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Artículo:

Resúmenes de Trabajos Libres y Video del V-99 a FP-167

V-99

VIDEOTHORACOSCOPIC RESECTION OF AN ESOPHAGEAL DIVERTICULUM

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Mid and low third pulsion esophageal epiphrenic diverticula require surgical treatment. Yuxta cardial diverticula can be approached by a trans hiatal approach, but higher situation requires a thoracic approach. **Case report:** A 52 year Old man complaining of severe pirosis and thoracic pain oesophagogastric Rx series showed a hiatal sliding hernia, oesophagogastric reflux and a 5 cm. Esophageal diverticulum located in the upper part of the lower third of the esophagus. Manometry ruled out the existence of a motor disturbance and a pathologic ph-metry. The patient was approached trough the abdomen, an a transhiatal dissection was tried but the diverticula was too high for a safe resection, and a crural closure and Toupet partial plication was done. The GERD symptoms disappeared but thoracic pain persisted, and 3 months later, a videothoracoscopic resection of the diverticulum was proposed. The right thorax was approached through a 5 cm minithoracotomy and two 5 mm trocars. The diverticulum was located at the mid-lower third union of the oesophagus. Dissection permit to clearly view the neck of the sac, and transection with mechanical suture (Surg Assist) was done. Staple line was reinforced with esophageal muscular closure and a chest drain was placed. Esophagogram three days later ruled out the existence of leakage, and the patient was discharged at the 5th postoperative day.

FP-100

LONG TERM OUTCOME OF LAPAROSCOPIC HELLER'S MYOTOMY WITHOUT AN ANTI REFLUX PROCEDURE

Gupta R, Sample C, Bamehriz F, Brich D, Anvari M.

Addition of anti-reflux procedure to a Heller's myotomy has been a contentious area. The aim of this study was to evaluate long term outcome of laparoscopic Heller's myotomy (LHM) without anti reflux procedure. Method: We reviewed 40 patients (21F:19M) with mean age of 44.9 ± 17.2 years with a diagnosis of achalasia who underwent LHM without antireflux procedure at our institution from 1993 to 2003. Of these, twelve patients had botulinum toxin (botox) injection (2.8 per patient) and fourteen patients had pneumatic dilatation (mean 1.9 per patient) prior to surgery. Results: LHM was completed in all of the patients with mean OR time of 79.2 ± 28.7 min OR time was significantly increased in patients with pre-operative botox injections (98.3 *vs* 71.1 min, p = .005). There were 4 intra-operative complications (mucosal injury in 3, hemorrhage in 1). Two patients with mucosal injury had pre-operative injection of the LES with botox. Mean hospital stay was 1.9 d ± 0.95 (range 1 to 5 days). After a mean follow up of 44.6 ± 31.2 months mean dysphagia score improved significantly (p = .001) from 11.1 $\pm$ 1.7 pre op. to 0.2 $\pm$ 1.3 post op. and was associated with a significant (p = .001) decrease in LES pressure from a mean of 29.6 ± 15.6 (pre op.) to 6.3 $\pm$ 6.8 (post op.) 2 patients (5%) developed dysphagia later on requiring reoperation (one open, one laparoscopic). The mean heart burn score did not change significantly from 3.7 $\pm$ 4.4 pre op. to 3.2 ± 4.3 post op. which was confirmed by pH study in 19 patients with a mean % acid reflux of 3.4 ± 4.3 pre and 3.3 ± 4.9 post op. 32 patients had excellent control of reflux on acid suppression medications and 8 patients did not require any medication. Conclusion: Our experience with LHM indicates excellent overall clinical outcomes without an antireflux procedure.

FP-101

LAPAROSCOPIC CHOLECYSTECTOMY WITH ONLY ONE PORT

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Our surgical group makes endoscopic cholecystectomy with technique of an umbilical port since 1997. We have integrated other procedures with this technique like: appendectomy, hysterectomy, ovarian cystectomy, inguinal hernia repair. The purpose of this study is to prove that this technique is a viable choice in gallbladder surgery. **Design:** Transversal, prospective study. A thousand patients were examined from december 1997 to april 2003, such patients presented symptoms of gallbladder disease and needed to take them into surgery. Five hundred group A patients got traditional laparoscopic cholecystectomy. Five hundred group B patients got laparoscopic cholecystectomy with only one port. We analyzed the following variable: age, gender, hospitalization time, surgical time, failures or conversions, cost and cosmetic. We used Student's t-test for comparison of variables and χ^2 test for percentages. Cholecystectomy with only one port supports the uses of percutaneous needles. There were no differences; neither in age or gender nor the hospital permanence. The average in the surgical time, in Group A, was 78 minutes and group B, 88 minutes ($P < 0.05$). The conversions to open cholecystectomy were 4% in both groups. However, in group B, there was also a conversion to traditional laparoscopic cholecystectomy in 14%. Group A used two ports of 5 mm and two ports of 12 mm. Group B used 1 port of 12 mm, relation 4 to 1 ports. We conclude that cholecystectomy of only one port is applicable in 82% ($P < 0.01$) of the patients with gallbladder disease. It improves the aesthetic results and it provokes an excellent psychological effect in the patients for acceptance of this surgery, and reduces costs, too.

V-102

RETAINED COMMON BILE DUCT STONES. LAPAROSCOPIC TREATMENT AFTER ENDOSCOPIC FAILURE

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Purpose: Consider the laparoscopy like a therapeutic option in the retained common bile duct stones after failure of endoscopic procedure. **Methods:** 69 years old female, cholecystectomy 10 years previous. Presented obstructive jaundice with acute cholangitis caused by retained common bile duct stones five years after surgery; with a good response to the medical and endoscopy treatment. Five years later repeated a new episode, but it was not possible endoscopic extraction of multiple stones, 2 cm average diameter. Laparoscopic approach was performed. **Results:** Laparoscopy, adhesiolysis, choledochotomy with choledocholithotomy, later lateral choledochoduodenum anastomosis and abdominal drainage were done. Remove it at 72 hours. Follow up at 22 months with normal clinical, biochemical and ultrasonography controls. **Conclusions:** Treatment of retained common bile duct stones by laparoscopy is possible. For that reason it has to be considered after the failure of endoscopic procedure.

V-103

DIFFICULT LAPAROSCOPIC CHOLECYSTECTOMY RISK AND BENEFITS

Contreras AA, Lozada LJD, Nava AD, Abunez PA, Carreto AF. Santa Mónica Hospital, Cuernavaca Morelos, México.

Purpose: The objective of this video is to present some difficult laparoscopic cholecystectomy in which it is very important to make to good decision if continue the surgery in laparoscopic fashion or decides to convert to and open technique. **Material and methods:** In a period of two years 72 have been operated of laparoscopic cholecystectomy, in patients with rank of age of 14 to 92 years old with median average of 63 years old, 40 women (55.5%) and 32 men (44.4%), 20 patients (27.7%) were operated emergency by acute gallbladder cholecystitis, 9 patients with hydrocholecystis, 6 patients with pyocholecisto, 4 patients with hydrocholecystitis and choledocolithiasis, two patients with pyocholecisto and biliary pancreatitis, a patient with gallbladder cancer, being necessary to turn to single conventional surgery a patient to straight detect during the surgical procedure a biliary leakage by laceration with the endoshears of the right hepatic duct. **Results:** Of our cases considered like difficult gallabladder was not necessary to convert to open

surgery none, the patient who had itself to turn to conventional surgery was a patient in whom we identified a biliary leakage of the right hepatic duct by a small laceration during the dissection, just in the bifurcation of both hepatic duct, reason why we decided to convert open surgery and biliary exploration, I am located the site of laceration and 4 stich with prolene vascular 5-0 I put in placed a cattle 16 Fr, in the immediate postoperatively the fistula continue drainage in 24 hours 300 ml, we being rich enteral feeding in arginina and glutamina, persisting the leakage for two weeks, without changes, we decided to make ERCP and Endoscopic Sphincteromy and positioning of biliary endoprosthesis, with good results, the leakage decreases to 0 millimeter at the 8th day, being able to retire of catell tube to the two weeds after endoscopic procedure. **Conclusions:** Difficult cholecystectomy is a subjective TERM that! Depends on the degree of surgical laparoscopic skill of the surgeon and his surgical team, but whenever it is not possible to continue in the laparoscopic fashion it is necessary to think about turning the procedure to conventional surgery by security of the patient.

FP-104

CAN WE PREVENT BILE LEAKS AFTER LAPAROSCOPIC CHOLECYSTECTOMY?

Hamouda A, Khan M, Mahmud S, Nassar AHM.

The incidence of post-cholecystectomy bile leakage (PCBL), without bile duct injury, is 0.8-2%. Published studies have addressed the sources, mainly cystic duct stump and subvesical duct leaks, and their management. As endoscopic, laparoscopic or laparotomy reintervention, have obvious disadvantages, how can this complication be prevented? **Aims and methods:** To study the possible aetiological mechanisms and the methods of preventing PCBL, prospective data from a large series of LC performed on one firm was analyzed. Dissection techniques and methods of securing the cystic duct and subvesical ducts were evaluated. **Results:** Subvesical ducts were encountered in 22 of 1,260 cases of LC (1.7%). Nine were secured with loops, seven were ligated and six were sutured. In our practice, Calot triangle and gallbladder dissection is carried out using only a blunt dissecting forceps with flat jaws, the so called “duckbill”. This is used to open windows in the peritoneal reflection and the jaws open to create a plain. Sweeping the gallbladder wall away from the liver makes it possible to identify any accessory ducts before using diathermy. It is very likely that hook dissection would have caused some to leak, as the hook may transect or open accessory duct without identifying them, coagulating the open ends at the same time. This may explain the delay of 2-5 days in most reported series until necrosis and sloughing occur causing leakage. Only one case of asymptomatic bile leakage requiring reintervention was encountered (0.08%). The patient had dense adhesions obscuring the cystic pedicle, necessitating fundus – first dissection. The pedicle was thickened and short and the cystic duct and artery could not be separated. Two endoclips were applied. A subphrenic drain produced 500 mls of bile for 3 days and ERCP showed a cystic duct leak and a “fingerscrossed” appearance of the endoclips which had twisted due to the thickening of the pedicle. A stent was inserted, the leakage stopped and the total hospital stay was 6 days. The stent was removed six weeks later. Following this, endoclips were abandoned in favour of intracorporeal ligation of the cystic duct and artery. No postcholecystectomy was encountered in the last 850 cases. **Conclusion:** In spite of its considerable benefits, the laparoscopic era has brought about some practices alien to conventional surgical principles. Using diathermy hooks for dissection and metal clips to occlude structures which used to be ligated and the explosion in the use of ERCP to investigate and treat suspected choledocholithiasis are but a few examples. Our techniques helped us to avoid a potential PCBL rate of 1.7%. Active search for subvesical accessory duct can reduce the incidence of post-operative bile leaks. Avoiding the use of endoclips and diathermy hooks may help to prevent this complication.

V-105

LAPAROSCOPIC TREATMENT OF BILE DUCT ASCARIDIASIS

Serrano J.

Ascaris are round worms that live in the human small bowel. The parasites eggs are eliminated with feces and infected the new host with the food. The egg covering is destroyed in the duodenum and the larva goes throught the small bowel wall to the liver and lungs, go up the traquea and to the small bowel were they live. The infected patient present tipically an abdominal pain, but it could also produce an intestinal obstruction by pilled up, appendicitis or bile obstruction with colangitis or liver perforation. The diagnosis of bile ducts ascaridiasis is made by ultrasound, in some cases by ERCP. The bile ducts ascariasis treatment is made with a antiparasite drugs. When there is no good response, we can try the parasite extraction by endoscopy. If that procedure fails the surgical treatment is recommended, with the laparoscopic extraction of the parasite. The bile duct ascaridiasis frequency in our state was 8 to 12 %. The actual reports in Ecuador shows a rate from 5 to 7 %. On my personal experience, I have four patients in a total of 600 lap-choles, it represent a 0.66% of the biliar pathology. The video presents the technique of laparoscopic exploration of the common bile duct, the extraction of the parasite and the cholecystectomy.

V-106

HEPATOBILIARY PATHOLOGY DUE TO ASCARIS LUMBRICOIDES. LAPAROSCOPIC RESOLUTION

Astudillo MR, Astudillo CA.

In our country ascaris lumbricoides is still an important surgical pathology, and between theses the biliary tract and liver pathology. In Hospital Latinoamericano, Cuenca Ecuador in a 11 year period we have performed 1,726 laparoscopic procedures for hepatobiliary pathology, 7 patients had common bile duct ascaridiasis. 1 patient has a liver abscess due to ascaris lumbricoides. We review the different techniques for the treatment of these pathology (clinically, endoscopically and laparoscopically) and the one to be used in each case.

FP-107

EXPERIENCE OF LAPAROSCOPIC COMMON BILE DUCT EXPLORATION

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Description: Background: Minimal invasive surgery has changed the surgical standards of our times, it seem logic to perform every time more laparoscopic procedures. The first open common bile duct exploration (OCBDE) was performed by Ludwig Courvosier 1889. Bakes in 1891 was able to look inside of the common bile duct (CBD) with an instrument of his creation. McLever in 1941 describes the optic choledochoscope. Jacobs was one of the first surgeons to describe laparoscopic choledochotomy. Actual data reports that 15% of patients with gallbladder stones have bile duct stones, for which reason the laparoscopic procedure is a therapeutic and diagnostic option, without the disadvantages of the open procedure. The reported mortality of the laparoscopic CBD exploration (LCBDE) shifts from 0 to 1% and morbility from 1 to 12% depending on the surgical approach (transcystic *vs* laparoscopic choledochotomy). Another treatment for CBD stones are endoscopic retrograde cholangiography (ERCP) with a risk of complications such as bleeding (3%), pancreatitis (2%), duodenal perforation (1%), and late papillotomy stenosis (10-33%), and OCBDE that increases 3 times the morbility and has the inconvenience of doing the exploration by hand. LCBDE has a reported complication rate of 7% with less surgical trauma and hospital stay. **Purpose:** The purpose of this study is to present the experience of a third level hospital at PEMEX, Mexico city. **Methods:** We reviewed 8 cases of randomized patients programmed for elective surgery in a period of 6 months from November 2002 to may 2003, 6 of which were women and 2 were men, with ages that range from 46 to 76 years with a median age of 67. All had a preoperative ultrasound with gallbladder stones, 7 with suspected CBD stones and 3 had a previous history of pancreatitis.

