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# 23rd International Congress of the European Association for Endoscopic Surgery (EAES) Bucharest, Romania, 3–6 June 2015

## Video Presentations



### EAES VIDEO AWARD SESSION

### V001 - Video - Liver and Biliary Tract Surgery

#### Indocyanine Green Enhanced Fluorescence During Laparoscopic Liver Resection for Colorectal Metastases

G. David[1], E. Cassinotti[2], S. Spampatti[2], A. Marzorati[2], V. Quintodei[2], E.M. Colombo[2], G. Borroni[2], L. Boni[2]

[1]University of Insubria, Varese, Italy; [2]Minimally Invasive Research Center, Varese, Italy

**Aims:** Indocyanine green (ICG) enhanced fluorescence can be used to identify hepatic metastases and helps to reach clear resection during laparoscopic liver resection.
**Methods:** Near infrared (NIR) camera associated to special NIR light source and 10 mm 30° scope equipped with a special lent (Karl Storz GmbH, Tuttlingen, Germany) is used during a standard laparoscopic liver resection for colorectal metastases. ICG is a sterile, water-soluble, tricarbocyanine compound that once injected intravenously rapidly binds to plasma protein. Once excited by NIR, ICG release fluorescence that can be detected by the system providing the visualization of liver metastases.
**Results:** This video shows our initial experience ICG enhanced fluorescence during laparoscopic liver resection in a 72 year-old male undergone to laparoscopic left colectomy for cancer (T3N0M0) two years before who developed a 2–3 cm solid liver metastases between segments V–VI. 10 ml of ICG were injected intravenously 36 hours before surgery to allow normal liver parenchyma to wash out most of the ICG, while the dye is retained from the normal cells around metastatic lesion, that appears fluorescent. At the exploration of the abdominal cavity the metastatic lesion at the level of the VI hepatic segment was clearly marked by fluorescence, but also the gallbladder, the biliary tree and the duodenum were still fluorescent.
Due to the anatomic location of the metastatic lesion the cholecystectomy has to be performed.
At this point the liver resection was carried out using an advanced harmonic scalpel combining bipolar force, without any clamping of the hilum. Switching from normal light to NIR light allows the surgeon to identify the clear plane and the safe margin for resection. At the end of the procedure the liver surface was checked with NIR light for biliary leaks. The pathology report confirmed a well differentiated colorectal metastasis of 3 cm of diameter with 0.9 cm free margin.
**Conclusions:** This experience suggests that ICG enhanced fluorescence may represent a real time, safe, effective technique during laparoscopic liver resection for metastatic lesions.

### V002 - Video - Different Endoscopic Approaches

#### Laparoscopic D2 Total Gastrectomy and En-Mass Splenectomy and Distal Pancreatectomy for Locally Advanced Proximal Gastric Cancer

B.C. Toh, J. Rao, M. Pathirana

Tan Tock Seng Hospital, Singapore, Singapore

**Background:** Safety and efficacy of laparoscopy surgery in locally Advanced Gastric Cancers (AGC) have not been proven by randomized control trials. Therefore, standard of care for AGC is still open surgery. Here we are presenting a 64 year female with proximal gastric adenocarcinoma (close to cardio-oesophageal junction) adherent to tail of pancreas, who underwent D2 Total Gastrectomy en-block distal Pancreatectomy and Splenectomy.
**Method:** Five ports entry into the peritoneal cavity (Three 10–12 mm and two 5 mm ports). Another 5 m stab incision made in the epigastrium for Netherson's Liver retractor. Standard D2 Gastrectomy was performed with en-mass removal of the spleen and body of the pancreas. Roux-en-Y oesophago-jejunostomy (Hand sewn) and Jejuno- Jejunostomy reconstruction performed laparoscopically. Operating time was 235 minutes. Post-operatively, patient able to mobilise independently. Total Parenteral Nutrition (TPN) was started and continue until post-operative day (POD) 7th when gastrograffin test performed. Patient started on oral feeding and discharged home well on POD 9. Histology showed Poorly Differentiated Adenocarcinoma with pT3N3b (17 nodes out of 62 positive). Hereby, we presented a video of the above procedure.
**Conclusion:** Laparoscopic D2 Gastrectomy and en-mass distal Pancreatectomy and Splenectomy is feasible and safe in advanced gastric carcinoma.

