

A Retrospective Series on the Efficacy and Course with Endoscopic Follow-up of Endoscopic Ultrasound-Guided Gastroenterostomy (EUS-GE) for Benign Gastric Outlet Obstruction (GOO)

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INTRODUCTION

- Endoscopic ultrasound-guided gastroenterostomy (EUS-GE) has gained popularity as a treatment for malignant gastric outlet obstructions (GOO).
- Recent investigations have been performed into its use in benign etiologies.
- Given one-step nature, risk profile, and reversibility, it has significant potential.
- We examine feasibility of EUS-GE with lumen-apposing metal stent (LAMS) placement to treat patients with benign causes of GOO.

Results

- EUS-GE had a 100% technical success rate and a 93% clinical success rate.
- 4 of 16 LAMS (Lumen-apposing metal stents) were able to be removed after resolution of the GOO etiology.
- On average, LAMS were able to remain patent for an average of 341 days as demonstrated by endoscopy.
- Some LAMS remained in place and patent multiple years (3 beyond 900 days).

Table 1: Patient Characteristics.

| | |
|-----------------------------|--------------------|
| Average Age (years) | 63 (Range 40 – 93) |
| Female Patients | 7 (44%) |
| Intrinsic Etiology | 8 (50%) |
| PUD | 2 |
| NSAID Induced Stricture | 4 |
| Radiation Induced Stricture | 1 |
| Anastomotic Stricture | 1 |
| Crohn's Stricture | 0 |
| Caustic | 0 |
| Extrinsic Etiology | 8 (50%) |
| Pancreatitis | 5 |
| Duodenal Hematoma | 1 |
| SMA Syndrome | 2 |

An intrinsic etiology for the purposes of this study is located within the lumen itself and includes ulcers and strictures. Extrinsic etiologies did not directly involve the lumen and included pancreatitis and vascular disease.

RESULTS (CONT.)

Table 2: Endoscopic Data and Results.

| | |
|--|-----------------------------|
| Technical Success | 16 (100%) |
| Clinical Success* | 14 (n=15; 93%) |
| Oral Intake on Same Day of Procedure | 16 (100%) |
| Average Length of Stay (days)** | 1.25 (Range 0 - 7) |
| Stent Removal | |
| Removed | 4 |
| Extrinsic GOO | 3 |
| Intrinsic GOO | 1 |
| Left in Place | 12 |
| Exchanged (then subsequently removed or left in place) | 2 |
| Average Stent Patency Time (days) | 341 (n=12; Range 30 – 1551) |
| Average Time Stent in Place (days) | 329 (n=12) |
| Average Time to Stent Removal (days) | 228 (n=4) |

*Clinical success in this case is defined as no admission or treatment for the same complaint within the time window of the study. This was assessed on the 15 patients who were re-assessed, with one patient lost to follow-up.

**Of note, the patient whose hospital stay totaled 7 days was already admitted for an unrelated infectious etiology.

Materials and Methods

- 16 Patients were selected for this retrospective series.
- Primary outcomes were technical and clinical success of EUS-GE.
- Secondary outcomes included adverse events, stent patency, and stent removal.

CONCLUSION

- These results demonstrate the safety and efficacy of EUS-GE for treatment of benign GOO.
- LAMS remained patent well beyond 6-months in most patients.
- Future investigation is needed into long-term outcomes in patients whose stents remain as well as optimal stent removal time.