All patients were operated for laparoscopic cholecystectomy (LC) and exploration with a choledochoscope was performed: 3 transcystic, 3 with choledochotomy, and 2 were performed with both. **Results:** Of 8 patients analyzed 5 had choledochoscopic confirmation of CBD stones, 4 patients had successful extraction of the stones (80% of successful clearance), the only patient that did not had successful extraction of the CBD stone required of conversion to OCBDE because of the size of the stone and adherence to the CBD wall. The average operative time was 160 min, the postoperative length of stay ranged from 1 to 15 days (one patient had a 15 day stay because of a cause non-related to the procedure of chronic renal failure) with an average length of stay of 4.5 days, none of the patients presented hyperamylasemia or pancreatitis in the postoperative period, the laparoscopic choledochotomy group had a T-tube inserted without evidence of bile leak and a successful extraction of the T-tube at the 4th week of the postoperative period, none of the patients had bile duct injury. The postoperative pain was minimum (visual analog scale 3/10) that responded to ketorolac dose of 30 mg 3 times a day for 2 days, feeding was started at 12 hrs postoperatively with good tolerance in all patients. Minor late complications consisted in seroma of the umbilical port in an obese patient and atelectasis that was resolved by respiratory therapy. In the CBD stone group with successful extraction none presented retained stones verified by a postoperative cholangiogram. **Conclusions:** These data shows that LCBDE decreases the postoperative rate of retained stones. In our study we had a 100% of visualization of the proximal and distal CBD and an 80% success rate for CBD stone extraction. There was no surgical-related morbidity and 0% mortality. No patient was reoperated. The transcystic access decrease the length of stay (one patient was released at the 24 hrs of the postoperative period). Our study also shows that the diagnostic accuracy of ultrasound is less compared with LCBDE with a choledoscope. The choledochotomy requires more experience and surgical skills in advanced laparoscopic techniques. We conclude that LCBDE is a reliable, secure and feasible option in trained hands with an adequate equipment.

FP-108

CHOLEDOCHORRHAPHY IN THE TREATMENT OF BILIARY LITHIASIS FOLLOW-UP 24 MONTHS

Germán N, Mario G, Diego A, Acevedo J, Ramírez IF, Braz MI, Marcelo G. General Surgery Doctors from Horacio Séller Hospital, Neuquen. Argentina.

Introduction: The primary closure of the choledocho (PCC), even though it requires specific technological support, and surgical skills is considered by many authors the ideal operation for choledocholithiasis. **Material and method:** With the aim of analyzing PCC results, in a retrospective study from July 1999 to October 2000 we have included all the patients who went through this technique. **Results:** 18 patients, with an average of 33.5 years (17 to 59). Fourteen operated by laparoscopy , two converted, and a PCC with conventional start 93% effective surgery. Bile duct average by ecography and IOC 10.5 mm. The average time of operation was 145 minutes. Two patients with high possibility of mortality, with choleperitoneum and reexploration (11%). Mortality 0%. Average of stay in hospital 3.3 days and the follow up average 24 months (10 to 48 months). **Conclusions:** The technique offers good results with high level of success and low mortality.

FP-109

LAPAROSCOPIC MANAGEMENT OF CHOLEDOCHOLITHIASIS

Statti M, Minatti W, Pérez CR, Gatti D, Premoli G.

With the advance of laparoscopic techniques becomes possible the laparoscopic approach as a therapeutic option for the treatment of common bile duct stones. **Design:** Retrospective study. **Setting:** Private Hospital affiliated to Buenos Aires University. **Patients and methods:** All patients with choledocholithiasis that underwent laparoscopic surgery from January 1995 to December 2000 were included. Age, gender, procedure, morbidity and mortality were assessed. **Results:** 207 patients were included. 60% were females with a median age of 71 years old. Twenty patients underwent preoperative ERCP with posterior laparoscopic cholecystectomy. Ten patients underwent laparoscopic cholecystectomy with postoperative ERCP. Seven patients underwent open surgery, and in 177 patients laparoscopic surgery were carried out. Conversion rate was 4%. Procedures carried out in the group of laparoscopic bile duct exploration were: Transcystic exploration, choledochotomy and choledochoduodenostomy. Mortality rate was 0.9%. **Conclusion:** Laparoscopic approach of patients with choledocholithiasis is feasible and safe. Combined methods let to resolved all patients.

FP-110

MANAGEMENT OF COMPLICATED BILIARY TRACT DISEASE ON GASTRIC BYPASS PATIENTS

Podkameni D, Szomstein S, Chousleb E, Villares A, Lomenzo E, Kennedy C, Zundel N, Rosenthal R.
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Management of biliary tract disease can pose a challenge to any experienced surgeon, specially in patients who were submitted to gastric bypass for treatment of morbid obesity. From our ongoing experience of 800 patients submitted to Laparoscopic Roux en Y Gastric Bypass (LRYGBP) we had 3 patients that developed biliary tract complications. We review their charts and analyze the treatment involved. Case one was a 44 year-old male who came to the emergency room after a LRYGBP with complaints of right upper quadrant pain, fever and jaundice. Twenty years earlier he was submitted to a cholecystectomy. An MRCP was unattainable due to his ongoing super obesity, so a decision was made to do a transgastric ERCP (TG-ERCP). Multiple stones were excreted and an sphincterotomy was performed. A completion cholangiogram revealed no residual stones. The patient was discharged home on postoperative day 3 afebrile and pain free. Second patient was a 38 year-old female who underwent a LRYGBP and cholecystectomy. Post operatively she developed a biloma. A HIDA scan was performed which revealed a bile leak. A TG-ERCP was then performed. The TG-ERCP had two objectives: to identify the location of the leak and possible biliary tree decompression. The CBD was cannulated and a cholangiogram demonstrating an accessory duct of Luschka was obtained. A stent was placed for biliary decompression. On postoperative day two the patient was discharged to home. She came back 5 weeks later to have a new TG-ERCP. The patient was afebrile symptom free, and had the stent removed. Our third case was a 24 year-old female that 6 months after being submitted to a LRYGBP developed acute cholecystitis and concomitant elevation of alkaline phosphatase. An MRCP revealed presence of CBD stones. Patient was submitted to an uneventfully laparoscopic cholecystectomy and CBD exploration through the cystic duct. A completion cholangiogram revealed no remaining stones. Complications of surgery on the biliary tract may pose a challenge on itself. This may be a double challenge if the patient had GBP surgery for morbid obesity. Surgeons in general need to be resourcefully and aware of different approaches to deal with biliary tract complications in the bariatric population submitted to gastric bypass surgery.

FP-111

CAUSES OF FAILURE IN LAPAROSCOPIC GASTRIC BANDING

Lo Menzo E, Podkameni D, Kennedy C, Villares A, Soto F, Higa G, Chousleb E, Berkowski D, Szomstein S, Rosenthal R. Bariatric Institute Cleveland Clinic Florida Weston, FL.

Background: Laparoscopic adjustable gastric band is a safe and effective option for weight loss surgery in selected cases. We present 3 cases of failure of the band requiring re-operation. **Methods:** The first case is a 55 year-old man with a history of sleep apnea and a BMI of 44. The patient had an excellent weight loss result of over 100 lbs (BMI of 30). Unfortunately he developed progressive dysphagia and heartburn over a 2-year period. Swallow examination revealed worsening megaesophagus in spite of complete band deflation. The second case is a 41 year-old man with a BMI of 41 and sleep apnea,

who had gastric banding 2 months prior to its removal for erosion. The patient presented with increasing pain in the left upper quadrant and night sweats. In spite of negative fluoroscopic and tomographic evaluations, the endoscopy proved the band erosion. The third case is a 46 year-old man with hypertension and a BMI of 46 who, 8 months after his gastric banding, developed dysphagia and vomiting. The gastrografin swallow confirmed the presence of a slippage and the band was completely deflated, without resolution of symptoms. **Results:** The case of megaesophagus required laparoscopic removal of the band. At his 4-month follow up the patient has maintained his initial weight loss. The erosion required laparoscopic removal of the band, drainage and antibiotic therapy. The slippage was repaired laparoscopically and the band left in place. **Conclusion:** Laparoscopic gastric banding presents some unique complications. Close follow up and early intervention are required.

FP-112

ENDOSCOPIC MANAGEMENT OF CHOLEDOCHOLITHIASIS IN PATIENTS OVER 79 YEARS

Staltari JC, Capellino P, Ramos P, Premoli G, Mendiburu A.

Background: Incidence of bile duct stone increases with age of patients, with highest incidence over 79 years old. This group has important comorbidities and in some cases contraindication for surgery. In that cases endoscopic management become the procedure of choice. The purpose is to analyze endoscopic management of bile duct stone in patients over 79 years old. **Design:** Retrospective study. **Setting:** Private Hospital associated to Buenos Aires University. **Patients and methods:** Patients over 79 years old with bile duct stone managed by endoscopy were analyzed from January 1995 to January 2001. Age, gender, number and type of procedure, effectivity, morbidity and mortality were assessed. **Results:** Eighty four patients were included, 42 of them were females. Average age was 83 years old (range: 80-95). In that group 122 procedures were carried out, 57 patients required onlyone procedure, 27 patients needed two procedures, 7 patients required three procedures and 4 patients needed four procedures. Effectiveness rate was 82.1%. Morbidity related to the procedure was 13% (15 patients), while mortality was 3.6% (3 patients). Average length of stay was 7 days. Fifteen patients required a surgical procedure after the endoscopic approach. Follow-up was 22 months in average (range: 1-73 months). **Conclusion:** The results seens to justify the endoscopic treatments in patients over 79 years old but prospective randomized study matching surgery *versus* endoscopic management is needed.

FP-113

LAPAROSCOPIC MANAGEMENT OF CHOLECYSTODUODENAL FISTULAE

Erenchun C, Capellino P, Benavides F, Ramos R, Pierini I.

Background: Cholecystoduodenal fistulae is a very uncommon event in the natural history of gallbladder stones. Its incidence increases with age and it is present in 3-5% of patients with cholelithiasis. **Objective:** To assess the outcomes of laparoscopic management of cholecystoduodenal fistulae. **Design:** Retrospective study. **Setting:** Private Hospital affiliated to Buenos Aires University. **Patient and methods:** Thirteen patients underwent laparoscopic surgery with intraoperative diagnosis of cholecystoduodenal fistulae from July 1998 and June 2003. Age, gender, procedure, conversion rate, morbility and mortality was assessed. **Results:** Average age was 73.9 years old, 10 patients were female. Conversion rate was 30% (4). Average length of stay was 7.4 days. Morbility rate was 30% and there was no mortality in this series. **Conclusion:** Videolaparoscopic approach to cholecystoduodenal fistulae is feasible and safe. It still has a high conversion rate.

FP-114

THROMBOPROPHYLAXIS WITH DALTEPARIN AFTER LAPAROSCOPIC CHOLECYSTECTOMY

Korolija D, Skegro M, Markicevic A, Vegar-Brozovic V, Predrijevac D, Tadic S. University Surgical Clinic, Clinical Hospital Center Zagreb, Zagreb, Croatia.

Background: The deep venous thrombosis reaches a high incidence after abdominal surgery and occurs in 30-40% of the patients operated. During the laparoscopic procedures, the intraabdominal pressure is elevated due to the pneumoperitoneum. Thromboembolic complications, including the portal vein thrombosis, have been reported in the literature, previously. The application of the low molecular weight heparins (LMWH) enables the deep venous thrombosis prevention. **Material and methods:** In the period from May 2001 to April 2002, a cohort of 212 patients was scheduled for an elective laparoscopic cholecystectomy, in a Clinical (high-volume) Hospital. In 30 patients with the identified risk factors, Dalteparin sodium (2,500 IU or 5,000 IU) was administered subcutaneously. During the first 30 postoperative days, a clinical follow-up was done for the whole cohort. All complications, as well as thromboembolic events, have been documented. **Results:** There were no major complications observed. Five patients had intraabdominal (subhepatic) hematoma and two of them were reoperated. The evacuation of the hematoma and a drainage was done. There were no bile duct lesions. None of the patients had the clinical signs of the deep venous thrombosis or other thromboembolic complications. One unplanned readmission to the hospital (patient reoperated for an intraabdominal hematoma) was recorded. **Conclusion:** Dalteparin sodium proved to be effective in preventing the thromboembolic complications after laparoscopic cholecystectomy. Selective application, according to the defined risk factors, gives very good clinical results in everyday practice.

FP-115

LEARNING CURVE FOR LAPAROSCOPIC FUNDOPLICATION IN TRAINING CENTER

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Description: Objectives: To evaluate the learning curve of laparoscopic fundoplication at IMSS training center Tijuana, B.C. **Materials and methods:** From May 2002 to August 2003, 94 laparoscopic fundoplication procedures were performed in which 46 of them were female and 48 were male with an average age of 43.01. A Nissen fundoplication was performed in 88 patients for GERD. Seven patients had a partial fundoplication plus cardiomyotomy for achalasia. Twelve surgeons with basic laparoscopic skills were trained during this period. To evaluate the learning curve, the following parameters were analyzed: Total OR time, complete knowledge of the GE anatomy, short gastric vessels dissection and suture technique. **Results:** The average OR time of the 94 procedures performed was 141 minutes ranging from 35 to 310 minutes. Every surgeon participated in at least 25 surgeries as first assistant and in at least 5 as the surgeon. Average hospital stay was 14 hours ranging from 6 to 72 hours. Cole-lap was performed in 9 patients, one laparoscopic splenectomy and one patient had to be converted because of bleeding. **Discussion:** One of the most important parameters to evaluate the learning curve in this procedure is the surgical time which should be similar or less than that of the open approach. In this study, we were able to meet the requirements of the learning curve after 25 procedures. The most difficult step of the procedure to master was the short gastric vessels dissection.

FP-116

LONG-TERM COMPLICATIONS IN ANTIREFLUX PROCEDURE: LAPAROSCOPIC TECHNIQUE

Manjarrez TA, Aguirre MD, González RR, Villegas CQ.

Purpose: This study was conducted to identify the post-surgical condition of patients diagnosed with gastroesophageal reflux disease who had received corrective laparoscopic antireflux surgery. A new evaluation to identify the efficacy of the procedure was used. Signs and long-term symptoms related to the surgical procedure were eval-

uated. **Materials and methods:** The study group included 195 patients who had anti-reflux surgery by laparoscopy (Nissen, Toupet), in San Jose Tec de Monterrey Hospital, from January 1993 to December 1999. The average follow-up was 3.1 years. The patients personal data were reviewed and each were contacted to obtain reported symptoms. **Results:** Of all the 195, 159 (81.5%) were found asymptomatic. Of the reported symptoms, the most common was gastritis, in 14 patients (7.1%), followed by flatulence and abdominal distention in 8 cases; each (4.1%). Nausea was reported in 6 cases (3.0%). 5 patients had postprandial fullness, (2.5%) and 3 (1.5%) dysphagia. In 3% of the studied population, a repeat surgery was conducted. There was a positive correlation of 3.75 times of relapse postoperative gastritis, in the female study participants (RM = 3.75; IC = (1.13, 12.3) (P = 0.05). Participants ranging in age 41-50 years were 10.1 times more probable to have continued reflux (RM = 10.1; IC = (1.03, 99.06) (P = 0.05). **Conclusions:** Although the laparoscopic surgery has surpassed the conventional technique, there are continued complications of short and long-term; however, with the innovative and modified techniques, a decrease in frequency, of reflux has been achieved improving the morbidity of these patients. This surgical procedure is sure to continue its evolution, becoming even greater in its efficacy.

FP-117

LAPAROSCOPIC SURGERY FOR GASTRO-ESOPHAGEAL REFLUX DISEASE IN CHILDREN. EARLY EXPERIENCE

Torices EE, Méndez VG, Domínguez CL, Velázquez GR, Tort MA, Núñez GE, Olvera HH, Cuevas HF, Olvera AD, Mondragón SA.

