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LAPAROSCOPIC JEJUNO-ILEAL BYPASS WITH TWO SWALLOWED LINEAR MAGNETS

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Introduction:
Minimally invasive surgery may be further advanced with the novel biofragmentable magnetic anastomosis compression system. Two magnets may be swallowed, or placed by flexible endoscopy, in a side-to-side magnetic jejuno-ileostomy (MagJI) bipartition for weight and type 2 diabetes (T2D) reduction. MagJI markedly reduces the major complications of enterotomy, stapling/suturing, and retained foreign materials.

Material and Method:
This video describes the technical aspects of a prospective first-in-human investigation of feasibility, safety, and preliminary efficacy in adults with body mass index (BMI, kg/m2) ≥30.0–≤40.0. After serial introduction via swallowing or endoscopy, linear magnets were laparoscopically guided to the distal ileum and proximal jejunum, where they were aligned. Magnets fused over 7-21 days, forming a jejuno-ileostomy.

Results:
Between 3-1-2024 and 6-30-2024, nine patients (mean BMI 37.3±1.1) with T2D (all on T2D medications; mean HbA1C 7.1±0.2 %, glucose 144.8±14.3 mg/dL) underwent MagJI. Mean procedure time: both magnets swallowed, 86.7±6.3 min; one magnet swallowed with second delivered endoscopically, 113.3±17.0 min. Ninety-day feasibility confirmed in 100.0%: 0.0% bleeding, leakage, infection, mortality. Most AEs grade I-II; no SAEs. At 6-month radiologic confirmation, all anastomoses were patent. Excess weight loss 17.5±2.8 kg; mean BMI reduction 2.2±0.3, HbA1C 6.1±0.1% ($p<0.01$), glucose 115.5±6.5 mg/dL ($p=0.19$); 83.0% dropped below 6.5% HbA1C and had markedly reduced anti-T2D medications.

Conclusion:
The swallowable, biofragmentable magnetic anastomosis system appeared to be feasible and safe in achieving incisionless, sutureless jejuno-ileostomy. The first-in-human MagJI procedure may offer minimally complicated anastomosis creation and moderate MBS weight loss and T2D reduction.

ISW26-441-03 (0822)

LAPAROSCOPIC REVERSAL OF MAGNETIC GASTRO-ILEOSTOMY

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Introduction:
Magnetic Gastro-Ileostomy for weight regain after laparoscopic sleeve gastrectomy has been recently introduced to decrease anastomotic-related complications, as it is delayed by several weeks. However, some patients may suffer from side effects like nausea and vomiting, dumping syndromes, preventing adequate protein nutrition, causing malnutrition and micronutrient deficiencies.

Material and Method:
This video describes a 41 y.o. female patient who at BMI of 46 kg/m2 had a Laparoscopic Sleeve Gastrectomy, but after Weight regain, she underwent a Laparoscopic Magnetic Gastro-ileostomy at BMI 40 kg/m2.

Results:
After rapid weight loss, a Lap Cholecystectomy with cholangiogram for sludge did not improve the persisting Nausea, Vomiting, Hypoalbuminemia and Hypoproteinemia. At BMI = 23 kg/m2 a Laparoscopic Reversal was performed with a linear stapler, and staple line single layer oversewing.

Conclusion:
Reversibility of the procedure was demonstrated in the present video with straightforward linear stapling. Safety of revisional strategies is paramount for both patients and surgeons.

ISW26-441-05 (0819)

LAPAROSCOPIC REVERSAL OF MAGNETIC DUODENO-ILEOSTOMY

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Introduction:
Magnetic Duodeno-Ileostomy for weight regain after sleeve gastrectomy has been recently introduced to decrease anastomotic-related complications, as it is delayed by several weeks. However, a small percentage of patients may suffer from side effects like nausea and vomiting, preventing adequate protein nutrition.

Material and Method:
This video describes a 55 yo patient who underwent a sleeve gastrectomy for severe obesity (BMI 41) and, after a successful weight loss, regained weight and, at BMI 33 kg/m2, underwent a magnetic duodeno-ileostomy.

Results:
After a rapid weight loss and severe symptoms, a cholecystectomy with cholangiogram did not improve persistent nausea, vomiting, hypokalemia, and hypoproteinemia. At BMI= 22 kg/m2 Laparoscopic Reversal was performed with a single firing of a laparoscopic linear stapler, without any complications. The video describes the technique and searches for other causes of malnutrition.

Conclusion:
Reversibility of the procedure was demonstrated in the present video with straightforward linear stapling. Safety of revisional strategies is paramount for both patients and surgeons.

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USE OF ICG IN BARIATRIC SURGERY, DOES IT MAKE THE DIFFERENCE?

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Introduction:
Bariatric surgery is the established treatment for obesity and its comorbidities, providing long-term weight loss and improved survival. Benefits include enhanced quality of life and reduced incidence of diabetes and hypertension. Staple line leakage after bariatric surgery is a feared complication, associated with sepsis, multiorgan failure, enterocutaneous fistulas, and mortality. Intraoperative methods to assess anastomotic integrity include methylene blue injection, endoscopic insufflation, and more recently, intraluminal indocyanine green (ICG) administration.

Material and Method:
A 32-year-old female with type 2 diabetes (4 years) and BMI 32 kg/m² underwent Roux-en-Y gastric bypass using a 4K Hypixel Mindray laparoscopic tower. A gastric pouch was created over a 40 Fr bougie, followed by gastrojejunostomy and jejunojejunostomy with a 45 mm articulating stapler. Leak testing was performed with 3 mL ICG (25 mg in 60 mL saline) intraluminally, revealing posterior gastrojejunostomy extravasation. A subsequent 50 mL methylene blue test confirmed leakage at the same site. The defect was repaired with continuous 2-0 Monocryl sutures, and post-repair leak tests were negative.

Results:
The patient tolerated the procedure without complications, initiated a liquid diet 8 hours postoperatively, and was discharged 24 hours after surgery.

Conclusion:
Intraluminal ICG leak testing provides a clear, highly visible fluorescence for defect localization, with the advantage of switching to standard illumination for direct visualization. Compared to methylene blue or endoscopic insufflation, ICG offers precise identification without increasing operative time or costs. This case demonstrates its feasibility and utility in bariatric surgery leak assessment.