Table 2. Correlation between BP quality and SES-CD scores according to scale and location.

	Spearman's Rank Correlation Coefficient (95% CI)				
Scale	**Ileum**	**Right colon**	**Transverse colon**	**Left colon**	**Rectum**
BBPS	0.12 (-0.10, 0.33)	-0.16 (0.39, 0.06)	-0.29 (-0.48, -0.09)	-0.31 (-0.49, -0.13)	-0.14 (-0.33, 0.05)
MBBPS	0.08 (-0.14, 0.30)	-0.1 (-0.33, 0.12)	-0.26 (-0.45, -0.06)	-0.32 (-0.50, -0.14)	-0.13 (-0.33, 0.06)
HCS	0.25 (0.05, 0.45)	-0.12 (-0.34, 0.10)	-0.16 (-0.35, 0.03)	-0.18 (-0.38, 0.02)	-0.05 (-0.27, 0.16)
FDA BCAS	0.11 (-0.12, 0.33)	-0.19 (-0.39, 0.02)	-0.26 (-0.44, -0.08)	-0.33 (10.51, -0.15)	-0.09 (-0.27, 0.09)

BP, bowel preparation; ICC, intraclass correlation coefficient; CI, confidence interval; BBPS, Boston Bowel Preparation Score; MBBPS, modified BBPS; HCS, Harefield Cleansing Scale; FDA BCAS, Food and Drug Administration bowel cleansing assessment scale; SES-CD, Simple Endoscopic Score for CD

Mo2032

COMPARISON OF GASTRIC SURFACE VISIBILITY IN MAGNETIC CAPSULE ENDOSCOPY USING ROBOTICALLY CONTROLLED AUTOMATION AND ARTEFICIAL INTELLIGENCE VS EXPERT MANUAL CONTROL

Adam Finta, Laszlo Madacsy, Milan Szalai, Rebeka Liebe

This study investigates and compares the efficacy of nurse-guided automated protocols (gastroscan), manual examinations performed by expert doctor, and a combined approach which involves both automated and manual methods to evaluate gastric surface visibility during magnetically controlled capsule endoscopy (MCCE). The automated protocols of gastroscan were established based on findings from our previous in vitro study, where we examined the accurate positioning of the magnetic vector in various parts of the stomach. The Anx AI software calculated visibility scores (0-100%) during each examination in real time. A total of 300 patients were divided into three groups: Group A (gastroscan), Group B (manual only), and Group C (gastroscan followed by manual examination). Group A (47 males, 53 females, average age:48), Group B (55 males, 45 females, average age: 45) and Group C (61 males, 39 females, average age: 52) achieved a mean visibility score of 75% (SD: 9), 79% (SD: 9) and 91% (SD: 7), respectively. Statistical analysis using ANOVA revealed a significant difference between the three groups. Post-hoc tests confirmed that Group C was significantly superior to both Group A ($p < 0.001$) and Group B ($p < 0.001$). However, no significant difference was observed between Group A and Group B ($p = 0.312$). Our results indicates that nurse-guided gastroscan, was not inferior to expert manual control. The integration of AI in all groups played a crucial role in assessing the completeness of the examination. AI facilitated real-time feedback, enabling nurses or experts to gauge whether the examination's completeness was sufficient or if additional time was warranted for improved visibility. This collaborative approach harnessing AI's capabilities alongside expert intervention demonstrates a promising strategy to enhance the diagnostic precision of capsule endoscopy.

Mo2033

ONE DEVICE FOR POEM: A SINGLE CENTER EXPERIENCE USING A NOVEL MULTIMODAL INSTRUMENT

Steven N. Steinway, Thomas J. Mathews, Michele B. Ryan, Christopher C. Thompson

Current peroral endoscopic myotomy (POEM) methods require the use of multiple tools to dissect, coagulate, inject, cut, and resect, which can add procedural time, cost, and complexity. The Speedboat Inject (Creo-Medical, UK) is a novel endoscopic device that integrates cutting, coagulation, and injection into a single device and has shown promising safety for endoscopic submucosal dissection **(Figure 1)**, however, it's data in POEM are limited. Here we report on our single center experience.

Methods: Data from patients who have undergone esophageal POEM using the Speedboat Inject over a two-year period from 3/17/2021 to 7/12/2023 were evaluated.

