

S3190

Endoscopic Full-Thickness Resection of a Gastrointestinal Stromal Tumor Using a Double-Endoscope Snare Technique

Jade Wang, MD^{1,*}, Jeong Hoon Kim, MD¹, Kamal Hassan, MD², Kartik Sampath, MD¹.
¹Weill Cornell Medicine, New York, NY; ²New York-Presbyterian/Queens, New York, NY.

Introduction: Endoscopic submucosal dissection with full thickness resection (ESD/EFTR) has been established as an alternative to surgery for removal of gastrointestinal stromal tumors (GISTs). We describe a case of successful EFTR using a double-endoscope snare traction technique.

Case Description/Methods: A 76-year-old woman presented with abdominal pain and constipation. Computed tomography abdomen/pelvis and subsequent upper endoscopy/endoscopic ultrasound with fine needle biopsy revealed a 2.5-cm GIST localized to layers 3 and 4 (Figure 1). A plan was made to proceed with ESD. The lesion was identified on endoscopy and dissection was performed in gastric retroflexion. After initial lift with saline/methylene blue, the mucosa was incised transversely along the caudal edge with a hybrid knife into the submucosa. Using repeated submucosal injections followed by short bursts of needle knife dissection, the submucosal space below the lesion was dissected. This revealed that the lesion appeared to be arising from the muscularis propria layer with an exophytic component. The decision was made to perform EFTR in order to remove the lesion en bloc. Subsequently, one edge of the lesion remained tethered proximally. A snare was used to grab the lesion to provide traction, and the scope was removed per os with the snare remaining attached to the lesion. A second gastroscope was inserted alongside the snare holding traction on the lesion, and the proximal end of the lesion was finally dissected completely via IT2 knife. The lesion was then removed per os with the snare. The defect was examined and confirmed to be full thickness. The defect was closed via 2-layer endoscopic suturing with good tissue approximation. Post-closure intra-operative gastrogram was negative for leak. Subsequent upper gastrointestinal tract series was negative for gastric outlet obstruction. Pathology revealed complete en bloc resection of the tumor. At 12-day follow-up, the patient was recovering well.

Discussion: This case demonstrates that ESD/EFTR is a safe, efficacious, and expeditious alternative to surgery for well-circumscribed GISTs. We confirm that the double-endoscope snare traction technique allows the endoscopist to more easily manipulate the tumor while preventing tissue loss into the peritoneum and facilitating visualization of the dissection plane. Lastly, endoscopic suturing can be used in such cases to provide durable closure of defects without leak.

Watch the video: <https://tinyurl.com/5ytzekz7>



[3190] **Figure 1.** Computed tomography abdomen/pelvis showing a gastrointestinal stromal tumor located along the mid-greater curvature of the stomach (yellow circle).

S3191

Successful Closure of a Delayed Persistent Duodenal Perforation Using Endoscopic Suturing After Failed Surgical Intervention

Jameel Alp, MD^{1,*}, Rahul Karna, MD², Natalie Wilson, MD², Mohammad Bilal, MD³.

¹University of Minnesota, Minnetonka, MN; ²University of Minnesota, Minneapolis, MN; ³University of Minnesota and Minneapolis Veterans Affairs Health Care System, Minneapolis, MN.

Introduction: Delayed duodenal perforations are challenging to manage endoscopically due to ulcer fibrosis and the angulations of the duodenum. However, with advances in endoscopic techniques, endoscopic closure can be possible. Here we present a case of successful endoscopic management of a delayed duodenal perforation using a full-thickness suturing device.