Background. The use of laparoscopic antireflux surgery in the treatment of refractory gastro-esophageal reflux disease in children is growing quickly inside, it is well tolerated and controls symptoms effectively, and less recovery time compared with open surgery. **Material and methods:** We analyzed retrospectively charts of patients with diagnosis of severe gastro-esophageal reflux disease who were operated on laparoscopically from January 2002 to July 2003. We evaluated the following variables, sex, surgical procedure, symptoms, added pathologies and complications. **Results**. In all patients the diagnosis was made clinically, main symptom was postprandial regurgitation. Four famales (30.8%) and 9 males (69.2%) patients were studied, with median age 7.8 years old. Five patients (38.5%) presented malnutrition and 2 patients (15.4%) recurrent pneumonitis. Diagnosis was confirmed by endoscopy and barium swallow. The average time of conservative treatment was 2 years, patients without appropriate response were selected for surgical treatment. A total fundoplication without division of short gastric vessels was carried out in all patients, 11 (84.6%) patients had a good postoperative outcome remission of the symptomatology and two patients (15.4%) presented recurrence that required laparoscopic re-do surgery with a good outcome. **Conclusions:** Laparoscopic approach offers better visualization with magnification of the esophagus, with advantages of minimal invasive surgery, it reduces hospital stay and morbidity. It is more affective than long term medical treatment, with remission of respiratory complication of GERD, as well as esophagitis.

FP-118

DECREASE AND DISAPPEARANCE OF BARRETT'S ESOPHAGUS IN GASTROESOPHAGEAL REFLUX WITH SURGICAL TREATMENT

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Purpose: To evaluate prospectively the outcome of laparoscopic fundoplication, with highly selective vagotomy in patients with Barret's esophagus, their disappearance, decrease or persistence. **Material and methods:** Since March 1993, a personal prospective study of 404 reflux patients were studied in accordance with a protocol, and according to the results of their endoscopic biopsies they were classified into two groups: those with Barret's esophagus (152 patients) and those without (252). Their symptomatology was assessed, and with, upper digestive endoscopy, X-ray of the esophagus, stomach and duodenum, manometry and pH of 24 hours, the factors affecting the formation of Barret's esophagus were studied. Both groups underwent procedures with laparoscopic highly selective vagotomy with geometrically symmetrical Fundoplication and closure of the pillars. They undergo yearly check-ups, and the variables are analyzed. **Results:** The average age of the patients was 43.5 years; males were more frequent in the Barret group which was statistically significant (p = 0.01) when comparing the two groups. Symptomatology was constant for both groups, with high incidences of pyrosis (88%) and regurgitation (75%). Previous history of reflux was 9.1 years, with a standard deviation of 5.73 P = 0.84 (not significant), endoscopy was grade 1 for 77 patients, grade II for 55 and grade III for 20 patients, according to the modified Savary classification, P = 0.024. The 24-hour pH study showed a reflux index of 16.6 with a standard deviation of 13.924, significantly higher than for the control group P = 0.0003. As for the DeMeester index, it behaved in the same way: P = 0.0002, with a value of 60.015 and a standard deviation of 44.485. The manometric study showed a pressure of the lower esophageal sphincter of 8.072 with a standard deviation of 13.976, which was not significant, P = 0.08. The total length was 2.68 cm, with a standard deviation of 0.9 P = 0.64, but the abdominal length of the sphincter was 0.641 with a standard deviation of 0.505 P – 0.0029. Operating time for reflux was 120.7 minutes with a standard deviation of 35.3. Hiatus hernias were found in 89.6% of the patients undergoing operations for reflux, with conversion to open surgery in 1.5% of cases, with morbidity rate of 10.3% and no mortality. In the annual check-up of the patients, we have follow-up rate of 98.1% with 96.7% of healthy patients (Visick I); in the third year, 95% of healthy patients, and 92.7% in the fifth year. The monitoring of esophageal biopsies shows that 25.4% of the Barret's esophagus disappear within 36 months with a standard deviation of 13.97. 30.3% decrease with a standard deviation of 9.86, and 44.3% remain unchanged with a standard deviation of 4.4. **Conclusion:** This is a prospective study of Barret's esophagus. We found that an average reflux index of 16.66 is statistically significant P = 0.0003 in relation to the control group, as is the DeMeester index of 60.01 P = 0.0002 as is the abdominal sphincter length of 0.641 P = 0.002. We also found a rate of disappearance of 25.4% and a 30.3% decrease in Barrett's cases following 36 months of surgery.

FP-119

VIDEOLAPAROSCOPIC APPROACH OF DIFFUSE APPENDICULAR PERITONITIS

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Background: Videolaparoscopic approach to diffuse appendicular peritonitis is considered by many authors as a contraindication. Good evidence is still lacking. **Objective:** To analyze the outcome of videolaparoscopic surgery in patients with diffuse peritonitis of appendicular source. **Design:** Retrospective study. **Setting:** Private Hospital affiliated to Buenos Aires University. **Patients and method:** Patients with intraoperative diagnosis of diffuse appendicular peritonitis treated by videolaparoscopic surgery were included from January 1995 to June 2002. Age, gender, conversion rate, length to stay, morbility and mortality were assessed. **Results:** Eight hundred seventy five (875) videolaparoscopic appendectomies were carried out in that period. Seventy two (72) patients had diffuse peritonitis (8.2%). Average age was 53 $\pm$ 24 years old (range 3-93). General morbility was 20.1% (15 patients). Three patients needed to be reoperated. Bowel sound recovery time was 3.5 days (range 1-10). and patients start oral intake at 3 days in average. Length of stay was 6.2 days (range 2-29). Mortality rate was 1.36% (1). **Conclusion:** Videolaparoscopic approach to diffuse peritonitis of appendicular source is a feasible and safe procedure.

V-120

LAPAROSCOPIC MANAGEMENT OF COMPLICATIONS AFTER ACUTE APPENDICITIS

Velásquez CM, Vera PJ.

Description: We present a several cases of acute postoperative appendicitis complications that were resulted by laparoscopy: **Case 1:** 54 male, with stercoraceus fistula and pericecal abscess with a blocked dehiscence or the operative wound after a conventional appendectomy through a Rocky Davis incision in a septic and compromised patient. The management was done by laparoscopy with drainage of the pericecal abscess, a tubular drain inserted and insulation of stercoraceus fistula with the prompt recovery of the patient. **Case 2:** 17 female, with appendicular flegmon treated medically, after 30 days she became septic and the abdomen surgically acute. By laparoscopy, a generalized peritonitis is found with a partial digestion of the appendix. **Case 3:** 28 female, with good medical treatment after four months a new episode of abdominal pain is treated laparoscopically with soft and hard adhesions and acute appendicitis that was managed successfully. **Case 4:** 32 male, with HIV (+) to whom realized a conventional appendectomy without any complications, a week later presents a progressive septic and hepatic abscess chart. By laparoscopy, the hepatic abscess in posterior segments is drained solving the complication presented. **Case 5:** 17 male, to whom realized an appendectomy by laparoscopic surgery in appendicitis no complicated. It shows an evolution with persistent pain and fever, getting better taking antibiotics by therapy prolonged. At Seven months shows acute septic chart, CT presents free liquid in cavity. By laparoscopy, there is an re-appendicitis solved successfully.

FP-121

SUBFACIAL ENDOSCOPIC PERFORATING VEIN SURGERY: 4 YEARS OF EXPERIENCE IN GUILLERMO ALMENARA IRIGOYEN HOSPITAL

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Purpose: To describe the clinic features and surgical management of the patients submitted to Subfacial Endoscopic Perforating Vein Surgery. **Methods:** This study is a Case Related Series. The population involve all the patients submitted to Subfacial Endoscopic Perforating Vein Surgery between October 1999-September 2003. The exclusion criteria were patients without source data not available or incomplete. The statical analysis used was rate, media, percentage and standard derivation. **Results:** It was enrolled/109 patients, 4 patients were excluded because source data incomplete the age average was 50.36 years old. The main interval was between 40 and 79 years old. The total of patients with ulcer before the surgery were 71, and the total of extremities with ulcer operated were 90. Nine patients with two ulcers and two patients with three ulcers. The sexual distribution was 53%, female and 47% male. The 44% of patients had Venous Cronic Insufficiency Grade VI. The interval of time of disease was 1-5 years in 46.9%, 11-20 years in 19-7%. 72.73% of the patients didn't have prior surgery, 10.81% had Safenectomy plus Collateral Ligation. The total contraindications to this kind of surgery were Arteriosclerosis, Infected Ulcer, Morbidity Obesity and High Risk Patients to Surgery. The surgery time was 128 minutes, the average of perforants vein were 5.28 per patient and the number of legs operated were 119. The 80% of patients didn't have complication after surgery and almost 10% had cellulitis. Only 5.13% had persistency of the ulcer after the surgery and the average of ulcer closing was 8.2 weeks. Only 5.36% had ulcer recidive after the surgery. **Conclusions:** Ulcer morbidity almost disappeared. The Endoscopic Surgery identify better the perforating veins. The ligation of perforator veins is safer with this procedure. The healing of the ulcer is faster and better than the open surgery. The symptoms of CVI grade IV get better with this procedure: Prevent the neuromuscular damage.

FP-122

PALLIATIVE LAPAROSCOPIC TREATMENT FOR PATIENTS WITH AMPULLARY TUMORS

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Background: Laparoscopy has proved its usefulness in patients with non resecable pancreatic cancer. It can be used only as staging laparoscopy or also for palliative treatment, decreasing the number of unnecessary laparotomies, hospitalization time and morbi-mortality rate. **Patients and methods:** From May 2002 thru August 2003, we studied prospectively the utility of palliative laparoscopic treatment in patients with periampullary non-resectable tumors. All patients with periampullary tumors in ISSEMYM Medical Center were evaluated preoperatively with CA 19-9 antigen, CEA and computed tomography to determine resecability. All patients underwent an staging laparoscopy and patients with tumors determined irresectable with gastric or biliary obstruction, were selected for palliative laparoscopic treatment. **Results:** Five patients were selected for this study. All patients were male, age from 39-66 years (m 56 years), 4 patients with pancreatic head cancer and one patient with gastric cancer recurrent to the pancreatic head. Three patients were operated on with gastric and biliary by-pass (cholecysto-jejuno anastomosis and gastro-jejuno anastomosis); and two only biliary by-pass. The median operative time was 190 minutes, median blood loss 100 mL; the convertion rate was 0% and the median hospitalization time was 5 days. In this series there were no major or complications. **Conclusions:** Even though this is a small series our results demonstrate safeness and feasibility for laparoscopic palliative treatment in pancreatic cancer. Controlled prospective trials are necessary to determine advantages against conventional surgery.

V-123

LAPAROSCOPIC ROUX-EN-Y CYSTOJEJUNOSTOMY FOR PANCREATIC PSEUDOCYST

Tan CN, Chan KKL, Ha JPY, Li MKW.

Internal drainage is the treatment of choice for pancreatic pseudocyst when it is larger than 6 cm and persists more than 6 weeks. Cystojejunostomy in Roux-en-Y fashion would be the choice if the main bulk of cyst is located mainly in the infracolic compartment. We here reported a case of symptomatic pseudocyst treated successfully with laparoscopic Roux-en-Y cystojejunostomy. Our patient was a 38-year-old lady who presented with left upper quadrant pain. Physical examination revealed a mass below the left costal margin and the pancreatic pseudocyst was confirmed by both ultrasound and computed tomography. The cyst measured 17 cm and located at body and tail of pancreas. The laparoscopic drainage was performed using a 4 port approach and lasted only 90 minutes. The cyst was drained and sutured to the Roux loop of jejunum using endostapler and the jejuno-jejunostomy was again performed using endostapler. The patient recovered uneventfully and was discharge day 3 after the operation. Upon a follow up of 1 year, there was no complication found and patient remained symptom free.

V-124

LAPAROSCOPIC SEGMENTAL PANCREATIC RESECTION

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Beside the location, the complex anatomic relationship and the necessary advanced laparoscopic skills in selected cases laparoscopic pancreas surgery increase. We show a video in cases of cystic adenoma in the area of the corpus, who was treated with a technique of complete laparoscopic corpus resection with preserving head and tail of the pancreas as well as the spleen. Patient was placed in lithotomy position. Four trocars were placed. After opening the bursa the pancreas was observed with a 6 x 6 x 6 cm large, well borderd cystic tumor in the corpus. Tail and head of the pancreas were free of tumor and seems inconspicuous. After exposition of the v. porte and v. lienalis the health tissue in the area of the head of pancreas was divided with the linear stapler. Preparation was continued in direction of the pancreatic tail with preserving the v. lienalis. After reaching the healthy part of pancreas in the tail region, the tumor covered segment was resected. The

resected pancreas segment was put in an endobag until solvage over a slightly wided trocar incision above the symphysis. The tail segment *in situ* was anastomized with the first jejunum loop after Treitz ligament end-to-site. There was no postoperative complication and postoperative course was uneventful. The patient return to normal activity within 10 days after operation. Laparoscopic operation in case of benign tumors of distal pancreas are possible with well surgical standard, preserving the health part of pancreas tissue and laparoscopic anastomosis with all benefits of minimal surgical access for the patients

V-125

LAPAROSCOPIC ASSISTED PANCREATICODUODENECTOMY

Puntambekar SP, Gurjar A, Sathe R, Kulkarni J.

Introduction: Pancreaticodudenectomy is a major surgical procedure performed in specialized centers in the world. This is due to the high morbidity and mortality associated with this procedure. The technical expertise and the experience of the surgeon is of paramount importance in deciding the ultimate outcome. A big incision is needed to visualize the detailed anatomy and this certainly adds to the morbidity. Any additional technique which can reduce the surgical incision without compromising the oncological principles as well as the safety of the patient is desirable. Laparoscopy has an advantage of magnification and precision which leads to a better anatomical delineation. In addition, it can reduce the morbidity by reducing the size of incision. There are very few reports of laparoscopic pancreatico-duodenectomy as this requires patience. Surgical experience and laparoscopic expertise. **Methods:** Since 1993, we have performed 85 pancreatico-duodenectomies with 20% morbidity and 7% mortality. Recently, we have performed 2 pancreatico- duodenectomies laparoscopically. Both were male patients, with periampullary cancers. Five ports, three 10 mm and two 5 mm were used. The total time taken was six hours, and blood loss was 500 mL. After complete removal of the specimen laparoscopically, the anastomosis and intestinal continuity was established through a small incision. Both the patients have done well following these procedures. **Observation:** We would like to present our experience and show the technical feasibility of performing this complicated surgery laparoscopically.

V-126

VIDEOLAPAROSCOPIC HAND ASSISTED ENUCLEATION OF PANCREATIC INSULINOMA

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Background: Videolaparoscopy is a therapeutic alternative in endocrines tumours of pancreas. There are several reports that support the advantages of videolaparoscopic approach for its enucleation. **Objective:** To show a case of hand assisted enucleation of pancreatic insulinoma. **Setting:** Private Hospital affiliated to Buenos Aires University. **Design:** Video. **Patient:** Male of 78 years old complaining of sweating, blur vision, nervousness and hunger. Laboratoy: hypoglycemia with hyperinsulinemia. I/G ratio = 0.44. MRI finding a pancreatic nodule of one centimeter at posterior face of pancreatic body. **Surgical technique:** Three ports of 10 mm: Upper umbilical, left upper quadrant and left paraumbilical. Laparoscopic releasing of splenic flexure of colon and visual approach to pancreas. Left hand introduction throught a 5 centimeter incision located at right flank. Digital enucleation with grasping helping. **Anatomo-pathology:** Insulinoma without vascular or capsular infiltration. **Conclusion:** Videolaparoscopic hand-assisted enucleation of pancreatic insulinoma is feasible and safe.