Results: A total of 18 patients who underwent esophageal POEM (E-POEM) for achalasia were included. The mean pre-procedure Eckhart score for achalasia patients was 8.4 ± 2.3. The mean distensibility index (DI) on pre-procedure EndoFlip was 2.1 ± 1.3 mm^2/mmHg. Technical success was achieved in 100%. There were no intra-procedural adverse events (AEs) per the ASGE lexicon, though bleeding requiring endoscopic treatment during the index procedure occurred in 50% (n=9) cases. The median post-procedure hospital stay was 1 day. There were no AEs within 30 days post-procedure. Seven patients underwent post-procedural esophagram. Esophagram-detected leak was present in one patient – this resolved with conservative management. The mean DI post-POEM was 4.2 ± 1.5 and was significantly lower than pre-POEM DI ($p<0.001$). The median length of follow-up was 6.4 months (range 3 to 23 months). Overall, clinical success, defined as Eckhart score ≤ 3 and no need for further intervention, was achieved in 83% (15 patients). The one failure had an Eckhart score of 4 at six months follow-up. The other two patients underwent successful repeat E-POEM. The mean Eckhart score was 1.7 ± 1.2 and was significantly improved post POEM ($p<0.001$) (**Table 1**). Additional, devices were required in 11% of cases (n=2) cases and included coagraspers in one case and and SB knife (Olympus, USA) in another.

Conclusions: The Creo-Medical Speedboat Inject is safe and effective as a single multimodal device for POEM in the treatment of Achalasia.

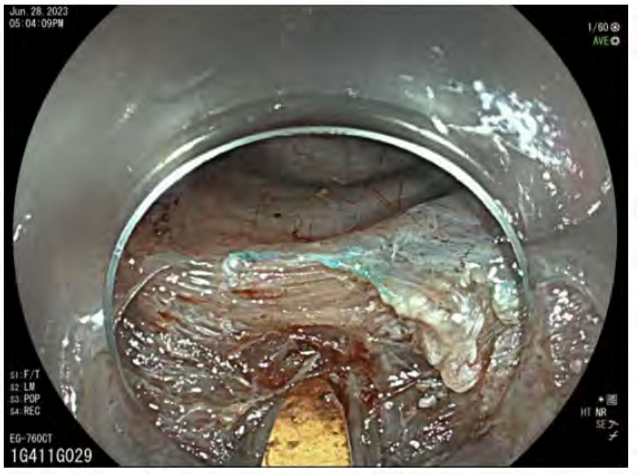

Figure 1: The Creo Speedboat is a novel multimodal instrument for endoscopic dissection, injection, coagulation, cutting, and resection. It uses bipolar radiofrequency for cutting, microwave energy for coagulation, and a 26-gauge extendable needle for injection.

Table 1. Demographic data of the included patients (n=18)

Age (years)	
Range	31-69
Mean (SD)	54 (10)
Gender (number, %)	
Female	11 (61)
ASA (Physical status classification, %)	
ASA 1	1 (5.5)
ASA 2	3 (16.7)
ASA 3	13 (72.3)
ASA 4	1 (5.5)
ASA 5	0 (0)
Distensibility index (mm²/mmHg)	
Mean (pre-myotomy, 40ml) (SD)	2.1 (1.3)
Mean (post-myotomy, 30ml) (SD)	4.2 (1.5)
Follow-up length (months)	
Median	6.4
Range	3-23
Mean Eckhart score (SD)	
Pre-procedure	8.4 (2.3)
Follow-up*	1.7 (1.2)

ASA American Society of Anesthesiologists, PS physical status, SD standard deviation
*Follow-up = most recent follow-up

Mo2034

MAGNETIC BALLOON-ASSISTED COLONOSCOPY IN PATIENTS WITH PROLONGED CECAL INTUBATION TIME: A SINGLE-ARM EUROPEAN MULTICENTER CLINICAL INVESTIGATION

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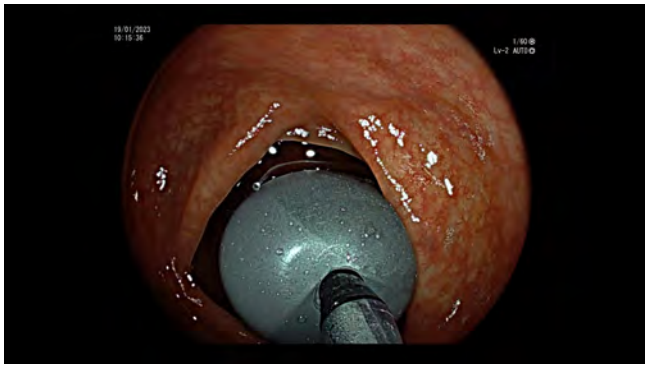
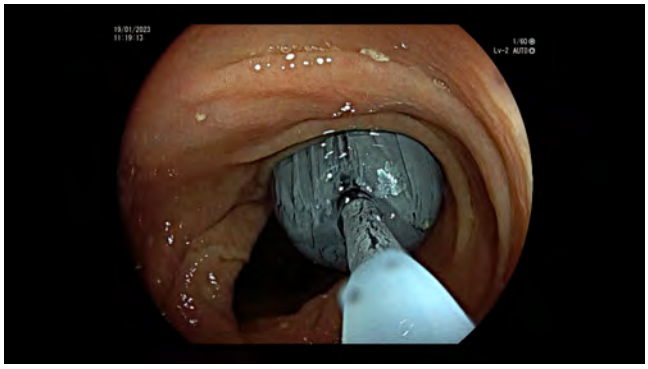
Aims Incomplete colonoscopy has been associated with higher risk of post-colonoscopy interval cancer. Colon loop formation is the main risk factor for incomplete colonoscopies. To address these challenges, a marked magnetic balloon technology add-on device was developed to facilitate colonoscope unlooping and progression. This study aims to assess the safety and efficacy of magnetic balloon-assisted colonoscopy in completing prolonged procedures.