Case Description/Methods: An 80-year-old man with metastatic melanoma on nivolumab and immune checkpoint inhibitor colitis on steroid therapy presented with abdominal pain. Computed tomography scan revealed pneumoperitoneum and suspected perforation on the anterior gastroduodenal wall. Urgent laparoscopy was performed which showed purulent peritonitis with omentum adhering to the gastroduodenal wall, but no obvious perforation was seen. A Jackson-Pratt (JP) drain was placed. Post-operatively, the patient had severe pain and bile-tinged serous fluid from the JP drain. A subsequent computed tomography scan with oral contrast showed a persistent duodenal leak and increased pneumoperitoneum. The patient was referred to advanced endoscopy, and an esophagogastroduodenoscopy was performed which revealed a 15 mm duodenal ulcer at the junction of the 1st and 2nd portion of the duodenum, with a focal defect at the apex of the ulcer consistent with a full-thickness perforation. Decision was made to attempt endoscopic closure. Argon plasma coagulation was used to ablate ulcer edges to promote granulation. Full-thickness endoscopic closure was then performed using the over-the-scope suturing device. Four bites were placed in a "Z" configuration and suture was cinched. Three additional endoclips were placed for reinforcement at the proximal end of the defect. A nasoduodenal tube was placed and connected to low intermittent wall suction. Follow-up imaging with oral contrast did not show any contrast extravasation, and the patient was transitioned to enteral nutrition and discharged. The JP drain was removed after 2 weeks, and patient has not had recurrence of duodenal leak on 6 months follow-up.

Discussion: Our case suggests that endoscopic full-thickness suturing can be effectively used in the duodenum for closure of delayed duodenal perforations and leaks in combination with percutaneous drain placement.

Watch the video: <https://tinyurl.com/bdfpfz4>

S3192

Magnetic Balloon-Assisted Endoscopic Retrograde Cholangiopancreatography in Surgical Altered Anatomy

Alessandro Repici, MD¹, Roberto de Sire, MD^{1,*}, Marco Spadaccini, MD¹, Alessandro Fugazza, MD², Gianluca Franchellucci, MD², Matteo Colombo, MD², Marta Andreozzi, MD², Gaia Pellegatta, MD², Davide Massimi, MD¹, Antonio Capogreco, MD², Ludovico Alfarone, MD², Roberta Maselli, MD², Elisabetta Mastrorocco, MD², Cesare Hassan, MD².

¹Humanitas Research Hospital, Rozzano, Lombardia, Italy; ²Humanitas Research Hospital, Milan, Lombardia, Italy.

Introduction: A 93-year-old man with a history of gastrectomy with Roux-en-Y anastomosis for a previous gastric cancer presented at the emergency room with severe cholangitis. A computed tomography scan performed in the emergency room department revealed the presence of a single stone measuring approximately 15 mm in the common bile duct. Additionally, the computed tomography scan revealed an apparent short segment as the afferent limb, suggesting us to try to reach the major papilla in order to perform endoscopic retrograde cholangiopancreatography.

Case Description/Methods: A pediatric colonoscope 160 cm length, 11.5 mm caliber, 3.2 mm working channel with distal attachment was utilized. The exploration of the y-en-Roux anastomosis was conducted through an underwater technique to prevent loop dilation (and lengthening) due to CO₂ insufflation. Despite the relatively short segment we expected, after several attempts we fail to reach the papillary region do

to considerable looping, and a magnetic balloon-assisted technology device was employed. This device comprises an external magnet and a through-the-scope balloon catheter filled by a second operator with a ferromagnetic fluid contained by a preloaded syringe. When the balloon is filled with the magnetic solution, the magnet was activated and used to anchor the balloon to the abdominal wall. The balloon fixation allows the endoscopist to solve the loop through scope retraction and straightening, avoiding the scope to flip back during the process.

Discussion: During the bowel exploration, several bowel loops were formed. Through the fluoroscopic view when the bowel loop had not solved with standard technique it was successfully solved by the magnetic balloon assisted technique. The papilla was reached after 22 minutes of exploration without significant bowel loop formation. This position allowed to cannulate the major papilla. Cannulation was performed using with a 4.4 Fr papillotomy preloaded with a 0.035 Fr guidewire. Considering the septic condition and the unstable parameters a plastic stent was placed, and a second session will be considered in a stable, elective setting. To date, this is the first reported case of a magnetic-assisted entero-endoscopic retrograde cholangiopancreatography. that has been successfully reported in the literature. This device, fitting different endoscopes, may be a useful on demand help in case of surgically altered anatomy and need of biliary access.

Watch the video: <https://tinyurl.com/38znrn7n>

S3193

Drowning in Food? Management of an Esophagojejunal Anastomotic Dehiscence through Endoluminal Vacuum Therapy

Kazi T. Haque, MD^{1,*}, Nitish Mittal, MD², Iyad Al-bustami, MD, MPH(c)³, Ingrid Schwartz, MD⁴, Jeffrey H. Lee, MD, MPH, FACP⁴, Emmanuel Coronel, MD⁴.