V-127

LAPAROSCOPIC MANAGEMENT OF A LARGE PANCRETIC PSEUDOCYST BY CYSTO-JEJUNOSTOMY

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Pancreatic pseudocyst occur as a consequence of acute or chronic pancreatitis. They consist of fluid collections surrounded by fibrous tissue with lack of epithelial lining. Laparoscopic drainage of pancreatic pseudocyst has been used in selected cases. We have advocated to tailor the type of drainage according to the position and site of the pseudocyst. This video shows a laparoscopic Roux-en-Y cystojejunostomy performed in a 70 year old patient with a history of biliar pancreatitis. Six month after the acute attack of pancreatitis a 18 x 11 x 14 cm pancreatic pseudocyst was diagnosed by CT scan. A transmesocolic cysto-jejunostomy was performed using an standard technique. The use of intraoperative ultrasound to asses the characteristics of the pseudocyst and to roule out adjacent collections is enphatized. Postoperative recovery was uneventful. He was discharged asymptomatic on the 3rd postoperative day.

FP-128

LATERAL INTRAPERITONEAL LAPAROSCOPIC ADRENALECTOMY. IS IT SAFE?

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Introduction: Since the first laparoscopic adrenalectomy performed in 1992 by Gagner and colleagues, the minimally invasive approach has become the standard of care for most adrenal tumors and hyperplasia. Several techniques have been proposed. The purpose of this study is to evaluate our results using the laparoscopic transperitoneal flank approach. **Patients and methods:** In a 7-year period, a total of 125 adrenalectomies were performed in 90 patients. We analyze demographic data, operative characteristics, complications and long term results. Indications for adrenalectomy were Cushing disease in 32 patients (bilateral adrenalectomy), pheochromocytoma in 18 (2 bilateral due to NEM II), cortisol producing adenoma in 13, Conn syndrome in 13 (1 bilatelaral hyperplasia), adrenal incidentaloma 6, virilizing tumor 5, adrenal cyst 2 and lymphoma 1. **Results:** Mean operative time was 192 min ± 66 (60-340) for unilateral adrenalectomy, and 290 min ± 87 (180-480) for the bilateral procedures. Complete resection of the gland and tumor was achieved in al patients. The were 3 major complications (hypoglycemic encephalopathy, pneumothorax, and postoperative bleeding that required surgical revision). There was a 2% conversion rate (3 patients). There were 2 deaths in the 30-day postoperative period, due to complications not related to the procedure (Upper gastrointestinal tract bleeding, and bronchoaspiration in a patient with a concomitant lung resection. There has not been recurrence of the disease due to remnant unresected tissue in any patient. **Conclusions:** Minimally invasive adrenalectomy using the lateral intraperitoneal approach is safe and effective for the management of benign adrenal tumors and hyperplasia.

V-129

LAPAROSCOPIC RESECTION OF A PEOCHROMOCYTOMA IN A PREGNANT WOMAN

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Unrecognized or untreated pheochromocytomas during pregnancy have serious risks of maternal-fetal mortality. These are markedly improved with early detection, pharmacological adrenergic blockade and elective removal of the adrenal tumor. The ideal time to remove a pheochromocytoma diagnosed in pregnancy is at the beginning of the second trimester. Spontaneous abortion is less likely to occur

since the gravid uterus is not yet large enough to interfere with the surgical field. This video shows an adrenalectomy performed in a 28 year old woman with a history of severe toxemia during the first pregnancy. During the 12 week of gestation of the second pregnancy she presented arterial hypertension (160-110) without symptoms. Renal ultrasonography revealed a left adrenal mass. The 24 hr urinary catecholamines were elevated (7024 μg) and plasma catecholamines were also elevated (9238 pg/mL). A magnetic resonance imaging was performed and showed a left adrenal tumor (56 x 44 x 63 mm). The patient was prepared with α-blockers for two weeks and β-blockers for one week. Once satisfactory blockage was achieved, laparoscopic adrenalectomy was performed using the lateral intraperitoneal approach. Postoperative recovery was uneventful. An obstetric ultrasound performed immediately after surgery confirmed good placental attachment and no signs of fetal distress. Patient was discharged asymptomatic and with normal arterial blood pressure on the 3rd postoperative day.

FP-130

LAPAROSCOPIC HAND ASSISTED LEFT ADRENALECTOMY IN PHEOCHROMOCYTOMA

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Purpose: Laparoscopic adrenalectomy is actually the standard technique to remove benign adrenal tumors. There has been described retroperitoneal and transperitoneal techniques. In large series, its application has been limited to lesions lees than 6 cm size. Hand assisted technique facilitates dissection and mobilization of larger tumors, enables tactile sensation and decreases learning curve. **Methods:** It's presented a famale patient 40 years old, with a large, unique left adrenal mass, adrenergic manifestations and hypertension. The diagnostic of pheochromocitoma is made by clinical, MRI and urine methanephrines. A laparoscopic hand assisted adrenalectomy was performed. Through a hand assisted device and two 10 mm trocars, colon and spleen were mobilized medially, Gerota's fascia opened and adrenal vein identified and divided. Adhesions of tumor are divided from aorta, pancreas, renal vein and retroperitoneal space. **Results:** A hypertensive period was experienced by the patient during operation and successfully managed with esmolol and sodium nitroprusiate. The patient is referred 24 h to ICU and 72 h postop is discharged. Pathologist reports a benign pheochromocytoma. **Conclusions:** Laparoscopic hand assisted adrenalectomy is a safe and effective approach. It is technically fusible in adrenal masses larger than 6 cm. Enables less manipulation of adrenal vein.

V-131

LAPAROSCOPIC RIGHT AND LEFT ADRENALECTOMIES: TECHNIQUE WITH LATERAL POSITION

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Purpose: Laparoscopic approach for adrenalectomy using a lateral position was firstly described by Gagner. This study has been performed to evaluate the procedure in comparison with the conventional surgery. **Methods:** 23 laparoscopic adrenalectomies (12 for the right glande, 11 for the left) were performed between 1995 and 2003 in 13 females and 10 males ranging in age from 32 to 73 years. Main indications were Cushing's syndrome, Conn's syndrome, small primary and metastatic tumors. A full lateral decubitus on the left side was used for right adrenalectomy whereas a right decubitus was used for the left adrenalectomy. Usually 3 or 4 trocars were employed right adrenalectomy: section of peritoneum under the liver. The adrenal gland was easily identified posteriorly and inferiorly to the liver. Section of the main adrenal vein and research of an accessory adrenal vein. Dissection of periglandular tisssue. The gland was inserted into an extraction beg. Left adrenalectomy: dissection of spleno-phrenic, phreno colic and spleno-colic ligaments to allow, a complete mobilization of the spleen. Retroperitoneal dissection for the exposure of the renal vein. Division of the lower adrenal vein dissection of the periglandular tissue with harmonic scalpel (Ethicon Endosurgery), used also to divide the upper adrenal rein and artery. The gland was inserted into an extraction bagand removed. Aspirative drainage was employed in every case and removed in the second operative day. **Results:** The median surgical time was 110 minutes. No mortality occurred postoperative morbidity consisted of a left pleural effusion in four patients. The median hospital stay was 4 days. **Conclusions:** Laparoscopic adrenalectomy in a lateral position is a safe procedure and combines the advantages to boyh anterior and posterior conventional approach.

FP-132

SIMPLIFIED GASTRIC BYPASS – 522 INITIAL CASES

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Background: The gastric bypass is considered the golden standard in the surgical treatment of morbid obesity. Although this procedure still be doing by laparotomy in most of the cases, laparoscopic approach is feasible, safe with good results and is grow in number. It is considered one of the most complex procedures in laparoscopy, requiring a large series to achieve the learning curve. So, any maneuver, technique or approaches who can improve it´s complexity are welcome. **AIM:** Evaluate the technique and initial results of Simplified Gastric Bypass (SGB) approach. **Casuistic:** Between December of 2001 and July of 2003, 522 SGB patients records were analyzed in a retrospective manner, 313 were female (59.9%), age range from 14 a 64y (M = 36,5y), weight range from 90 a 202 kg (M = 132 kg) and BMI were between 37 a 66 kg/m^2 (M = 44 kg/m^2). The Simplified technique (to be presented) is based in doing all of the anastomoses in the supra-mesocolic "floor" with the trocars in similar position of lap Nissen procedure. **Results:** There was no conversion to laparotomy at this series. BMI came from a mean of 44 to 28.4 kg/m^2 (63.3% EBMIL –Excess BMI loss). Operative time stays between 39 to 154 min (M = 75 min), Hospital stay within 1.5 to 6d (M = 3d). Complications occurred in 2.87% of ulcers, 2.5% of gastrojejunostomy strictures, 1.4% of leakage, 0.19% of digestive bleeding, 0.57% bowel obstruction. Re-operation was done in 1.91% and there were 0.95% of deaths (3p with pulmonary embolism. e 2p with sepsis due to gastrojejunostomy leakage). **Conclusion:** The Simplified Gastric Bypass proved to be at it's initial results; safe, less time consuming and efficient in reducing patients BMI with low complication and death rates.

FP-133

UMBILICAL DEFECTS BEFORE AND AFTER LAPAROSCOPIC CHOLECYSTECTOMY: DECREASING THE INCIDENCE OF POST-LAPAROSCOPIC INCISIONAL HERNIA

Hamouda AH, Ilham M, Khan M, Mahmud S, Nassar AHM.

Aims: The reported incidence of post-cholecystectomy incisional herniation is 0.8-3%. Wound extension seems to be an important etiological factor. This study aims to evaluate the effect of adopting a standard technique for access, gallbladder extraction and closure on the incidence of post-operative hernia after laparoscopic cholecystectomy (LC). **Patients and methods:** 900 LC's were performed in one unit over 7 years. Pre-existing defects were documented. The 10 mm umbilical port was established by direct access, through a fascial incision smaller than 10 mm, entering the peritoneal cavity with blunt forceps before wedging-in the cannula. Gallbladder extraction was done only after evacuating bile and stones allowing removal without wound extension. Umbilical port closure was achieved using an absorbable suture between two

blunt hooks tenting the fascia under vision and umbilical hernias larger than 2 cm were repaired using nonabsorbable sutures. **Results:** 57 pre-existing umbilical defects (6.3%) were used for access and then repaired after LC. Postoperative incisional hernia occurred in 3/900 patients (0.33%) with an average age 67 years. None of the patients were diabetic, one patient had a pre-existing umbilical defect and no wound infections were recorded. Incisional herniation was detected 4, 8 and 9 months postoperatively and necessitated repair in only 1 case, 11 months after operation. The hernia was umbilical in 1 patient, epigastric in 1 and combined in the third. None of the patients had wound extension. **Conclusion:** Pre-existing umbilical defects must be documented and repaired. The incidence of postcholecystectomy umbilical incisional herniation can be minimized by avoiding the classical Hasson technique, careful gallbladder extraction, avoiding wound extension and using a sound fascial

FP-134

LAPAROSCOPIC VENTRAL AND INCISIONAL HERNIA REPAIR: 11-YEAR EXPERIENCE

Manjarrez TA, Treviño J, Franklin M, Glass JL, González JJ.

Purpose: Incisional hernias develop in 2% to 13% of laparotomy incisions, necessitating approximately 90,000 ventral hernia repairs per year. Although a common general surgical problem, a “best” method for repair has yet to be identified as evidenced by documented recurrence rates of 25% to 52% with primary open repair. The aim of this study was to evaluate the efficacy and safety of laparoscopic ventral and incisional herniorrhaphy. **Materials and methods:** From February 1991 through November 2002, a total of 382 patients were treated by laparoscopic technique for primary and recurrent umbilical hernias, ventral incisional hernias, and Spigelian hernias. The technique was essentially the same for each procedure and involved lysis of adhesions, reduction of hernia contents, closure of the defect, and 3-5 cm circumferential mesh coverage of all hernias. **Results:** Of the 382 patients in our study group, there were 212 females and 172 males with a mean age of 58.3 years (range 27-100 years). Ninety-six percent of the hernia repairs were completed laparoscopically. Mean operating time was 68 minutes (range 14-405 minutes), and estimated average blood loss was 25 mL (range 10 to 200 mL). The mean postoperative hospital stay was 2.9 days and ranged from same-day discharge to 36 days. The overall postoperative complication rate was 10.1%. There have been 11 recurrences (2.9%) during a mean follow-up time of 47.1 months (range 1-141 months). **Conclusion:** Laparoscopic ventral and incisional hernia repair, based on the Rives-Stoppa technique, is a safe, feasible, and effective alternative to open techniques. More long-term follow-up is still required to further evaluate the true effectiveness of this operation.

FP-135

ENDOSCOPIC TOTALLY EXTRAPERITONEAL INGUINAL HERNIA REPAIR-A SERIES OF 200 REPAIRS

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Description: Aim: The addition of laparoscopic repairs only adds to the complexity of choosing the best hernia repair among the numerous types that have been described, but as history shows the best repair is the one that the surgeon has the greatest experience in and thus the lowest recurrence and complication rates. Laparoscopic hernia surgery has maintained its role because of the benefits to patients that are evident when compared to open repairs, as reported in many published randomized controlled trials. To review the experience of endoscopic totally extraperitoneal hernia repair (TEP) in a major teaching hospital. **Methods:** A review was undertaken of 160 consecutive patients who underwent TEP for inguinal hernia between 1998 and 2003 at the National University Hospital, Singapore. **Results:** The 160 patients had 200 hernia repairs (120 unilateral and 40 bilateral hernias). The mean age was 51 years and 95% were men. The overall mean operative duration was 70 minutes; bilateral repairs took 27% longer than unilateral repairs. Four patients had conversion to open surgery, and 10 patients developed minor complications (groin seroma). Seven patients (3%) developed hernia recurrence, but there was no recurrence detected in the last 52% of cases. The recurrence rate was higher when the mesh was not anchored (5 of 41 patients; 12%) than when the mesh was anchored (2 of 119 cases; 1.6%). The mean inpatient hospital stay was 1.4 days, and of the last 30 cases, 70% were performed as outpatient. **Conclusion:** Endoscopic TEP is a viable alternative to open hernia repair. To achieve good results, adequate cases should be performed to overcome the learning curve, and that the mesh should be anchored to the inguinal floor.

