VC01 SUBMUCOSAL TUNNELING ENDOCOSCOPIC RESECTION OF A LARGE OESOPHAGEAL LEIOMYOMA

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Introduction: Leiomyomas are benign submucosal tumours and although rare in the upper GI tract are most commonly found in the oesophagus. As these tumours usually involve the deep layers with extension into the muscle, submucosal endoscopic resection of these large tumours has been limited by patient’s requiring invasive surgery. However the recent development of a new endoscopic technique, Submucosal Tunneling Endoscopic Resection (STER) has now allowed the ability to resect these tumours safely without the associated morbidity of surgery. Aims & Methods: Aims: 1) Discuss management of submucosal tumours in the upper GI tract. 2) Demonstrate the STER technique in resection large leiomyoma of the oesophagus. 3) How to treat peri-procedural complications such as bleeding associated with this technique. Methods: Endoscopic Video demonstrating the above.

Results: This video will demonstrate: 1) The successful endoscopic resection of a large leiomyoma of the oesophagus using the STER technique. 2) How to treat associated peri-procedural complications such as minor bleeding during the procedure.

Conclusion: STER is safe and effective therapeutic modality in treating large submucosal tumours of the Upper GI tract.

Disclosure of Interest: All authors have declared no conflicts of interest.

VC02 TEMPORARY BILIARY METAL STENT PLACEMENT IN THE CYSTIC DUCT AS AN AID TO CHOLANGIOSCOPY-GUIDED LASER LITHOTRIPSY OF MIRIZZI SYNDROME (MS)

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Introduction: Cholangioscopy-guided lithotripsy is a minimally invasive alternative to surgical treatment of Mirizzi Syndrome (MS). Cholangioscopic lithotripsy and cystic duct clearance is usually labour intensive and may require several treatment sessions.

Aims & Methods: A 54 year-old man underwent single-operator cholangioscopy and Holmium laser lithotripsy (LL) for type I MS. Stone fragments failed to be cleared from the cystic duct. A biliary fully covered self-expandable metal stent (FC-SEMS) was placed across the cyst duct, whereas the common bile duct (CBD) was drained with a plastic stent. The FC-SEMS was removed at follow-up ERCP. Stone fragments were easily cleared through the temporarily expanded cystic duct.

Results: Endoscopic therapy was carried out in three sessions. At baseline ERCP, a 16-mm stone pressing on the CBD was noted and urgent decompression of the CBD was achieved with a 10F plastic stent. Two weeks later, elective single-operator cholangioscopy with successful LL fragmentation of the stone was performed. Larger stone fragments were individually removed under cholangioscopy using a tripod forceps. However, complete clearance using balloon catheters or previously inserted guidewires (GW) were useful to negotiate the strictures through the MS because it was an easy branch in this patient. Finally, we achieved successful clearance of the MS interstices, because a confluence of GW and MS is a site to be negotiated. After deployment, the general condition of the patient improved. He has been well for more than 12 months.

Conclusion: After deployment, the general condition of the patient improved. He has been well for more than 12 months.

Disclosure of Interest: All authors have declared no conflicts of interest.

VC03 METACHRONOUS DEPLOYMENT OF FOUR PLASTIC AND FOUR METALLIC STENTS IN THE PATIENT WITH HILAR BILE DUCT CARCINOMA SUCCESSFULLY ACHIEVED ONLY VIA ENDOCOSCOPIC PROCEDURE

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Introduction: Endoscopic biliary decompression performed on the patient with hilar biliary strictures is technically demanding. We successfully deployed four plastic stents (PS) and four metallic stents (MS) metachronously on the same patient to ameliorate jaundice and cholangitis. We will present the procedure in detail with video.