Methods We conducted an open-label, single-arm, prospective, post-market, multicenter study in Italy, Belgium, and Germany. Outpatients undergoing diagnostic or surveillance colonoscopy were eligible if cecal intubation was not achieved within 10 minutes. Patients with angulated and fixed colon curves were excluded. Study technology consists of a balloon catheter that can be inserted on demand in the colonoscope tool channel, filled with a syringe of ferromagnetic fluid, and anchored with an external permanent magnet. Magnetic balloon anchorage stabilizes the scope tip and facilitates easy straightening. Primary endpoint was an incompletion rate ≤ 10%. Rate of serious adverse events was also collected. **Results** Between January and May 2023, a total of 38 patients who experienced an insertion time ≥10 minutes with incompleteness of colonoscopy, were included for the interim analysis. Technical success of the magnetic balloon technology was 100%. The cecum was successfully intubated in all 38 patients, achieving a colonoscopy completion rate of 100%, also corresponding to a 0% incompleteness rate (95% CI: 0% - 7.6%). Polyp detection rate was 45% (95% CI: 26% - 71%). **Conclusions** This clinical investigation provides evidence that magnetic balloon-assisted colonoscopy is both safe and effective in completing prolonged colonoscopies. This on-demand technology has the potential to serve as a useful tool for large-scale solution for facilitating colonoscopy completion in a subset of patients at a higher risk of incomplete procedures or adverse events.



Inflated Endorail Balloon Catheter



Magnetic Balloon Anchorage

Mo2035

LONG TERM OUTCOMES OF PATIENTS UNDERGOING EUS-GUIDED GASTROENTEROSTOMY FOR BENIGN GASTRIC OUTLET OBSTRUCTION: RESULTS OF A LARGE COLLABORATIVE MULTI-CENTER INTERNATIONAL COHORT STUDY

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Introduction: EUS-guided gastroenterostomy (EUS-GE) is increasingly recognized as a minimally invasive management alterative to surgical gastroenterostomy for gastric outlet obstruction (GOO). Despite its growing application, particularly for malignant GOO, there remains limited data on clinical outcomes of EUS-GE for benign etiologies of GOO. This study is one of the largest cohorts to evaluate the effectiveness, safety, and long term clinical outcomes of EUS-GE for treatment of benign GOO.

Methods: We conducted a multi-center international retrospective cohort study from November 2014 to November 2023 for adult patients undergoing EUS-GE for benign GOO. Patients with malignant GOO were excluded. Descriptive statistics summarized clinical, procedural, and follow up characteristics.

Results: 72 patients undergoing EUS-GE for benign GOO indications were identified with a mean age of 54.8 (17.8) and 42% (30) were female. Etiologies of benign GOO were diverse; surgical anastomotic stricture in 19% (14), peptic stricture in 17% (12), chronic pancreatitis in 15% (11), acute pancreatitis in 13% (9), superior mesenteric artery syndrome in 10% (7), caustic stricture in 6% (4), Crohn's disease strictures in 3% (2), duodenal hematoma in 3% (2) and others listed in Table 1. Average follow up time from initial procedure to last clinical follow up was 426.3 (443.9) days and to last endoscopic follow up was 417.8 (279.9) days. Technical success was achieved in 97% (70). Free-hand puncture technique 76% (55), AXIOS lumen apposing metal stents (LAMS) 97% (70) at a size of 20 mm x 10 mm 59% (40) with no dilation 71% (51) or co-axial stent placement 96% (69) were favored techniques. Rates of adverse events during procedure were 6% (4) with two stent misdeployments and two stent migrations/dislodgements. Post-procedural adverse events were low: early bleeding in 3% (2), late bleeding in 1% (1), early migration in 1% (1), late migration in 4% (3), and a gastrocolonic fistula in 1% (Table 2). GOO symptom score improved from 4% (3) on solid food diet pre-procedure to post-procedurally 72% (50) at 7 days, 82% (56) at 30 days, and 90% (57) at 60 days ($p<0.00001$). Majority of providers left LAMS in place unless clinical indication occurred 60% (39), 22% (14) replaced LAMS at a median time of 4.5 months, and 18% (12) removed LAMS at endoscopic follow up often due to resolution of clinical condition. On last endoscopic follow up, stent was patent and in place in 68% (40), stent occlusion occurred in 15% (11) most commonly due to tissue overgrowth 45% (5) with a median time of 213 [IQR 126 – 286].