FP-136

LEARNING CURVE IN INGUINAL HERNIA REPAIR BY LAPAROSCOPIC APPROACH

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Objectives: To analyze the results of the learning curve in inguinal hernia repair by laparoscopic approach. **Materials and methods:** From February 1995 to August 2002, 1,050 inguinal hernia repairs were performed in 1,000 patients in the IMSS training center Tijuana, Mex. General anesthesia was used in all patients and the decision to perform TAPP (trans-abdominal pre-peritoneal) or TEP (totally extra peritoneal) technique was randomly taken. Thirty eight surgeons with basic laparoscopic skills were trained and their evaluation was based on the following standards: 1. The number of procedures needed to obtain complete knowledge of the posterior inguinal region anatomy. 2. OR time. 3. Complications. **Results:** Laparoscopic inguinal hernia repair was performed in a total of 1,000 patients, in which 50 of them were bilateral. 78% were male, 22% were female. Their ages ranging from 17 to 84 years with an average of 42 years. The most frequent type was indirect hernia in 760 patients (76%), direct in 220 patients (22%) and femoral in 20 patients (2%). TAPP procedure was performed in 580 patients (58%) and TEP in 420 patients (42%) with a morbidity of 8.5% (85 patients). Fifty seven patients presented seroma (5.7%), 7 had wound infection (0.7%), 3 patients had nerve lesion (0.3%), 2 patients had to be reoperated because of bleeding (0.2%), 1 patient presented mesh migration (0.1%). The recurrence rate was 1.5% (15 patients). Thirty procedures were needed to obtain adequate knowledge of the preperitoneal inguinal region and stabilization of OR time, which varied from 15 to 180 min with an average of 70 min. Some of these procedures had to be completed by one of the proctors because of technical difficulties. **Discussion:** The learning curve of the laparoscopic inguinal hernia repair takes a large number of procedures (at least 30) to be mastered because of the lack of knowledge of the region’s anatomy and its technical difficulties. It is considered an advanced laparoscopic procedure but once it is mastered, the results should be similar or even superior to those of the open approach.

FP-137

TOTAL EXTRAPERITONEAL LAPAROSCOPIC HERNIORRHAPHY USING KUGEL PATCH

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Description: Introduction: Kugel method is recently used for preperitoneal inguinal hernia repair because of tension free and sutureless fasion through a very small incision. Although it had very good result, it was difficult to confirm whether the mesh was adequate position because of small working space. So we had a good

working space with combination of abdominal wall lifting and low-pressure pneumopreperitoneum and performed total extraperitoneal laparoscopic herniorrhaphy using Kugel patch. **Patients and methods:** Between January 2002 and October 2003, total extraperitoneal laparoscopic herniorrhaphy using Kugel patch was carried out on 18 patients (3 patients had bilateral hernias) with a median age of 68.6 (47 to 89) years. Surgical procedure as follow: Under spinal anesthesia, the patient is placed in the supine position. A 12 mm infraumbilical skin incision is made and the fascia is incised. Extraperitoneal dissection is accomplished using a balloon device. A 12 mm trocar is inserted into the extraperitoneal cavity from this incision. Abdominal wall lifting using Kirschner's wires can provide a wide operative field of vision with pneumopreperitoneum. Carbon dioxide is introduced into the extraperitoneal cavity until reading a pressure of 4 mmHg. Subsequently, two 5 mm trocars are inserted into the extraperitoneal cavity. The vas deferens and genital vessels are teased away from the posterior aspect of the sac by sharp dissection. The sac is ligated and transected, and the distal part of sac is left undisturbed. A Kugel patch is inserted from the 12 mm trocar into the extraperitoneal cavity. The mesh complete covers to the underlying Cooper's ligament, the iliopubic tract, transverses abdominus and lateral border of the rectus and fixed with the Protack. Finally we confirm whether the mesh is adequate with the laparoscope. **Results:** The median operative time was 68.7 (44 to 106) minutes. There was no case of postoperative complications; hematoma, seroma and transient neuralgia. The median time, it took the patients to return to their normal activities, was 7.8 days. There was no case of recurrence during follow up (1 to 22 months). **Conclusion:** Total extraperitoneal laparoscopic herniorrhaphy using Kugel patch was safe and effective procedure for inguinal herniorrhaphy.

FP-138

LAPAROSCOPIC CORRECTION OF DIAPHRAGMATIC TRAUMATIC HERNIAS. REPORT OF 13 CASES

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Purpose: Describe the laparoscopic management of 13 patients with left diaphragmatic traumatic hernias. **Methods:** Descriptive study of non consecutive patients. The procedures were performed in different clinics and hospitals of the city. **Results:** We included 13 patients who required diagnosis or repair of left diaphragmatic injuries. One patient required conversion to an open procedure and the remaining 12, the correction were performed laparoscopically. In 9 patients, the mechanism of trauma was penetrating (4 patients stab wounds and 5 patients shot gun wounds) and blunt trauma in the remaining 4. In 10 patients the repair was done some hours after the trauma and 3 patients presented late onset diaphragmatic hernias. Two of these 3 patients required a mesh to cover the defect. In acute presentation hernias, the repair did not required mesh and just required primary repair. One patient presented a severe trauma index that required management at the Intensive Care Unit. In these particular patient, postoperative complications ocurred and the hospital stay was 33 days, both related to the extent of the trauma. The remaining patients no presented any complications and the average hospital stay in this group was 3 days. **Conclusions:** Laparoscopy is appropriate for the management of left diaphragmatic traumatic hernias in hemodinamically stable patients who did not require laparotomy or thoracotomy for other reasons.

FP-139

SILICONE COVERED LOW WEIGHT POLYPROPYLENE MESH (LOPROSI) FOR LAPAROSCOPIC REPAIR OF VENTRAL HERNIAS: ANIMAL STUDY AND INITIAL CLINICAL EXPERIENCES

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Purpose: The effect of silicone-membrane in prevention of adhesions to intraabdominally placed polypropylene meshes have been evaluated. **Methods:** In 24 white rabbits two full-thickness 3x4 cm symmetric contralateral defects were made in the abdominal wall. In the first 12 rabbits the left side defect was , covered by a polypropylene (PP) mesh covered with a silicone membrane in a way that the covered surface of the mesh was put in contact with the visceral peritoneum. As a control, the right side defect was covered by a PP mesh alone. In the next 12 rabbits the biological response of silicone membrane protected material-reduced mesh was evaluated: in all rabbits, on the left side silicone-covered low weight PP mesh, on the right side uncovered low weight PP mesh was implanted. The animals from each group were studied at 7th, 14th, 30th, 60th, 90th and 120th postoperative day, respectively, to determine the degree 6 of adhesion formation and its macro-and microscopic appearance. Based on the promising animal studies and having ethical committee permission we have started a multicentric study to investigate the clinical relevance of LOPROSI. In clinical evaluation a prospective study was performed including 12 patients (9 women and 3 men) with a mean age of 54 years (range 39-69 y), **Results:** In animal settings the silicone-membrane decreased adhesions significantly. In the clinical study was no mortality were no wound or mesh infections. In one case prolonged ileus was noted. Scans of six patients showed small fluid collections within the abdominal wall between the hernia sac and the mesh. These collections resolved within the first 30 days without aspiration. Clinically evident seromas were found in another four cases and multiple aspirations were needed for 2 and 4 months. During a mean follow-up period of 5 months we found no infections, rejections, fistulas, or recurrences. **Conclusions:** Although only a small number of patients were studied, low weight polypropylene mesh protected with silicone-membrane appears to be a promising combination for intraperitoneal hernia repair.

V-140

LAPAROSCOPIC MANAGEMENT OF INCARCERATED CRURAL HERNIA

Velasquez CM.

Description: We present many cases of complexity progressive of incarcerated crural hernia and its laparoscopic approach or management. **Case 1:** Left crural hernia with ileal asa incarcerated that recovers its motility and color. So, the hernioplasty is completed by TEP. **Case 2:** Right crural hernia with antimesenteric cecal incarcerated (Ritcher's hernia) edge that dont recover. TEP hernioplasty is realized. **Case 3:** Right crural hernia with asa ileal strangled that dont retrieve totally. Hernia ring closed for laparoscopy, conversion and intestinal resection are realized, however the hernioplasty is postponed to the second intervention.

V-141

LAPAROSCOPIC REPAIR OF SPIGELIAN HERNIA

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Introduction: Spigelian hernias are a rare entity. Laparoscopic approach to such a unique hernia can be both diagnostic and therapeutic. A recent MEDLINE search identified only thirteen reported cases of laparoscopic repair of spigelian hernias. **Technique:** The author presents a simple technique for laparoscopic mesh repair of spigelian hernias. This technique allows simple mesh placement and orientation to overlap the hernia defect. **Conclusion:** Laparoscopic repair of a Spigelian hernia is a feasible option to address this unique problem.

V-142

LAPAROSCOPIC CORRECTION OF A LEFT DIAPHRAGMATIC HERNIA CAUSED BY SHOT GUN TRAUMA

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33 year-old male patient who suffered a left thoracoabdominal shut gun trauma. The bullet entered the thorax in the fifth intercostal space at midaxilary line and was lodged at the twelfth thoracic vertebral body. At the emergency room the patient was hemodinamically stable, without peritoneal signs or respiratory distress. The laparoscopy showed a 2 cm posterior diaphragmatic defect, two fundic injuries and a non bleeding grade I spleen injury. The diaphragm was corrected whit non absorbable suture and the gastric fundus was sutured with an absorbable material. The patient did not present any complications, the thoracic tube was withdrawn at the third day and the hospital stay was four days.

V-143

HYPOVOLEMIC SHOCK SECONDARY TO A RUPTURE OF ECTOPIC SALPHINX PREGNANCY. LAPAROSCOPIC APPROACH
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Purpose: The objective of this video is to present us the surgical technique. **Material and methods:** We present us the clinical case of a 22 years old female patient, nulipara, with active sexual life, without contraception measures that beginning with pain in abrupt form at 0900 AM, intense abdominal pain localized to low belly and that later she becomes with generalized abdominal pain. The patient was admitted by the emergency room service, 10 hours after the onset of her pain, the patient was in hypovolemic shock, BP 70-50 mmHg, HR 172 bpm, make a draft, obnubilation, pallor xxx, acute abdomen, her lab findings RBC 4.2 gr. With 10% of hematocrit. The abdominal ecosonogram show a great amount of free fluids into the abdominal cavity and cul de sac. We began blood, transfusion, we decided to perform a gynecologic laparoscopic surgery, we found 4 liters of blood in abdominal cavity, with active bleeding evidence in the left salphinx by broken ectopic pregnancy. We performed salphinguectomy with 00 prolene endoloop knot fashion, washed exhaustive of abdominal cavity, we corroborate complete hemostasia and we put drainage in placed type penrose in the pelvic hollow. **Results:** The patient improve her hemodynamic constants, two units of globular package were transfused, she tolerate oral liquids at 48 hours after the surgery and discharge hospital at the second postoperatively day. **Conclusions:** The laparoscopic approach is safe in this type of patients as long as measures adapted of resuscitation are made, and it is very important to have all the, laparoscopic equipment ready in order to initiate an emergency surgery any time with the advantage to avoid postoperatively adhesions in a nulipara patient that can get to make difficult a later pregnancy possibility.

V-144

SAFENECTOMÍA ENDOSCÓPICA
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Objetivo: Describir la técnica mínima invasiva endoscópica con una sola incisión para el tratamiento del síndrome de insuficiencia venosa de la safena magna **Método:** Presentamos la descripción de la técnica de safenectomía endoscópica en dieciséis pacientes con insuficiencia de safena magna grados I y II de Hach quienes fueron intervenidos quirúrgicamente, practicándose una sola incisión a nivel crural a diferencia de la técnica de recuperación de safena para puentes coronarios que implica el uso de dos incisiones. **Resultados:** Se operaron dieciséis pacientes, 90% del sexo femenino. Con un tiempo operatorio promedio de 74.6 minutos. Se ligaron un promedio de 3.5 afluentes. Hubo que convertir un paciente. Dos pacientes (obesos) desarrollaron linfedema y sólo uno tuvo hematoma. No hubo mortalidad en la serie. **Conclusiones:** La safenectomía endoscópica es un procedimiento seguro y efectivo para el tratamiento de la insuficiencia de safena magna, con óptimos resultados cosméticos.

FP(TL)-145

EMPIEMA PLEURAL EN CONEJOS. MODELO EXPERIMENTAL PARA ENTRENAMIENTO EN TORACOSCOPIA
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Introducción: La cirugía videotoracoscópica ha demostrado ser una buena alternativa para el tratamiento de los empiemas pleurales en los estadios II (fibrino-purulento). El éxito de este procedimiento está en relación con el entrenamiento y capacitación del equipo quirúrgico El objetivo de este modelo experimental es lograr una réplica del empiema pleural del humano en conejos, para el entrenamiento en cirugía toracoscópica. **Material y métodos:** A 20 conejos neozelandeses de 3 y 4 kg se les inyectó en el espacio pleural- mL de trementina. Ocho horas más tarde, se inyectaron 1010 colonias de *Escherichia coli* en medio líquido y agar nutriente. Se administró antibióticos inhibidores de la betalactamasa por vía parenteral. 96 horas después, utilizando como anestesia general ketamina 35 mg/kg y acepromacina 0.75 mg/kg e intubación bronquial selectiva, se les efectuó una toracoscopia. Se colocó un trócar de 10 mm para la óptica. en el noveno espacio intercostal a 3 cm de la columna, uno de 5 mm en el sexto espacio a 2.5 cm de la columna y un tercer trócar de 5 mm en el mismo espacio por fuera del esternón. La técnica toracoscópica consistió en la aspiración de líquido, remoción de fibrina con pinzas romas, decorticación y lavado de la cavidad. Se realizó prueba hidroneumónica para evaluar las lesiones de pleura visceral y se comprobó la reexpansión pulmonar. Finalizada la cirugía. los animales fueron sacrificados con inyección letal de tiopental sódico. **Resultados:** Todos produjeron un empiema fibrinopurulento similar al del humano. El uso de cepas bacterianas poco agresivas para el conejo como la *E. coli*, permitió la sobrevida de los mismos hasta finalizar el procedimiento. El antibiótico limitó la infección a la cavidad pleural. El agar aportó nutrientes necesarios para la duplicación bacteriana y la trementina actuó como irritante. El modelo sirvió para reproducir la técnica toracoscópica usada en humanos para el tratamiento de los empiemas. La cavidad pleural fue pequeña pero satisfactoria para su manejo por toracoscopia y muy útil en el entrenamiento de cirujanos pediátricos. **Conclusión:** Este modelo experimental en conejos es económico y reproduce fielmente la fase II del empiema pleural. Permite el entrenamiento toracoscópico en el manejo de esta patología acortando la llamada curva del aprendizaje.

FP(TL)-146

TORACOSCOPIC SYMPATHECTOMY PRELIMINARY REPORT
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Purpose: Analyze the short term results of the toracoscopic sympathectomy in the treatment of palmar hyperhidrosis. **Methods:** With the patient under general anesthesia, is intubated with a double lumen tube. The sympathetic chain of the dominant hand is treated first. Two trocars introduced one 10 mm and one 5 mm. The lung is collapsed and the T2, T3, T4 ganglia are dissected. A 5 mm clip (hemolock) is placed in the upper portion of T2, the chain is cut. The rest of the dissected chain is removed with fulguration of the distal portion. The ganglia is sent to the pathologist. **Results:** Since January to November 2003, we have operated on 12 males and 7 females patients with a total of 37 sympathectomies performed. The response has been 100% successful. One patient had only side treated and now is complaining of having the dominant hand dry and the other one completely wet. 70% had

transitory compensatory sweating. 0% morbility, 0% mortality. **Conclusions:** Toracoscopic Sympathectomy is an excellent technique for the treatment palmar hyperhidrosis.