Aims & Methods: Seventy-two year old patient with jaundice was referred to our hospital. He had hilar bile duct carcinoma and his serum bilirubin level was 23.5 mg/dl. Since the carcinoma involved the bifurcation of bile duct, the intrahepatic bile ducts were dilated markedly. Furthermore, since the left portal vein was obliterated by the tumor invasion, the left lobe of the liver became very atrophic. At that time, cholangitis was not complicated. To ameliorate jaundice, we inserted two PSs (ThroughPass K-hilar, Gadelius Medical, Tokyo, Japan) into the right anterior branch (B8) and posterior branch (B6), respectively, because we thought the decompression of left intraductic hepatics was meaningless. Even after successful deployment of plastic stents, the decrease of serum bilirubin level was far from easy despite the exchange of PSs. To make matters worse, the patient suffered from fever due to segmental cholangitis. The CT disclosed the cholangitis in the left lobe. Therefore, we added two more PSs in the B2 and B3 branches of the left lobe. The correct position of four PSs was certified under CT imaging. His cholangitis and jaundice was once improved, but one month later, recurrent cholangitis happened due to hemobilia. Since cholangitis did not improve despite the exchange of four PSs, we employed four MSs (Zeostent, Tokyo, Japan) to ameliorate jaundice and cholangitis. We employed a partial stent-in-stent (PSIS) procedure, because we had to decompress four individual segments to avoid recurrent cholangitis. After inserting 3 guidewires (GW) into B2, B3, and B6, we deployed the first MS in B6. As a reference GW, two previously inserted GWs were used to negotiate the strictures through the MS interstices, because a confluence of GW and MS is a site to be negotiated. After deployment of MS in the B3 and B2, we inserted GW into B8 branch, because it was an easy branch in this patient. Finally, we achieved successful deployment of the fourth MS.

Results: After deployment, the general condition of the patient improved. He has been well for more than 12 months.

Conclusion: Four-branched PSIS deployment of laser-etching MS is feasible and more advantageous than side-by-side method because of no excessive dilatation of the hilum through multiple MS.

Disclosure of Interest: H. Kawamoto: Advisor Piolax Medical Devices, Gadelius Medical

VC04 CHRONIC TRACHEOESOPHAGEAL FISTULA SUCCESSFULLY TREATED USING AMPLATZER SEPTAL OCCLUDER

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Aims & Methods: ASO has been used in off-label closure of GI fistulae (2). It’s composed by a nitinol mesh with 2 self-expandable disks connected by a waist (dumbbell shape) (3). ASO permits the mechanical closure of the two fistula sides making a potentially platform for next tissue ingrowth (4). In our report, endoscopic TEF obliteration using ASO was performed in a 44-years-old male who suffering from submucosal tumours of the upper GI tract.

Disclosure of Interest: All authors have declared no conflicts of interest.

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patient with tracheostomy and a long intubation story due to thoracic politrauma with multiple fractures. Following several aspiration pneumonia episodes, TEF was diagnosed and subsequently referred to surgery (anterior cervicotomy with fistulorafia). After 7 months the patient developed dysphagia. Endoscopy showed recurrence of TEF that was unsuccessfully treated by acrylic glue’s submucosal injection. According to the poor clinical conditions and the failure of surgical and endoscopic therapy, ASO positioning was planned. The procedure was performed using a gastroscope (GF-ITTH190, Olympus Europe) and a bronchoscope (BF-IT180, Olympus Europe). TEF was cannulated by a papillotome (℃-type, 30mm, Boston Scientific) and a 0.025in guidewire (Jugwire, Boston Scientific) was inserted into the left main bronchial segment. The wire was then grasped with a biopsy forceps (Endowab, FB-231D, Olympus Europe) through the bronchoscope providing a countertraction by maintaining a straightened position. Under fluoroscopic view, ASO catheter was then introduced over the wire. Under direct endoscopic control, we released both ends of ASO in trachea and esophagus, respectively. Final contrast medium injection confirmed successful TEF closure. Procedure was uneventful.