Conclusion: EUS-GE can be performed for a variety of benign GOO conditions, with high rates of technical success and low rates of adverse events on long-term follow up, leading to a significant and sustained improvement in diet intake. Further prospective studies are needed.

Table 1: Demographics and Clinical Characteristics of Patients Undergoing EUS-GE for Benign GOO

Clinical Characteristics	N (%) or Average (SD)
Total Participants	72
Age, Mean (SD)	54.8 (17.8)
Sex	
Female	30 (42%)
Male	42 (58%)
Pre-BMI, Mean (SD)	21.6 (4.6)
Benign Indication for EUS-GE	
Surgical Anastomotic Stricture	14 (19%)
Peptic Stricture	12 (17%)
Chronic pancreatitis	11 (15%)
Acute Pancreatitis	9 (13%)
Superior Mesenteric Artery Syndrome	7 (10%)
Caustic Stricture	4 (6%)
Duodenal stenosis	2 (3%)
Crohn's Disease Strictures in Small Bowel	2 (3%)
Duodenal hematoma	2 (3%)
Aortoduodenal Syndrome	1 (1%)
Gastroparesis	1 (1%)
Pyloric Stenosis	1 (1%)
Duodenal diverticulum	1 (1%)
Small bowel obstruction	1 (1%)
Extrinsic compression from liver tuberculoma	1 (1%)
Duodenal polyposis burden in setting of Gardner's Syndrome	1 (1%)
Bouveret's Syndrome	1 (1%)
Embedded stent in duodenal bulb	1 (1%)
Surgical Candidate for Management of GOO?	
Yes	33 (46%)
No	29 (40%)
Unknown	10 (14%)
Total Endoscopic Follow Up Time, Average in Days (SD)	417.8 (279.9)
Longest Total Endoscopic Follow Up Time, in Days	1113
Total Clinical Follow Up Time, Average in Days (SD)	426.3 (443.9)
Longest Total Clinical Follow Up Time, in Days	2145

Table 2: Procedural Characteristics, Adverse Events of Patients Undergoing EUS-GE for Benign GOO

Procedural/Technical Characteristics	N (%) or Average (SD)
Technical Success	70 (97%)
Puncture Technique Style	
Guidewire	12 (17%)
Direct Puncture	55 (76%)
Balloon-Assisted	5 (7%)
LAMS Type	
AXIOS	70 (97%)
Spaxus	2 (3%)
LAMS Diameter and Length	
15 mm x 10 mm	23 (34%)
15 mm x 15 mm	5 (7%)
20 mm x 10 mm	40 (59%)
Dilation Post-LAMS Deployment	21 (29%)
Co-Axial Stent Placement Post-LAMS Deployment	3 (4%)
Adverse Events	**N (%) or Median (IQR)**
Post-Procedure Adverse Events	
Early Bleeding (< 48 Hrs)	2 (3%)
Late Bleeding (> 48 Hrs)	1 (1%)
Early Perforation (< 48 Hrs)	0 (0%)
Late Perforation (> 48 Hrs)	0 (0%)
Early Migration (< 48 Hrs)	1 (1%)
Late Migration (> 48 Hrs)	3 (4%)
Other: gastrocolic fistula	1 (1%)
Provider Management of LAMS	
Decided to Replace LAMS at Specified Interval	14 (22%)
Decided to Leave LAMS in Place Until Clinical Indication Arises	39 (60%)
Removal of LAMS At Follow Up	12 (18%)
Endoscopic Findings at Last Endoscopic Follow Up	
GE Patent with Stent in Place	40 (68%)
GE Not Patent with Stent in Place	6 (10%)
Stent Migration	1 (17%)
Stent Removed	12 (20%)
Did Stent Occlusion Ever Occur?	11 (15%)
Reasons for Stent Occlusion	
Food Debris	3 (27%)
Tissue Overgrowth	5 (45%)
Blood Clots	1 (9%)
Angulation	1 (9%)
Gastrocolonic Fistula	1 (9%)
"Time to Stent Occlusion From Initial Procedure, Median in Days [IQR]"	213 [126, 286]
Was the Stent Ever Upsized?	3 (5%)