¹University of Texas Health, McGovern Medical School, Pearland, TX; ²University of Texas Health, McGovern Medical School, Houston, TX; ³Brooklyn Hospital Center, Houston, TX; ⁴MD Anderson Cancer Center, Houston, TX.

Introduction: Esophagojejunal (EJ) anastomosis after a gastrectomy is common, but one deadly complication is an anastomotic leak/dehiscence. We highlight a case of an EJ anastomosis leak managed by endoluminal vacuum therapy (EVT) with stent placement.

Case Description/Methods: A 43-year-old woman with gastric adenocarcinoma underwent total gastrectomy that was complicated by an EJ anastomotic leak. Treated for gastric cancer in 2012, she was in remission until 2023. Due to dysphagia, she underwent an esophagogastroduodenoscopy (EGD) with biopsies that revealed poorly differentiated signet ring adenocarcinoma. Endoscopic ultrasound later showed an irregular nodule in the gastric cardia. Piecemeal endoscopic mucosal resection and biopsies confirmed the diagnosis and revealed submucosal invasion with positive distal margins. She then underwent robot-assisted laparoscopy with total gastrectomy. A few days later, she became hypoxic with computed tomography chest/abdomen showed bilateral pleural effusions and EJ anastomotic leak requiring a percutaneous abdominal drain. An interdisciplinary discussion between gastroenterology and surgery favored pursuing EVT placement with a stent. EGD then showed a large fistula at the level of anastomosis with ~50% dehiscence. The EV was successfully placed, and EJ anastomosis was stented with an 18x119 mm fully covered stent. A week later, EGD showed granulation tissue found at the level of the anastomosis. Contrast injection did not show a leak. The EV and stent were replaced. Next week, EGD continued to show mucosal healing. Due to the overall improvement, the stent was replaced without EV placement. Afterwards, the patient tolerated a clear liquid diet, and computed tomography scan showed an improvement in abdominal fluid collection. Final EGD, 3 weeks later, showed overall improvement with epithelization of the mucosa at the anastomosis, and she was later discharged.

Discussion: 30-day mortality rate of patients with anastomotic leaks range from 17-35% compared to 2%-3% of patients without leaks. To provide a minimally invasive solution for anastomotic leaks, self-expanding stents acted as first line therapy before EVT. EVT outperforms stent placement with an 84.4% closure rate compared to 53.8% for stents. Advantages of EVT over stent therapy include providing optimal drainage of the wound preventing peritonitis and abscess formation as well as providing clear visualization of the wound cavity. Hence, our case sheds light on the relevance and utility of EVT with stents in EJ anastomotic leaks.

Watch the video: <https://tinyurl.com/5xawhbv7>

S3194

Taming Type 3 Achalasia and Co-Existing Diverticula With POEM

Mhd Kutaiba Albuni, MD*, Mohamad Hijazi, MD, Venkata Muddana, MD.

TriHealth Good Samaritan Hospital, Cincinnati, OH.

Introduction: Epiphaneic esophageal diverticulum is a rare condition often associated with an underlying motility disorder, such as achalasia. Diagnosis involves upper digestive endoscopy and barium esophagogram, with manometry providing additional insights. Treatment may involve surgical options like laparoscopic Heller myotomy with partial fundoplication or selective diverticulectomy. Peroral endoscopic myotomy (POEM) offers effective symptom relief with minimal invasiveness, particularly for patients ineligible for surgery. A recent meta-analysis demonstrated that diverticular POEM is effective and safe.