Introduction: Various endoscopic stents (TES) can be congenital or acquired, malignant or nonmalignant and often caused by tracheitis necrosis following prolonged intubation, tracheostomy or intubation maneuvers. After TEF diagnosis, enteral feeding and dietary support combined with surgery is the gold standard treatment in MDI approach. The novel large defect-ligating device is able to grasping of tissue prior to dissection. The outer segment of the scissor arms are insulated and the inner segment of the arms have thin cutting blades that allow for patients in critical conditions with severe comorbidities and TEF recurrence. Results: The patient was discharged in 7 days without symptoms. A 4-weeks clinical, endoscopic and radiologic revaluation, confirmed TEF was closed and patient remained asymptomatic.

Disclosure of Interest: All authors have declared no conflicts of interest.

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VC05 A NOVEL SCISSOR AND LOOP TECHNIQUE FOR ENDOSCOPIC RESECTION AND CLOSURE OF ESD DEFECTS: A VIDEO ABSTRACT ON THE RESECTION OF A GASTRIC SUBMUCOSAL TUMOUR

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Introduction: Endoscopic submucosal dissection (ESD) was a technique developed in Japan to enable curative en-bloc resection of early gastrointestinal neo-plasms. This technique has been slow to be adopted in the West due to the lack of scope of training, endoscopic knives requiring significant manual dexterity and a high rate of complications. Efforts have been made to improve training but until recently, there have been few advances improving endoscopic knife technique and the development of devices to reduce complications of ESD.

Aims & Methods: We present a video to the demonstrate the utility of a novel scissor-type knife and a large defect ligation device in the endoscopic resection of a large gastric submucosal tumour. Various types of endoscopic knives such as the insulated tip, hook, triangular tip and knife handles have traditionally been used in ESD. The scissor-type knife was developed to facilitate the accurate grasping of tissue prior to dissection. The outer segment of the scissor arms are insulated and the inner segment of the arms have thin cutting blades that allow for patients in critical conditions with severe comorbidities and TEF recurrence. Results: A 72-year-old man was incidentally found to have a large gastric submucosal tumour in the body (lesser curve) of his stomach. The lesion was assessed endoscopically and the surface pattern on enhanced imaging showed normal gastric mucosa. Endoscopic ultrasound showed that the lesion was clear of submucosa. The case was discussed in the cancer multi-disciplinary team meeting (MDT). Both the MDT and the patient agreed that the best option was to proceed with endoscopic resection. The access to the proximal aspect of the pylor part that is facing the fundus was difficult with the traditional endoscopic needle type and insulated tip knives. A scissor-type knife enabled controlled and measured mucosal incision and submucosal dissection even on retroflexion. Haemostasis was maintained using the scissor type knife, which was able to carry out the function of a haemostatic forceps, negating the need to change instruments during the procedure. The large resection defect was then closed using a novel ligating device that is approximated like a purse string. There were no immediate or late complications of the procedure. The patient was discharged home the next morning.

Conclusion: Novel scissor-type knives are technically easy to use even when the access is challenging. This type of knife can perform mucosal incision, submucosal dissection and maintain haemostasis effectively. A detachable large defect ligation is a simple device that can effectively close large ESD defects. Both novel devices have the potential to help facilitate the uptake of ESD in the West.

Disclosure of Interest: All authors have declared no conflicts of interest.

VC06 RENDEZVOUS BILARY RECANALIZATION OF COMPLETE BILARY OBSTRUCTION WITH DIRECT PERORAL AND PERCUTANEOUS TRANŞHEPATIC CHOLANGIOSCOPY

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Introduction: Anastomotic biliary stricture post liver transplantation remains one of the major cause of morbidity and mortality. The reported incidence of biliary stricture is range from 16-32%. Currently, endoscopic therapy is the first line of treatment for anastomotic stricture with ERCP and PTBD. However, the novel devices have the potential to help facilitate the uptake of ESD in the West.

Disclosure of Interest: All authors have declared no conflicts of interest.

