van der Merwe holds the Cook and Boston-Scientific chair in interventional endoscopy and holds consultancy agreements with Cook, Pentax and Olympus. The remaining authors declare no COI relevant for this article.
The authors

Giuseppe Vanella1, Domenico Tamburrino2, Francesco Vito Mandarino1, Michiel Bronswijk1, Schalk Van der Merwe3, Massimo Falconi2, Paolo Giorgio Arcidiacono1

1 Pancreatobiliary Endoscopy and Endosonography Division, Pancreas Translational & Clinical Research Center, IRCCS San Raffaele Scientific Institute, Milan, Italy
2 Pancreatic Surgery Unit, Pancreas Translational & Clinical Research Center, IRCCS San Raffaele Scientific Institute, Milan, Italy
3 Department of Gastroenterology and Hepatology, University Hospitals Gasthuisberg, University of Leuven, Leuven, Belgium.
4 Department of Gastroenterology and Hepatology, Imelda General Hospital, Bonheiden, Belgium

Corresponding author

Giuseppe Vanella, MD
Pancreatobiliary Endoscopy and Endosonography Division, Pancreas Translational & Clinical Research Center, IRCCS San Raffaele Scientific Institute, Vita-Salute San Raffaele University, Via Olgettina 60, 20132, Milan, Italy
Fax: +39-0226435609
vanella.giuseppe@hsr.it

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Fig. 2 Endoscopic follow-up of the endoscopic ultrasound-guided gastrojejunostomy (EUS-GJ). a, b Follow-up at 4 months: wide and patent EUS-GJ, with normotrophic mucosa on the jejunal side. c Follow-up at 8 months: initial erosions were seen on the jejunal side of the anastomosis.

Fig. 3 a Endoscopic follow-through showing adequate contrast flow through both anastomoses, although EUS-GJ diameter seemed slightly reduced after 13 months. b, c Endoscopy performed for lumen-apposing metal stent (LAMS) extraction 13 months after placement. b Endoscopic view of the LAMS reduced in caliber, not passable with a standard gastroscope. c After LAMS removal, significant granulation tissue overgrowth was visible surrounding a stabilized fistula reduced in caliber.


Bibliography

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