FP(TL)-147

DESARROLLO DE HABILIDADES PSICOMOTORAS EN LA ENSEÑANZA DE CIRUGÍA ENDOSCÓPICA CON EL USO DE SIMULADOR (MÉTODO DE MEDICIÓN)

Sereno TS, Fregoso AJM, Cabrera PC, Ruiz CJ, González OA, Zermeño RJJ, Orozco AMO, Cumplido HG, Hermosillo SJM.

Antecedentes: La evaluación objetiva de las habilidades psicomotoras desarrolladas debe ser parte esencial de los programas de entrenamiento de cirugía endoscópica modernos. Desde hace tres años se realiza durante un periodo de seis meses, un Curso-Taller de Cirugía Endoscópica dirigido a residentes y especialistas quirúrgicos, utilizando simuladores y modelos biológicos. La finalidad de este trabajo, fue evaluar de forma objetiva mediante un método de medición, el progreso en las habilidades de los participantes en la realización de tareas laparoscópicas. **Métodos:** Se incluyeron 18 sujetos participantes en el V Curso-Taller de Cirugía Endoscópica en el Hospital de Especialidades del Centro Médico Nacional de Occidente del Instituto Mexicano del Seguro Social. Se diseñó un método de medición que aplicaron los instructores en dos momentos diferentes: el primer día del curso y ocho semanas después, tras haber realizado nueve ejercicios distintos en el simulador. Se midió el tiempo y la precisión con la que se realizaron cuatro tareas: movilización de objetos, patrón de corte, sutura y nudos intracorpóreos. Se registraron los tiempos grupales e individuales promedio tanto basales como finales. Esta evaluación se aplicó en forma aislada del grupo, a cirujanos laparoscopistas expertos y a cuatro individuos ajenos al ámbito médico que funcionaron como grupo control. **Resultados:** En cuanto a la movilización de objetos, el tiempo grupal inicial fue de 75 segundos y el final de 58, la precisión de esta actividad fue de 93% inicial y 95% al final. El patrón de corte inicial fue 159 segundos y al final 155 segundos, con una precisión inicial del 77% y 94% final. Cuando el grupo realizó la aplicación de sutura se cronometraron 210 y 170 segundos respectivamente al inicio y final de la evaluación con una precisión del 51% en la evaluación basal y 78% en la final. La realización de nudos intracorpóreos fue hecha por el grupo en un promedio de 214 segundos inicial y finalmente lo lograron en 90 segundos; la precisión para dicha actividad fue de 55% al inicio y de 93% al final. Los cirujanos laparoscopistas expertos hicieron las tareas con mejores tiempos y precisión en todas las actividades desarrolladas en comparación con los sujetos a evaluación. Los tiempos y precisión con que se desempeñó el grupo de estudio tuvieron una mejoría que se reflejó en diferencias estadísticamente significativas al final del trabajo respecto de la evaluación inicial; sin embargo nunca superaron a los cirujanos con mayor experiencia. **Conclusiones:** Este método de medición de tiempo y precisión, permite evaluar de manera objetiva el grado de desarrollo de destrezas quirúrgicas por quienes están aprendiendo cirugía endoscópica con la implementación de simuladores. Después de culminar el estudio se definió como alumno competente a aquel que realizó cada una de las tareas en tiempos no mayores al 25% y en precisión de al menos 75% de los expertos. Este método, por su fácil aplicación es reproducible en otras instituciones.

V-148

SUSTITUCIÓN DE PUERTOS POR AGUJAS PERCUTÁNEAS EN CIRUGÍA ENDOSCÓPICA

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Objetivo: Presentar una nueva modalidad quirúrgica en cirugía endoscópica con agujas percutáneas de 1 mm de diámetro que sustituyen puertos de asistencia en laparoscopia. **Introducción:** La cirugía endoscópica es un método de mínima invasión considerado en algunas patologías quirúrgicas como el estándar de oro para su resolución. La tendencia en los últimos años a disminuir el calibre de instrumentos y puertos para optimizar los resultados de la cirugía laparoscópica tradicional ha dado lugar a la creación de miniinstrumentos y aditamentos minilaparoscópicos. **Metódos:** Las agujas percutáneas (aguja-gancho, aguja pasahilos, aguja enhebradora, aguja recta atraumática calibre 2-0) sustituyen de manera eficaz a los puertos de asistencia y algunos instrumentos en cirugía laparoscópica en diversas patologías (colecistectomía, apendicectomía, cistectomía ovárica, histerectomía, salpingectomía, plastia inguinal), cumpliendo con las funciones de tracción, movilización, disección, ayuda en la colocación de material de sutura. Las agujas son de acero inoxidable grado médico, pueden esterilizarce por los métodos habituales en cirugía endoscópica. Permiten mejorar los resultados estéticos y funcionales de la cirugía endoscópica tradicional y además reducen costos. **Conclusión:** cuando se tiene la experiencia en el uso de agujas percutáneas en cirugía laparoscópica es posible utilizarlas sustituyendo puertos de asistencia e instrumentos en algunos procedimientos endoscópicos, optimizando los resultados estéticos y funcionales.

V-149

CISTECTOMÍA OVÁRICA POR VÍA LAPAROSCÓPICA CON UN PUERTO UMBILICAL

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Este trabajo en video muestra la técnica endoscópica con un solo puerto umbilical para resolver los casos clínicos de quistes benignos ováricos y paraováricos. El propósito es optimizar los resultados estéticos y funcionales cuando se compara con la cirugía laparoscópica tradicional y la cirugía abierta tradicional. La técnica requiere para su realización: laparoscopio con canal de trabajo, instrumental de 5 mm en su variedad larga (43 cm) y aditamentos especiales como agujas percutáneas (aguja-gancho, aguja-pasahilos). Para la realización de esta técnica es importante tener experiencia en cirugía laparoscópica, estar familiarizado con el uso de agujas percutáneas y con el laparoscopio con canal de trabajo. La técnica está contraindicada en aquellos casos con sospecha de malignidad. Se muestra como alternativa a la técnica una variante que se asiste endoscópicamente para puncionar y exteriorizar el quiste y completar el procedimiento (disección y ligadura del pedículo vascular) con cirugía abierta tradicional. Estas técnicas permiten mejorar los resultados estéticos y funcionales de la cirugía abierta tradicional y de la cirugía laparoscópica tradicional, además de reducir costos.

V-150

MANEJO LAPAROSCÓPICO DE LOS QUISTES HEPÁTICOS. EXPERIENCIA DE 12 CASOS. TÉCNICA QUIRÚRGICA EN QUISTE DE LOCALIZACIÓN CENTRAL

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Antecedentes: Femenina de 56 años de edad originaria del estado de Morelos. Antecedentes familiares de diabetes mellitus e hipertensión arterial, cuatro años de presentar hipertensión arterial tratada con captopril. Niega alérgicos y transfusionales. **Padecimiento actual:** Dolor abdominal de 2 años de evolución, relacionado a la ingesta de todo tipo de alimentos, diagnosticada como gastritis crónica tx. procinéticos e IBP'S E.F. Sin adenomegalias, no síndrome pleuropulmonar, hepatomegalia dolorosa a 4-5-3-abajo de borde en líneas convencionales y masa en área hepática. USG de hígado con masa ocupativa, quística, única, v. biliar normal. Doppler color, sin vascularidad, adosada a v. porta y cercanía de la v. cava TAC. Abdominal masa quística líquida sin cápsula o septos. en segmento 4 y

5 de 12 cm sin dilatar vía biliar intrahepática, vena porta. Bioquímicos =N. IGg. Equinococo negativa. **Descripción de la técnica:** Cirugía el día 22-05-03 programada como destechamiento por vía endoscópica, mediante 5 puertos, líneas convencionales, lente de 30 grados, punción para obtención de estudio citoquímico, tinción de Gram, se procede a destechamiento mediante disección, corte y coagulación monopar de bordes, colecistectomía y revisión biliar. Colocación de sonda Pezzer para drenaje extracción por un puerto lateral, con retiro a las 72 horas. USG. Postoperatorio a las 24 hrs sin colección líquida, 3 meses hígado normal sin cavidad o colecciones. Boquímicos=N. **Comentarios:** Es importante determinar en el preoperatorio la etiología de masas quísticas hepáticas con el fin de aceptar el destechamiento como manejo quirúrgico de elección la prueba inmunológica A equinococo deberá ser negativa, también es importante conocer su localización y estructuras vasculares cercanas con el fin de evitar accidentes graves, y determinar si existe patología biliar asociada, en este caso se remarca el manejo de la vía biliar, la realización de la colecistectomía con el fin de destechar lo más completa la pared del quiste hepático. A diferencia de quistes localizados en segmentos periféricos los centrales entrañan un riesgo mayor. Nuestra experiencia es de 12 casos manejados por vía endoscópica. Siendo posible realizar el destechamiento en 10 de ellos y sólo en 2 casos no fue posible de alcanzar por esta vía, los del segmento 8. Siendo el caso de un quiste calcificado postraumático y el otro cercano a la vena cava superior, uno se programó para abordaje por tórax y otro se mantiene en observación. Es factible realizar el destechamiento en quistes centrales y periféricos. Con morbilidad baja y mortalidad de 0%. Estancia hospitalaria corta y bajo costo para la institución.

FP(TL)-151

QUISTE HEPÁTICO NO PARASITARIO. TRATAMIENTO LAPAROSCÓPICO

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Introducción: Los quistes del hígado se dividen en parasitarios y no parasitarios. Los no parasitarios son los más frecuentes y se deben tratar cuando el paciente presenta sintomatología (dolor o datos de compresión) o complicaciones del quiste. El tratamiento puede ser mediante drenaje percutáneo o resección de la cápsula del quiste mediante cirugía abierta o por cirugía laparoscópica. **Objetivo:** Demostrar la experiencia del Hospital Juárez de México, en el tratamiento de los quistes hepáticos no parasitarios, sintomáticos, con cirugía de mínima invasión. **Material y métodos:** Se estudiaron seis pacientes (5 mujeres y 1 hombre), con quiste de hígado diagnosticado por ultrasonido, en todos se les hicieron pruebas inmunológicas para descartar que fuera quiste hidatídico. En todos los pacientes se les resecó la pared del quiste hepático. En dos pacientes en el momento transoperatorio antes de resecar el quiste, se les realizó escleroterapia con aplicación de alcohol al 96%, se esperó 10 minutos antes de efectuar la resección. **Resultados:** Se pudo realizar la cirugía laparoscópica en forma satisfactoria en todos los pacientes, no existió ninguna complicación transoperatoria ni postoperatoria, los pacientes se egresaron de 2 a 3 días de postoperatorio y en un seguimiento de 9 meses a 63 meses no se presentó ninguna recidiva, en el seguimiento clínico y mediante ultrasonografía. **Conclusiones:** El tratamiento de mínima invasión para los quistes hepáticos no parasitarios, debe ser el estándar de oro para su tratamiento, debido a las ventajas que ofrece este tipo de cirugía en el transoperatorio y postoperatorio.

FP(TL)-152

LAPAROSCOPIA EN EL DIAGNÓSTICO Y MANEJO DEL ABDOMEN AGUDO DE ORIGEN DESCONOCIDO

Quiroz RF, Parra ZR, Jaramillo A.

Objetivo: Evaluar la utilidad de la laparoscopia en el diagnóstico y manejo del abdomen agudo de origen desconocido. **Materiales y métodos:** Durante el periodo de Agosto de 1999 a Mayo del 2003, se realizó laparoscopia a pacientes mayores de 15 años que ingresaron por urgencias a la Clínica Materno Infantil los Farallones de Cafi, Colombia, con diagnóstico de abdomen agudo de causa no definida., Se incluyeron en esta serie pacientes con abdomen agudo posquirúrgico, tanto de cirugía laparoscópica como abierta, intervenidos por el mismo grupo o remitidos de otra institución, cuando la causa del abdomen agudo no fue aclarada previamente. Se excluyeron aquellos pacientes a quienes se les realizó laparoscopia por abdomen agudo, cuya causa fue establecida antes del procedimiento. **Resultados:** Durante el periodo cumplieron criterios de inclusión 123 pacientes, se obtuvo información completa en 114 casos. Hombres 34 (30%) y mujeres 80 (70%), la edad promedio fue de 37 altos con rango entre 15 y 84 años. Se hizo el diagnóstico en 112 casos (98.2%), se logró manejar la causa por vía completamente laparoscópica en 108 casos (94.7%), sólo en tres casos se convirtió a cirugía abierta. Los hallazgos incluyeron: apendicitis aguda en 51 pacientes, (edematosa en l5, con peritonitis localizada en 18, con peritonitis generalizada en 9 y con plastrón apendicular en 9). Hemoperitoneo en 22 (folículo ovárico sangrante 7, endometriosis 5, embarazo ectópico roto 3, posquirúrgico 3, quiste ovario roto 2, cuerpo luteo sangrante 1, menstruación retrógrada l), pelviperitonitis en 9 (salpingitis 7, absceso tubo ovárico 2), adherencias peritoneales 6, divertículo perforado 5, biliperitoneo poscolecistectomía 4, úlcera duodenal perforada-peritonitis 2, absceso hepático roto 2, absceso intraabdominal poscolecistectomía 2, vólvulos de intestino delgado 1, invaginación íleo cólica lipoma de ciego 1, linfoma de ciego 1, necrosis de apéndice epiploico 1, neumonía basal-peritonismo 1, infección urinaria - peritonismo 1, pancreatitis abscedada 1, perforación de yeyuno - ca. metastásico 1, perforación sigmoide por colonoscopia 1, esclerosis nodular hepática 1, carcinomatosis - ascitis 1, adenitis mesentérica 1. Se encontró infección intraabdominal en 75 (65.80%), 32 (28%) con peritonitis generalizada. Se presentaron complicaciones en 18 (150%) pacientes, cinco con absceso intraabdominal, uno se manejó con antibióticos y a cuatro se les realizó punción drenaje guiada por escanografía; tres pacientes tuvieron íleo prolongado, una fístula colocutánea que cerró en 8 días, neumonía en 1, un hematoma de pared y un hematoma retroperitoneal manejados conservadoramente, tromboembolismo pulmonar en 1, los dos pacientes de diverticulitis perforada con peritonitis a quienes no se les intentó manejo laparoscópico por su mal estado, fallecieron en falla orgánica múltiple. **Conclusiones:** El presente trabajo muestra claramente que este abordaje es técnicamente posible, si se cuenta con el recurso humano y técnico necesario. Las ventajas en cuanto a morbilidad, mortalidad, menor impacto en la calidad de vida, mejores resultados estéticos y reducción de costos globales.