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4. Paulo Rogério Scordamaglio et all. Endoscopic treatment of tracheobronchial fistula: a novel technique for patients with critical conditions with severe comorbidities and TEF recurrence.

Conclusion: Combined antegrade and retrograde cholangioscopy technique is considered when conventional techniques fail.

Disclosure of Interest: M.A. Khashab: Mouen Khashab is a consultant for Boston Scientific. All other authors have declared no conflicts of interest.

VC07 EUS GUIDED CONTINUOUS CATHETER THROMBOLYSIS OF PORTAL VENOUS SYSTEM

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Introduction: Acute portal vein thrombosis (PVT) is an uncommon and insidious condition that often presents with delay in diagnosis and therapy. It can be associated with significant morbidity and mortality. There are no uniform protocols practiced for the effective management of acute portal vein thrombosis. Treatment of PVT currently ranges from observation with no active therapy to anticoagulation or thrombo-embolectomy, transcatheter thrombo-embolectomy and portosystemic shunt placement. The goal for treatment consists of resolution of symptoms, prevention and treatment of mesenteric ischemia, and prevention of thrombus extension. Usually, systemic anticoagulation is used. Catheter-based interventional therapy offers a safe and effective option for treatment of symptomatic portosystemic venous thrombosis refractory to medical therapy.
Aims & Methods: An 18 years old female presented with intractable upper abdomen distending. Abdominal and MRI showed extensive thrombosis of portal venous system without bowel infarction. A diagnosis of acute portal vein thrombosis was made and she was started on anticoagulants. The intractable pain persisted and EUS guided thrombolysis was performed. The patient showed significant relief and the symptoms of the patient disappeared within four hours. The infusion was continued and follow-up of the characteristics of the thrombus were done by daily ultrasound and CT scan after 48 hours. The patient had melena after 72 hours and the anti-coagulant infusion was stopped. She required further endoscopy for hemodynamic stabilization. The endoscopy was removed after six hours of stopping the infusion. After removal of the catheter side viewing endoscopy was done which showed there was active bleeding from the site of injection. Adrenaline Injection failed to stop the bleed. Two clips were applied but the bleed continued. A G-EYE balloon was inflated for five minutes in duodenum. No further undue bleeding was noted. Her prothrombotic workup suggested the deficiency of protein C and protein S. The patient was discharged on 7th day with a satisfactory, clinical and radiological response. A follow-up after three weeks showed flow in splenic and portal veins.

Results: The intractable upper abdominal pain with high index of suspicion showed an extensive thrombus in portal vein which was managed conservatively without any response. EUS guided thrombolysis showed a remarkable improvement.

Conclusion: This case shows a life threatening situation with impending bowel gangrene in which EUS guided continuous catheter thrombolysis was done. The major complication was bleeding from the site of puncture into the portal vein. It was tackled by the methods mentioned above. Further studies will be required for this new method of thrombolysis.

Disclosure of Interest: All authors have declared no conflicts of interest.

VC09 COMBINED LAPAROSCOPIC AND ENDOSCOPIC FULL THICKNESS RESECTION APPROACH FOR GASTRO-INTESTINAL Stromal tumors (GIST) in adults: a series of 3 cases with video

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Introduction: Endo-gastric junction (EGJ) location is rarely for gastro-intestinal stromal tumors (GIST) and resection remains highly challenging for posterior/fundic intraluminal tumors. Laparoscopic endoscopic cooperative surgery (LECS) is a new combined minimally invasive resection method for such situations. The aim is to report our growing experience on LECS in difficult gastric GISTs resections, presenting one video and the outcomes of 3 cases.

Aims & Methods: Between 2014 and 2016, three patients with posterior EGJ GISTs have been operated in our center. They initially presented with unspecific abdominal pain in 2 cases and melena in one case. The diagnosis was made by upper GI endoscopy, and all the patients underwent a complete check-up includ- ing EUS and CT scan. The tumors were resected using either LECS (PERA) and CT-scans.