Case Description/Methods: The patient is a 71-year-old woman who has undergone several procedures in the past, including laparoscopic correction of hiatal hernia, Nissen fundoplication, Heller myotomy, Nissen removal, Dor fundoplication, and open surgery for a recurrence of hiatal hernia. She visited our clinic complaining of progressive dysphagia and night-time regurgitation 5 years later. The barium esophagogram showed narrowing at the gastroesophageal junction, esophageal dysmotility, and tertiary contractions in the mid-to-distal esophagus and a 1-2 cm pulsion-type diverticulum in the distal esophagus. EGD confirmed the presence of a diverticulum above the distal esophagus, proximal to the hypercontractile segment. Elected to perform POEM procedure. Gastroesophageal junction is seen at 36 cm with a 2 cm mucosal incision created at 18 cm on the posterior wall. During tunnel creation, a 2 cm pseudodiverticulum was noted in the distal esophagus, and an additional diverticulum was seen in the mid-esophagus. After esophageal tunneling, a 12 cm myotomy was performed from 23 cm to 35 cm, including the diverticular sites. Post myotomy, a 1 cm area of mucosotomy was identified at the site of the esophageal diverticulum in the distal esophagus, with an additional minor mucosal injury immediately distal to the diverticulum. We decided to close with over the scope clip, successfully closing the initial mucosotomy with an additional OTSC clip, closing the second superficial injury. Following this, the initial mucosal incision was closed. Post procedure esophagogram confirmed the absence of any leak and resolution of the diverticula. The patient was observed overnight and discharged on clear liquids; she is symptom-free and tolerating food by mouth. A 4-month follow-up showed an improved Eckardt score from 7 to 2.

Discussion: This case demonstrates a successful POEM in this technically challenging clinical situation.

Watch the video: <https://tinyurl.com/ye25jp84>

S3195

Endoscopic Ultrasound-Guided Gastroenterostomy: An Animated Educational Video Review

Arjun Chatterjee, MD^{1,*}, Raj Jessica Thomas, MD², Zehra Naseem, MD¹, Amandeep Singh, MD², Prabhleen Chahal, MD¹.

¹Cleveland Clinic Foundation, Cleveland, OH; ²Cleveland Clinic Akron General, Akron, OH.

Introduction: Gastric outlet obstruction (GOO) has been traditionally treated surgically or with duodenal stent. Endoscopic ultrasound-guided gastroenterostomy (EUS-GE) has recently emerged as an alternative minimally invasive technique for managing benign and malignant GOO. This animated educational video reviews 3 EUS-GE techniques: direct, EUS-guided balloon-occluded gastrojejunostomy bypass (EPASS), and orojejunal tube-facilitated contrast-enhanced method.

Case Description/Methods: An 82-year-old man with a malignant bladder tumor presented with worsening nausea, vomiting, and abdominal cramping. Computed tomography scan showed duodenal wall thickening causing GOO. Endoscopy revealed severe stenosis of second part of duodenum. Using orojejunal tube-facilitated contrast-enhanced EUS-GE technique, a lumen apposing metal stent (LAMS) was placed to create EUS-GE (Figure 1). His symptoms resolved completely, and a small bowel follow-through showed GOO resolution and a patent gastro-jejunal stent.

Discussion: Direct EUS-GE method: a linear endoscope is used to identify the jejunal or distal duodenum loop. Under EUS-guidance, a 19-gauge needle is used to instill a 250cc contrast mixture, followed by deploying a cautery-enhanced LAMS. Safety checks ensure proper alignment. Orojejunal tube-facilitated contrast-enhanced technique: standard or therapeutic endoscope is advanced to the obstruction site. If the endoscope can pass, a guidewire is placed in the distal duodenum or proximal jejunum and left in place as the endoscope is withdrawn. If it cannot pass, a flexible guidewire (0.025 or 0.035") is advanced beyond the obstruction under fluoroscopic guidance. A 7 or 10 Fr orojejunal catheter is then advanced past the obstruction. The linear endoscope is advanced alongside the catheter, and 250cc of contrast mixture is instilled into the small bowel. Under EUS-guidance, the distended small bowel loop is identified from the stomach, and a cautery-enhanced LAMS is deployed. EPASS method uses a double-balloon enteric tube to improve sonographic visualization. An upper endoscope is advanced into the duodenum, followed by a rigid guidewire beyond the target bowel loop. The endoscope is removed, and a double-balloon tube is advanced over the wire. After the balloons are positioned in the duodenum and jejunum, they are filled with contrast to create a stable, distended bowel segment for LAMS placement. Based on the endoscopist's experience and instrument availability either of these EUS-guided techniques can be used for the successful creation of gastroenterostomy.

Watch the video: <https://tinyurl.com/3633jn4w>