## V015 - Video - Abdominal Cavity and Abdominal Wall

### Single Incision Laparoscopic Tension Free Incisional Hernia Repair

J.S. Park, S.H. Yun, Y.J. Kim, J.Y. Bu, S.W. Lee, Y.A. Park, J.W. Huh, Y.B. Cho, H.C. Kim, S.H. Choi, W.Y. Lee

Samsung Medical Center, Seoul, Korea

**Aims:** The efficacy and safety of laparoscopic incisional hernia repair has been reported through several studies. We developed a noble procedure of single incision laparoscopic repair of incisional hernia through the previous skin incision. The aim of this video is to show the safety and feasibility of single incision laparoscopic tension free incisional hernia repair.
**Methods:** The patient was 72-years old female. She was underwent single incision laparoscopic right hemicolectomy for treating cecal cancer about 4 years ago. The incisional hernia was occurred 3 years ago. The hernia defect was oval shape and its size was about 8 × 6 cm. The body mass index (BMI) was 26.9?/?
**Results:** Under general anesthesia, the patient was placed on the surgical table with lithotomy position. We made 3 cm skin incision at previous incision site and placed single port made by surgical glove, two 5 mm port and one 12 mm port. 5 mm 45 degree laparoscopic camera was inserted and adhesiolysis was done. We measured the size of hernia defect, drew by a surgical pen and cut the mesh with more than 3 cm margin. The size of mesh was 12 × 15 cm. 3 cm slit was made at the center of mesh and then the mesh was inserted into the abdomen through 12 mm port. Single port was re-placed through the slit of mesh. The mesh was suspended and deployed without any folding with temporally four trans-peritoneal sutures. And then the mesh was fixed using titanium tacks every 1 cm along the perimeter of the prosthesis. After fixing the mesh, the port was removed and the slit was repaired with continuous sutures. Estimated blood loss was 10ml and total operation time was 99 minutes. There was neither postoperative morbidity nor mortality. The patient was discharged on the 4th postoperative day. The final wound size was 3 cm
**Conclusion:** Single incision laparoscopic incisional hernia tension free abdominal wall repair was feasible and safe approach to fix the incisional hernia.

## V016 - Video - Abdominal Cavity and Abdominal Wall

### Incidental Morgagni Hernia Presented with Pancreatitis

I.C. Sormaz, R.E. Sonmez, Y. Soytas, M. Keskin, A.F.K. Gok, L. Avtan

Istanbul University, Istanbul Faculty of Medicine, Istanbul, Turkey

Morgagni hernia is a rare type of diaphragmatic hernia, accounting for 1–2 % of all diaphragmatic hernias, and it is seen most frequently in overweight middle-aged women. The hernia may contain omentum, transverse colon, and rarely gall bladder, stomach, and liver. Often an incidental finding, it can very rarely present with acute abdomen due to bowel obstruction, strangulation, or gastric volvulus.
**Case Report:** A 63-year-old woman admitted to the emergency department with a 2-years history of intermittant abdominal pain and 6 days of epigastric pain. Clinical examination, laboratory investigations and imagings revealed acute pancreatitis with Morgagni hernia. Because of 6 days history of epigastric pain the patient was hospitalised and surgery delayed. After 2 weeks of intravenous antibiotic treatment patient discharged. Three months after the diagnosis of acute cholecycytitis she underwent surgery. Laparoscopic cholecistectomy and primary hernia repair was performed.
**Surgical Technique:** Patient was placed in the inverted 'Y' step reverse Trandelenburg position with legs abducted, the monitor was located at the right shoulder. The surgeon stood between the patient's legs, the first assistant on the patient's right side and the camera driver on the opposite site. Pneumo-peritoneum was induced at 12 mmHg using a Veress needle. Two more trocars (one 10 mm and one 5 mm) were inserted. In the exploration omentum and transverse colon was in the hernia sac. These structures retrieved from the hernia sac and round ligament seperated from diaphragma by Ligasure. Than laparoscopic cholelecystectomy was performed and hernia sac sutured with non-absorbable sutures.
**Discussion:** Diagnosis of Morgagni hernia is difficult and can be suspected on plain X-ray chest anterior-posterior and lateral view. If there is any suspicious in differential diagnosis thorax and abdomen CT scan must be performed. CT scan is the most accurate diagnostic modality and is crucial for delineation of the retrosternal defect and the contents in the hernia sac. Laparoscopic and thoracoscopic approaches can be performed, but it should be noted that abdominal approach enables a satisfactory exposure.