V-153

LAPAROENDOSCOPIC PROXIMAL ESOFAGOGASTRECTOMY WITH TOTAL SUBSTITUTION OF ESOPHAGUS WITH ANTIPERISTALTIC LEFT COLON BY MODERATELY DIFFERENTIATED ADENOCARCINOMA FROM THE GASTROESOPHAGEAL JUNCTION

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Purpose: The objective of this video is to present us the surgical technique. **Material and methods:** 43 years old male patient witn diagnosis of moderated Adenocarcinoma of the gastroesohageal junction in July 2002, received two cycles of chemotherapy with etoposido c, 5 fluouracilo and cis platinum and radiotherapy 6000 rads with linear accelerator machine, after a control endoscopic study in November of 2002 with biopsy reported negative esophagus to tumor, posteriorly the patient again reinitiates with disphagia, we repeat the endoscopic study in March of the 2003 finding an exofitic tumor of approx. 3 x 6 cm of gastroesophageal junction that occludes 70% of the esophagus lumen with

histopatologic results of moderately differentiated adenocarcinoma, the helical toracoabdominal CT scan, reported injury or delimited to esophagus, without adenomegalias, normal lung and normal liver, the patient received preoperatively enteral fedding, previous endotraqueal intubation, balanced general anesthesia, a diagnostic laparoscopic was made, by fitting subcostal positioning 11-12 mm port, 10-12 mm umbilical port, and 10-12 mm port to half of the xifoides appendix line and umbilicus scar, and 5 mm port in left flank, we start to review the left colon vascularized with partial clippage of left colic artery to value suitable collateral circulation to expenses of marginal artery of drummond, or serpetin artery, we continue with dissection and liberation of gastroesphageal junction, gastric fundus, greater and smaller stomach curvature with surgical stappler and ligasure surgical device, trashiatal esophageal dissection, trasoperatively endoscopic for pyloric dilatation with balloon, introduction under direct vision of saphenotomo, subtotal gastrectomy, incision at level of left side anterolateral edge of sternocleidomastoideo muscle, protection of the vascular package, exposure and transection of cervical esophagus, olive anchorage of safenotomo, stripping esophaguectomy, liberation of left colon until third means of transverse colon, ascent and transposition of antiperistaltic left colon, cologastric anastomosis with Endo GIA 60 stappler, colo rectoanastomosis with CEEA 28 circular stappler washed of abdominal cavity, tired test, methylene blue dye test by nasogastric tubes, positioning of drainage type Jackson Pratt, esophagocolic anastomosis in neck. Positioning of two pleural tubes 28 and 26 Fr in right hemithorax and finished surgical procedure. **Results:** Good postoperatively outcome. **Conclusions:** We considered that it is a feasible surgical technique to make by laparoscopic route when a good colateral circulation is present.

V-154

ALTERNATIVA TERAPÉUTICA DRENAJE ENDOSCÓPICO QUIRÚRGICO PARA EL ABSCESO HEPÁTICO AMEBIANO

Nava PC, Reyes EJ, Galicia TM, Moreno CJ, Molina PJ, Perea LH, Coronado BJ, Sánchez GL, Jiménez LJ. Hospitales Generales 1A, 2A, 47, 194 IMSS. México D.F.

Introducción: Estudio prospectivo multicéntrico lineal efectuado durante 7 años enero 1996, agosto 2003 se incluyen 13 pacientes, 12 hombres, una mujer todos con indicación para manejo quirúrgico. **Objetivo:** Demostrar que la endoscopia quirúrgica es la mejor alternativa de manejo en pacientes con absceso hepático amebiano cuando presentan indicaciones de drenaje tales como falta de respuesta al manejo médico (70%), falla del manejo con punción guiada, abscesos muy grandes o múltiples (25%), localizados en la cara posterior del hígado (25%), los localizados en lóbulo hepático izquierdo (15%), abscesos con inminencia de ruptura a cavidad peritoneal o comunicación a órganos vecinos, datos de irritación peritoneal. **Material y métodos:** Los pacientes fueron protocolizados mediante clínica, estudios de USG, TAC, Rx toráx y abdomen, Laboratorio (Bh, PFH), todos recibieron tratamiento médico previo a base de metronidazol solo o con cefalosporinas y/o emetina. El drenaje comprendió identificación, localización, desbridación, aspiración del contenido, limpieza y legrado del interior del absceso, toma de biopsia y colocación de drenajes en el interior de la cavidad del absceso bajo visión directa. **Resultados:** No se presentaron complicaciones, se drenaron abscesos de lóbulos derecho e izquierdo, la cantidad de material (hemático achocolatado) fue de 200 a 600 cc, estancia hospitalaria de 2 a 5 días. Resultados excelentes en el 100% de los pacientes. Mortalidad nula, morbilidad mínima. **Conclusiones:** Permite visión, exploración y drenaje directos, se debe considerar como método de elección en los pacientes con indicación quirúrgica, principalmente en los centros hospitalarios donde no se cuenta con radiología intervensionista.

FP(TL)-155

THE UNDERGRADUATE TEACHING OF ENDOSCOPIC SURGERY, PRESENT AND PERSPECTIVES

Heredia JNM, Escalante PO.

The surgical teaching methods at the undergraduate level, including the use of the laparoscopic surgery equipment, used at the Medical Military School are presented, with comments on some historical aspects, objectives and justification since it's beginning to present moment and it's perspectives for the future. This is a fundamental concept for the training of military physicians of excellence as required by the society of the new millenium.

FP(TL)-156

LA VIDEOLAPAROSCOPIA EN LA OCLUSIÓN INTESTINAL

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Objetivo: Considerar la laparoscopia como método para diagnosticar la etiología y tratar las oclusiones intestinales. **Métodos:** 44 pacientes operados por videolaparoscopia (VLC) por cuadros de oclusión intestinal desde marzo de 1993 hasta agosto del 2003. Se analiza la localización y etiología de la oclusión, utilidad de la VLC para la resolución del cuadro, morbilidad y mortalidad inherentes al método. **Resultados:** La oclusión se ubicó en el intestino delgado en 42 casos (95.5%) y en el colon en 2 oportunidades (4.5%). Las causas fueron: 23 adherencias, 7 hernias atascadas, 3 tumores, 3 posoperatorios (P.op.) de VLC, 2 cuerpos extraños, 1 P.op. de eventroplastia abdominal, 1 P.op. de histerectomía, 1 eventración abdominal atascada, 1 invaginación intestinal, 1 cáncer de colon derecho y 1 vólvulo de colon sigmoides. En cuanto a la utilidad de la VLC el procedimiento fue totalmente laparoscópico en el 73% de los casos, asistido en el 15.5% y convertido en el 11.5%, llegando al diagnóstico etiológico en el 100% de los casos. La morbilidad consistió en 2 perforaciones intestinales. No hubo mortalidad. **Conclusiones:** La VLC permitió llegar al diagnóstico etiológico en todos los casos. En el 73% la resolución fue totalmente VLC. La VLC se muestra como un procedimiento reproducible, eficaz y seguro para pacientes con sospecha de obstrucción localizada en el intestino delgado, con baja morbilidad y nula mortalidad.

FP(TL)-157

EROSIÓN DE LA BANDA GÁSTRICA: ¿SE PUEDE PREVENIR?

Cerón RF, Figueroa AS, Burgos QV.

Introducción: La complicación más, importante que se presenta después de la colocación de la. banda gástrica ajustable por laparoscopia para el tratamiento quirúrgico de la obesidad severa, es la erosión de la banda hacia la luz del estómago, presentándose en la mayoría de los casos en los primeros 12 meses después de su colocación, con una frecuencia de 0.5 a 3%. Esta complicación implica una reintervención para su retiro, y según la experiencia del cirujano puede ser por laparotomía o por vía laparoscópica. Y sólo cuando la banda se encuentra erosionada en más de 80%, se puede retirar por vía endoscópica. Cuando se retira la banda por erosión, en la mayoría de los casos los pacientes suben de peso nuevamente, por lo que esta complicación se considera como fracaso para el tratamiento quirúrgico de la obesidad. **Material y métodos:** En el Hospital Reg. Lic. Adolfo López Mateos del ISSSTE de la Ciudad de México, de mayo de 1998 a agosto de 2003, se operaron un total de 316 pacientes con banda gástrica ajustable por laparoscopia como tratamiento quirúrgico de la obesidad mórbida, 263 (83%) fueron del sexo femenino y 53 (16.71/1) del sexo masculino, con un promedio de edad de 40.5 años (13 a 68 años) y con IMC de 47 kg/m^2 en promedio (37 a 57 kg/m^2). De mayo de 1998 a abril de 2002 (47 meses) se operaron 195

pacientes con la técnica de fijación de la banda gástrica, cubriéndola con 2 puntos seromusculares de estómago-estómago. Y de mayo de 2002 a agosto de 2003 (15 meses) operamos a 121 pacientes sin colocación de puntos de estómago-estómago para fijar la banda. **Resultados:** En un periodo de 47 meses (de mayo de 1998 a abril de 2002) fueron operados 195 pacientes, colocando 2 puntos seromusculares de estómago-estómago para fijar la banda, presentándose 6 casos (3%) de erosión de la banda, todos los casos se diagnosticaron por endoscopia y serie esofagogastroduodenal entre 6 y 14 meses después de la cirugía. De mayo de 2002 a agosto de 2003 (15 meses) operamos a 121 pacientes sin colocación de puntos seromusculares estómago-estómago para fijar la banda, sin que hasta el momento se haya presentado ningún caso de erosión de la banda. A todos los pacientes se les realizó endoscopia cada 6 meses para descartar la erosión. **Conclusiones:** 1. Se ha comprobado que la parte de estómago que se erosiona, es con la que se cubre la banda. 2. Todas las técnicas para fijar la banda, descritas hasta el momento presentan un índice de erosión del 0.5 al 3%.,3.- Con la técnica de no colocar puntos seromusculares de estómago-estómago para fijar la banda descrita por nuestro grupo, después de 15 meses de seguimiento no se ha presentado ningún caso de erosión. 4.- Con esta técnica no se ha presentado ningún caso de deslizamiento. 5.- Es importante el seguimiento a largo plazo para demostrar que con esta técnica no se presentará erosión de la banda.

FP(TL)-158

MANEJO LAPAROSCÓPICO DE LEIOMIOMAS ESOFÁGICOS

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El uso de cirugía laparoscópica para el tratamiento quirúrgico de las enfermedades benignas de esófago es actualmente bien establecido y altamente confirmado por diversos reportes a nivel mundial. Durante 12 años de cirugía endoscópica de esófago se han realizado más de 650 procedimientos, la mayor parte de ellos para el tratamiento de la enfermedad por reflujo gastroesofágico. La presencia de tumores esofágicos benignos es poco frecuente, y la mayor parte de ellos pasa inadvertido en la mayor parte de los pacientes. El hallazgo transoperatorio de un leiomioma puede ser la mayor detección de estos tumores. La mayoría no requiere manejo ni extirpación. En el presente trabajo se reportan 3 casos de leiomiomas detectados durante el transoperatorio de cirugía esofágica y el tratamiento laparoscópico de un leiomioma que estenosaba la mayor parte de la luz esofágica, causando disfagia importante. El cirujano que realiza cirugía esofágica tiene que estar familiarizado con la morfología de este tipo de tumoraciones, su evolución clínica y en tener experiencia para el manejo laparoscópico cuando las dimensiones de la tumoración lo indiquen.

FP(TL)-159

FUNDUPLICATURA DE NISSEN POR LAPAROSCOPIA. EXPERIENCIA DE 350 CASOS SIN LIBERACIÓN DE GÁSTRICOS CORTOS

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La relación entre reflujo gastroesofágico (RGE) y esofagitis no fue bien reconocida hasta finales de los 40s. En el año de 1951 Allison describió el primer procedimiento exitoso para el manejo de la enfermedad por RGE y el cual consistía en la reducción de los pilares y el cierre de la crura. No fue hasta el año de 1956 cuando Nissen describe una técnica antirreflujo exitosa consistente en la funduplicación a 360°, obteniendo con este procedimiento resultados alentadores. Presentamos nuestra experiencia de 350 casos de ERGF tratados quirúrgicamente con funduplicación de 360° sin liberación de vasos gástricos cortos, cierre de pilares y fijación de manguito. Esta casuística abarca un periodo de tiempo de 10 años a la fecha. El 64% (224 casos) de nuestra población fue del sexo femenino y la edad promedio fue de 42.6 $\pm$ 9.8 años con un rango de 19 a 71 años. Todos los pacientes fueron estudiados con endoscopia superior, en el 96.5% de los casos (338 pacientes) se contó con estudios de manometría preoperatorio y en el 16% (56 pacientes) con phmetría veintiocho, seis pacientes (7.42%) fueron diagnosticados como Barret durante su evaluación endoscópica. Observamos disfagia clínicamente significativa y persistente en 6 casos (1.71%), tres de estos mejoraron con dilataciones esofágicas (mejoría total en dos y persistencia ocasional de los síntomas en una paciente), los restantes tres pacientes requirieron reintervención quirúrgica (uno de ellos se diagnosticó ulteriormente como esclerodermia y en dos por deslizamiento del manguito). Nuestro grupo realiza de forma rutinaria la funduplicatura de 360° sin liberación de gástricos cortos y aún en pacientes con trastornos leves de la motilidad esofágica. La estandarización de esta técnica nos ha permitido la reducción importante en los tiempos quirúrgicos (procedimientos hasta de 17 minutos) con buenos resultados clínicos y morbilidad comparablemente menor a la reportada en la literatura internacional.

V-160

RESULTADOS DE NUEVE AÑOS DE EXPERIENCIA EN EL MANEJO ENDOSCÓPICO QUIRÚRGICO DE ERGE

Nava PC, Reyes EJ, Galicia TM, Moreno CJ, Molina PJ, Perea LH, Coronado BJ, Sánchez GL. Hospitales Generales 1A, 2A, 30A, 47, 194 IMSS. HG Homeopático SS. México, D. F.

El manejo endoscópico de ERGE presenta claras ventajas sobre la cirugía tradicional. Nuestro equipo realiza este procedimiento desde hace 9 años, asesorados inicialmente por cirujanos nacionales endoscopistas de reconocido prestigio internacional, el proceso ha sido lento pero gratificante con bajos índices de complicaciones. Es un estudio multicéntrico de 353 pacientes entre mayo de 1994 y agosto de 2003, sometiéndose a cirugía endoscópica con los siguientes criterios: sintomatología mayor de 12 meses, sin mejoría a pesar de tratamiento médico, datos clínicos y endoscópicos de esofagitis, SEGD y endoscopias positivas, manometría y pHmetría. **Técnica:** en 88% se usó técnica Nissen con cierre de pilares; 6% Toupet; 3% técnica en "V" y 3% hemifunduplicatura; el promedio de estancia intrahospitalaria fue de 24 hrs, inicio de vía oral 8 hrs, tiempo quirúrgico inicial 3 hrs, actualmente 1.50 hrs considerando que son hospitales de adiestramiento; incapacidad laboral 7 días. Hubo seis perforaciones esofágicas transoperatorias, 2 por periesofagitis severa, 3 al paso de la sonda de calibración y 1 anclaje inadvertido de SNG, de éstas, 2 se repararon durante el mismo evento quirúrgico y 4 fueron convertidas para su reparación; 5% cursaron con disfagia y reflujo recurrentes por más de tres meses que cedieron con dilatación esofágica endoscópica y tratamiento médico. Se observaron buenos resultados en el 93%, actualmente sólo se hace seguimiento del 60%. **Conclusiones:** Se demuestra la seguridad y eficacia de la técnica, los mejores resultados con Nissen-Rossetti, inicio temprano de vía oral (12 hrs), alta hospitalaria en 24 hrs, mortalidad nula, morbilidad mínima, uso de analgésicos y antimicrobianos por 24 hrs y retorno a la vida normal en 7 días.