All the tumors were low grade (Ki67 < 5%) without metastases. Each case was then discussed in multidisciplinary meeting including endoscopists and surgeons, with patients’ informed consent approved. The procedure was performed in the operating room, involving a digestive surgeon and an endoscopist that used a large channel gastroscope. The LECS technical steps were: 1/ surgical liberation of the esophagus; 2/ excision of GIST; 3/ full thickness incision intersecting the % of the lesion, by endoscopy (Hook knife, Olympus, Japan); 3/ Exposure of the tumor pedicle to the surgeon using forceps foregut excision and resection of the lesion; 5/ Removal of the tumor and gastrotomy closure with separate suture.

Results: In total 3 patients (2M, 1W) aged of 31, 59 and 73 years old were operated according to this procedure. The lesions measured 5.5 cm, 4.5 cm, and 6 cm, respectively. The mean procedural time was 106 minutes, without intra-operative complication. The clinical course was simple with early feeding and the patients were discharged at post-operative day 5. The final pathological analysis confirmed the diagnosis of GIST, all of them being completely resected with safe margins, and low grade. None had recurrence, after a follow-up of 12 to 28 months.

Conclusion: LECS following a rigorous surgical protocol is safe and offers easiest access to the tumor and lower morbidity compared to laparoscopic GIST resections. These cases underline the importance of collaboration between surgeons and endoscopists, especially in complex situations.

Disclosure of Interest: M. Barthet: Consultant for Boston Scientific. All other authors have declared no conflicts of interest.

VC10 TRACTION STRATEGY WITH CLIPS AND RUBBER BAND FOR ENLARGE EN Bloc ENDOSCOPIC SUBMUCCOSAL DISSECTION OF LATERALLY SPREADING TUMORS INVAADING THE APPENDIX

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Introduction: Endoscopic submucosal dissection is now the reference method to allow En Bloc resection of large colorectal neoplasia[1]. Nonetheless, appendix invasion is still considered a contraindication of resection because of the risk of perforation and the difficulty to find the submucosal space at the bottom of the appendix. We report here the case of a 72 years old men referred for resection of a 4 cm granular LST of the cecum. The lesion was developed on the appendix orifice invading it deeply.

Aims & Methods: The patient was referred for a granular homogenous type laterally spreading tumours with appendix invasion and we tried ESD in order to achieve a complete resection with safe margins. Next, we used a traction strategy with two clips and rubber band[1]. After complete circumferential incision and trimming, we caught the lesion edge with a first clip grasping the rubber band. A second clip was then used to catch the rubber band and to move it at the opposite wall of the colon. Once the traction seemed good, the second clip was fixed on the opposite wall mucosa and released. This traction is adaptive using inflation and deflation since the rubber band is more or less stretched according to the volume of CO2 inflated. Inflating a lot, a strong traction was obtained and allowed to extract the...
appendicular mucosa outside of the appendix orifice. Finally, the complete appendicular mucosa was stretch and we were able to cut the deep fibrotic fibers fixing the mucosa to the bottom of the appendix. Once the appendix was strongly stretched we could dissect the bottom of the appendix and get the full specimen En Bloc with free margin.

**Results:** This traction technique allowed to resect En Bloc this large specimen although it involed the appendix. The resection was complete without hole into the appendix mucosa. The appendix orifice was closed with clips without any delayed perforation or appendicitis. The final histology was a high grade dysplasia LST involving the appendix fully resected with margins. This traction technique allows to improve exposition of submucosal fibers and in particular cases like fibrosis or appendix involvement, it appears strongly requested to expose the submucosal adherence.

**Conclusion:** Double clip and rubber band traction improves submucosal stretching to allow ESD in the colon. In particular case like appendix involvement, this technique is very important to strech the submucosal fibers and extract the lesion from the appendix orifice.

**Disclosure of Interest:** All authors have declared no conflicts of interest.

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