## V017 - Video - Different Endoscopic Approaches

### Combined Vaginal-Laparoscopic-Transanal Approach in Large Rectovaginal Deep Endometriosis

H. Roman, E. Huet, V. Bridoux, J.J. Tuech

Rouen University Hospital, Rouen, France

**Objective:** To report a combined triple approach of vaginal excision, rectal shaving using PlasmaJet®, deep nodule removal and transanal disc excision using an end-to-end anastomosis circular stapler suitable in deep rectal endometriosis responsible for large posterior vaginal involvement.
**Methods:** The video presents the procedure performed in a 28 year-old nullipara referred with symptomatic large endometriotic nodule infiltrating the whole posterior vaginal fornix and the anterolateral wall of the mid rectum. Infiltration of the vagina measured 40 mm-diameter and that of the rectum 20 mm in diameter. The first step is performed vaginally, using plasma energy with the aim to circumscribe the vaginal involvement. Dissection is complete when fat rectovaginal and pararectal tissue is identified. Next, laparoscopic rectal shaving is performed using plasma energy only, allowing detachment of the nodule from the rectum. The nodule is resected following vaginal incision performed during the first step. When lower and mid rectum is involved, large disc excision is performed using the Contour Transtar® stapler. The patient gave consent for use of the video in the article. In this patient, immediate postoperative outcomes were uneventful, and bowel movements were normal beginning at day 4. A combination of three different routes and the use of a tool with no lateral thermal spread may allow for more conservative surgery and increase the chances of favourable postoperative rectal and bladder functional outcomes.
To date, 17 patients with deep endometriosis involving the vagina on more than 3 cm have benefited from this technique, and none of them have had postoperative bladder dysfunction.
**Conclusions:** The combined triple approach is feasible in rectal endometriosis responsible for large vaginal involvement and may reduce the risk of unfavorable outcomes related to colorectal resection and excessive vaginal excision.

## V018 - Video - Different Endoscopic Approaches

### Magnetic Compression Anastomosis for Recanalization of a Complete Radiation Induced Upper Esophageal Occlusion

E. Shlomovitz, N.R. Sinclair, O.A. Bernstein, C.S. Ho

University Health Network, University of Toronto, Toronto, Canada

**Background:** Recanalization of complete upper esophageal occlusion may require the use of various puncturing techniques or endoscopic dissection methods. The risk and difficulty of these techniques increases significantly with the length of the occlusion. This case illustrates the use of magnetic compression anastomosis for recanalization of a 1.5 cm, radiation induced complete occlusion of the upper esophagus in a 68-year-old male with a history of squamous cell carcinoma of the base of the tongue.
**Methods:** Previous attempts at endoscopic recanalization had failed due to an inability to pass a guidewire through the fully occluded upper esophagus. Endoscopic and radiologic imaging modalities demonstrated a 1.5 cm occlusion of the esophagus, approximately 1 cm below the upper esophageal sphincter. The distal aspect of the esophageal occlusion was accessed by dilating the patient's PEG site and retrogradely passing a cholangioscope. A wire was inserted through the scope and scope withdrawn. This allowed for over the wire placement of a 1/2' X 1/8' rare earth magnet at the distal aspect of the occlusion. At the proximal aspect of the occlusion, a matching magnet was inserted endoscopically using a grasper. Fluoroscopy demonstrated adequate placement and engagement of the magnets across the obstruction.
**Results:** Upper endoscopy at day 18 confirmed recanalization of the esophagus and easy passage of a flexible endoscope into the stomach. The magnets were expelled naturally and the recanalized segment was maintained using periodic dilatations. At 4 month follow-up the patient is doing well, tolerating a regular diet.
**Conclusion:** To our knowledge this is the first described case of magnetic compression anastomosis of an iatrogenic esophageal obstruction. This technique may allow for a safe, gradual recanalization of the esophagus when other therapeutic endoscopic techniques may be difficult or risky.