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EUS Gastroenterostomy: Primetime for All?

Gastric outlet obstruction (GOO) is a mechanical blockage that clinically progresses based on the degree of obstruction. Patients often experience debilitating symptoms with intractable nausea, vomiting, and limited peroral intake that can quickly lead to malnutrition, decreased quality of life, and potential delays in chemotherapy [1]. While surgical gastroenterostomy (SGE) has been the mainstay of treatment with long-term palliation, it is associated with significant morbidity and mortality that may delay treatment in the postoperative period [2]. Endoscopic ultrasound-guided gastroenterostomy (EUS-GE) has emerged as an effective minimally invasive alternative for suboptimal operative candidates [1]. Comparing these techniques is paramount, especially as increased operator experience with EUS-GE expands and advancements in chemotherapy treatment extends the life expectancy in this patient population.

In a recent issue of Endoscopy International Open, Jaruvongvanich et al [3] compare the outcomes of patients undergoing EUS-GE, enteral stenting (ES), or SGE for benign and malignant etiologies of GOO. This was a dual-center retrospective study of 436 patients with a median follow up of 185.5 days, of which 233 were in the EUS-GE cohort. Baseline characteristics between EUS-GE and SGE were largely similar, although the EUS-GE group had higher rates of ascites, peritoneal carcinomatosis, ECOG status, a malignant indication, and symptomatic GOO. The technical success rate was similar in all groups. However, the clinical success rate was significantly higher in the EUS-GE group compared to ES and SGE (98.3% vs 91.6% vs 90.4%, $P = 0.002$) with lower rates of reintervention (0.9% vs 12.2% vs 13.7%, $P < 0.0001$) and median length of stay (LOS) (2 vs 3 vs 5 days, $P < 0.0001$). A subgroup analysis examining the 360 patients with malignant GOO demonstrated similar findings. There were also lower rates of adverse events in the EUS-GE group (8.6%) compared to SGE (27.4%) and ES (38.9%). There were limited instances of stent obstruction, migration, and inadequate stent expansion after EUS-GE. The long-term outcomes of EUS-GE appear to be reliable, especially in a sicker patient population, as was the case in this cohort.

This is a well-designed study that advances the current literature supporting the efficacy and durability of EUS-GE, particularly in sick patients. Yet, before these data can alter practice management, one must consider that this study did not differentiate surgical approaches (open and laparoscopic) in their outcomes. Laparoscopic SGE is now the preferred method because it is associated with improved outcomes, decreased LOS, and shorter time to resumption of oral intake [4]. Analyzing outcomes should ideally be done in this context, although such a comparison is limited in a retrospective study. Patients who undergo conversion from laparoscopic to open approaches will likely have fundamentally different outcomes than those whose procedures can be completed laparoscopically.

There is selection bias and heterogeneity in all studies to date pertaining to EUS-GE versus SGE. Patients undergoing EUS-GE are generally sicker with more advanced cancers and comorbidities [5]. A more focused comparison between laparoscopic SGE and EUS-GE, therefore, may either blunt or further cement the advantages of a purely endoscopic approach. Prospective studies comparing these techniques are needed as we continue to define the optimal role of EUS-GE for GOO.

Conflict of Interest

Dr. Todd Baron is a consultant and speaker for Boston Scientific, W.L. Gore, Cook Endoscopy, and Olympus America

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