FP(TL)-161

RESULTADOS DE LA FUNDUPLICATURA TIPO NISSEN EN EL MANEJO DE LA ENFERMEDAD DE BARRET

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Uno de los tumores más letales que existen es el adenocarcinoma del esófago. En México es poco frecuente y no se tienen cifras exactas, su frecuencia se considera menor al 1% de todos

los tumores malignos del tubo digestivo. Los reportes muestran el incremento de esta enfermedad en el mundo Occidental y existe una necesidad urgente de encontrar un método eficaz que permita vigilar y prevenir el adenocarcinoma esofágico, que surge en su gran mayoría a partir de una enfermedad premaligna reconocida como la metaplasma de Barret. Existen factores ambientales, locales y características predeterminadas genéticamente que interactúan en la evolución de la enfermedad. El riesgo para desarrollar un adenocarcinoma esofágico en los pacientes con esófago de Barret es de 30 a 125 veces mayor que el resto de la población. El presente estudio muestra la evolución de 72 pacientes, en el periodo de enero de 1992 a diciembre de 1993, diagnosticados con esófago de Barret mediante endoscopia y biopsia, tratados quirúrgicamente con funduplicatura de 360º tipo Nissen por cirugía de mínima invasión en el Hospital Regional "General Ignacio Zaragoza" del ISSSTE, en la ciudad de México, D.F. El objetivo del presente estudio es valorar la evolución del paciente con esófago de Barret sometido a tratamiento quirúrgico, y analizar si el procedimiento disminuye el riesgo de evolución a adenocarcinoma. El seguimiento postoperatorio se realiza cada 3, 6 y 12 meses por los servicios de endoscopia, cirugía general y anatomopatología. En el presente estudio sólo un caso de los pacientes tratados quirúrgicamente desarrolló adenocarcinoma del esófago a los 6 años y 7 meses de operado. Se presenta el protocolo de estudio de esos pacientes, la técnica quirúrgica empleada y los procedimientos agregados realizados en estos casos, así como una comparación con los resultados obtenidos de 9 pacientes que no fueron tratados quirúrgicamente, en donde 3 casos desarrollaron adenocarcinoma de esófago.

FP(TL)-162

FUNDUPLICATURA LAPAROSCÓPICA EN PACIENTES CON ENFERMEDAD POR REFLUJO GASTROESOFÁGICO Y ESÓFAGO HIPOCONTRÁCTIL: ¿FUNDUPLICATURA TOTAL O PARCIAL?
Rendón CE, Hernández CA, Villanueva SKR, Huizar SP, Mata QC, Dorado RJD, Martínez JA.

Introducción: Los pacientes con esófago hipocontráctil secundario a enfermedad por reflujo gastroesofágico (ERGE) tienen más probabilidad de presentar disfagia después de una funduplicatura total (tipo Nissen) en comparación con una parcial (tipo Toupet). **Objetivo:** Demostrar que la funduplicatura laparoscópica tipo total (Nissen) no presenta mayor grado de disfagia en pacientes con ERGE y esófago hipocontráctil. **Material y métodos:** El presente es un estudio descriptivo, retrolectivo, longitudinal que incluyó a los pacientes con diagnóstico de ERGE y esófago hipocontráctil sometidos a funduplicatura laparoscópica. Se registraron: demografía, tipo de funduplicatura (Nissen o Toupet), grado de disfagia al mes, a los 3, 6 y 12 meses. **Resultados:** Se incluyeron 301 pacientes. Se dividieron en dos grupos de acuerdo al tipo de funduplicatura: Grupo Nissen = 201 p (66.5%), 123 hombres y 78 mujeres, con un promedio de edad de 47 ± 8 años. Grupo Toupet = 100 p (33.5%), 71 hombres y 29 mujeres con un promedio de edad de 51 ± 11 años. El tiempo quirúrgico promedio en el Grupo Nissen en comparación con el Grupo Toupet fue de 75 min ± 12 min *vs* 45 min ± 11 min. En el Grupo Nissen hubo mayor grado de disfagia al primer mes: grado I = 44, grado II = 103, grado III = 54, comparado con el Grupo Toupet: grado I = 89, grado II = 11, grado III = 0. Sin embargo, al tercer mes ambos grupos tuvieron resultados similares: Grupo Nissen: grado I = 104, grado II = 12, grado III = 0; Grupo Toupet: grado I = 12, grado II = 3, grado III = 0. El resto de los pacientes no presentaron disfagia. El control del reflujo gastroesofágico pirosis/regurgitación) fue en el 100% de los pacientes desde el primer mes del posoperatorio. Del sexto mes en adelante ningún paciente presentó disfagia. Se reportan a 3 pacientes con enfisema subcutáneo, el cual se resolvió espontáneamente a las 24 horas. **Conclusiones:** Tanto la funduplicatura tipo Nissen como la funduplicatura tipo Toupet controlan satisfactoriamente el reflujo gastroesofágico. Se demuestra además que la funduplicatura tipo Nissen en pacientes con esófago hipocontráctil se puede realizar con seguridad, ya que la disfagia desaparece al tercer mes del postoperatorio teniendo así resultados similares con la funduplicatura tipo Toupet.

FP(TL)-163

ACALASIA: SIEMPRE PRESENTA UN ESFÍNTER ESOFÁGICO INFERIOR HIPERTÓNICO?
Castro RJM, Trabanino PMA, López AME, Rodríguez BG.

Introducción: La acalasia es un trastorno motor primario con una incidencia de 1/400, 000, el método estándar de oro de diagnóstico es ausencia de relajación del esfínter esofágico inferior (EEI) (presión residual > 8 mmHg) y ausencia de peristalsis. Sin embargo no en todos los casos el esfínter es hipertenso, ya que puede ser normal o incluso hipotónico. Se presentan los hallazgos manométricos de pacientes con acalasia en un centro de concentración de estudios manométricos. **Objetivo:** Analizar los hallazgos manométricos de los pacientes con diagnóstico de acalasia corroborado por este método y determinar qué pacientes tuvieron un esfínter esofágico inferior hipotónico o normotónico. **Método:** Es un estudio retrospectivo, transversal y descriptivo, basado en las manometrías esofágicas realizadas en el periodo de enero del 2000 a diciembre del 2003, con el diagnóstico de acalasia. Se analizaron las variables socio-demográficas, presión del EEI (Nl: 14-45 mmHg), relajación, presión residual y motilidad del cuerpo esofágico. Todos los casos fueron realizados con catéter de perfusión o de estado sólido con un polígrafo y un programa de la marca Synetics. **Resultados:**

Presión del EEI	Pacientes (%)
Hipotónico	8 (14%)
Normotónico	34 (61%)
Hipertónico	14 (25%)
	Total: 56 (100%)

Conclusión: La manometría esofágica es el estándar de oro para el diagnóstico de acalasia, la hipertonía del EEI no es un criterio diagnóstico ya que la presión puede ser normal o baja y en esta serie lo más frecuente fue normotónico, los criterios de diagnóstico absolutos son ausencia de relajación y aperistalsis del cuerpo esofágico, la frecuencia de acalasia vigorosa es muy baja, similar a la reportada en la literatura mundial, en nuestra serie fue de 3 casos que representa el 0.5%.

FP(TL)-164

FUNDUPLICATURA LAPAROSCÓPICA SIMPLIFICADA: RESULTADOS DE 302 CASOS
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Introducción: La enfermedad por reflujo gastroesofágico (ERGE) es un problema de salud significativo que afecta a gran parte de la población. La cirugía antirreflujo laparoscópica juega un papel importante en el control de la enfermedad por reflujo en pacientes bien estudiados, considerado hoy como el tratamiento idóneo. **Objetivo:** Describir la experiencia de funduplicatura laparoscópica en pacientes con ERGE en el Centro de Endoscopia Quirúrgica Gastrointestinal. **Material y métodos:** Es un estudio descriptivo, retrolectivo y longitudinal. Se revisaron expedientes de pacientes con ERGE candidatos para cirugía antirreflujo. Todos los pacientes fueron estudiados por valoración clínica, endoscopia y biopsia, manometría, y sólo en casos seleccionados con serie esofagogástrica y phmetría/24 h. La técnica utilizada fue la siguiente: disección roma del hiato, hiatoplastia con un solo punto, sin sec-

ción de vasos cortos, y funduplicatura de 3 cm de longitud. **Resultados:** En un periodo comprendido de 1996 a 2003, se analizaron 302 casos de pacientes con diagnóstico de ERGE, 187 hombres y 115 mujeres, con edad promedio de 46 años. El tiempo promedio de evolución de la enfermedad fue de 2.5 años, los hallazgos endoscópicos más frecuentes fueron: hernia hiatal, esofagitis grado II, y enfermedad ácido péptica (p = 204, 67.5%). El esófago de Barret se encontró en 27 p (8.9%) de éstos, 11 p (46%) tuvieron displasia de bajo grado. El hallazgo manométrico más frecuente fue: esfínter esofágico inferior hipotenso y esófago hipocontráctil (62.5%). Se realizaron 201 funduplicaturas Nissen, 100 tipo Toupet y 1 procedimiento de Hill. Se presentaron 14 complicaciones (4.6%), 13 de las cuales fueron por enfisema subcutáneo resuelto espontáneamente, y una hemorragia de un vaso corto resuelto por colocación de grapas. No se reporta mortalidad. **Conclusión:** En pacientes con ERGE la cirugía antirreflujo controla la sintomatología (pirosis/regurgitación) en la mayoría de los casos a corto y largo plazo, con baja morbilidad y nula mortalidad, haciendo de este procedimiento el tratamiento idóneo.

V-165

EXOFAGOPEXIA POSTERIOR CON HEMIFUNDUPLICATURA ANTERIOR POR LAPAROSCOPIA, UNA NUEVA TÉCNICA QUIRÚRGICA PARA EL TRATAMIENTO DEL ERGE

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Con el paciente en posición europea, se realiza neumoperitoneo cerrado con aguja de Veres, colocando 4 puertos (2 de 10 mm y 2 de 5 mm), en abdomen superior, colocando separador de hígado, iniciamos la disección del ligamento gastrohepático, respetando la rama hepática del vago, continuando con la membrana freno esofágica, identificando el pilar derecho e izquierdo, se diseca el esófago posterior por debajo del vago, de derecha a izquierda, terminando la disección meticulosa del hiato, liberando al esófago completamente y conservando el ligamento gastrofrénico. Se cierran los pilares con prolene 0 (2-3 puntos), se fija el esófago al pilar derecho con 2 puntos de prolene 0 donde se alinea a éste (ESOFAGOPEXIA). Se procede a acentuar el ángulo de His con un punto que va de fundus gástrico al ligamento medio (del hiato), a esófago cara anterolateral izquierda (respetando el vago anterior) y nuevamente al fundus. Se completa hemifunduplicación anterior (220 grados) con dos a tres puntos de fundus a borde externo del pilar derecho (zona aponeurótica entre éste y la cava) formando un manguito de 4 cm. Se termina el procedimiento.

FP(TL)-166

ESTUDIO COMPARATIVO COSTO-BENEFICIO, ENTRE LA CIRUGÍA LAPAROSCÓPICA Y CONVENCIONAL, EN EL SERVICIO DE URGENCIAS DEL HOSPITAL GENERAL DE MÉXICO

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Introducción: La cirugía endoscópica es el "estándar de oro" para procedimientos quirúrgicos que anteriormente eran realizados por el método convencional o "abierto", tanto en intervenciones electivas y/o de urgencia. Actualmente se aplica rutinariamente, como ejemplo: en patologías agudas de la vesícula biliar, dado los costos y beneficios aún se encuentra en controversia su aplicabilidad en instituciones especialmente públicas, como método de tratamiento definitivo, por tal motivo se realizó el presente estudio de análisis costo beneficio en el tratamiento de urgencia de los casos de patología vesicular. **Material y métodos:** Estudio clínico, prospectivo, doble ciego, comparativo y longitudinal, realizado en los servicios de Urgencias Médico Quirúrgicas y Cirugía General del Hospital General de México (HGM), se incluyeron un total de 200 casos de pacientes con patología aguda de vesícula biliar, 104 casos fueron intervenidos por el método convencional y 96 por vía laparoscópica, en el periodo de septiembre del 2000 a diciembre del 2002. Todos los casos tuvieron el cuadro clínico y diagnóstico de litiasis vesicular confirmado por US y corroborado por estudios de laboratorio. Se estudiaron las siguientes variables: costos totales y parciales de los dos métodos estudiados, días estancia, complicaciones, tiempo quirúrgico, personal de salud asignado, material y equipo empleado, etc. según indicadores de un hospital de tercer nivel de atención en la ciudad de México. **Resultados:** Fueron ingresados al estudio previo consentimiento informado, 173 pacientes del sexo femenino y 27 del sexo masculino. Las variables estudiadas como días estancia (promedio 1.5 ± .5) y tiempo quirúrgico (56 min ± 12 min) fueron menores por la vía endoscópica, existiendo diferencias estadísticamente significativas en comparación con el método convencional, en relación a costos totales, complicaciones y personal empleado comparando ambos procedimientos no hubo diferencias estadísticas. Debemos mencionar que en el HGM, existe un costo extra es de: U$ 500.00 (donativo solicitado para ser intervenido quirúrgicamente por vía endoscópica, además de los insumos regulares). **Conclusiones:** En una institución de tercer nivel de atención en el Distrito Federal, como lo es el HGM, el presente estudio de costo beneficio, nos indica que la atención urgente del paciente con patología vesicular, es altamente recomendable realizarlo por vía endoscópica, la inversión inicial en la adquisición del equipo y control adecuado del material e insumos, en comparación al método convencional o "abierto", es muy similar, sin diferencias estadísticas, sin embargo los costos por vía endoscópica disminuyen progresivamente de acuerdo al número de pacientes intervenidos y experiencia del equipo quirúrgico.

FP(TL)-167

LAPAROSCOPIC SURGERY IN COMPLICATED INFLAMMATORY BOWEL DISEASE

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Introduction: The use of laparoscopic approach in patients with inflammatory bowel disease (IBD) is still controversial. Advantages related to laparoscopy could be important in this type of patients: better cosmetic results, less inflammatory response and less adhesions. **AIM:** To analyze the results of laparoscopic surgery in the treatment of IBD. **Methods:** Prospective analysis between January 2001 and April 2003. Fifty-two patients with the diagnosis of IBD were operated using laparoscopic approach: 36 patients with Crohn's disease (CD) and 16 with Ulcerative Colitis (UC). All CD patients were operated by elective basis. Indications for surgery were: 63.8% stenotic disease and 36.2% presented with fistula disease. Eleven patients with UC were operated by urgent basis. **Results:** Mean age was 24 years for CD and 32 for UC. Nineteen percent of patients with UC and 75% of patients with UC had previous abdominal surgery. The most frequent operation in UC patients was laparoscopically assisted total colectomy with end ileostomy, completing posteriorly the proctocolectomy with ileal-anal "J" pouch with or without diverting ileostomy. Conversion rate was 12.5% due to hypercarbia and one ureteral lesion. Mean operative time was 210 minutes and postoperative complication rate was 11.1%. Mean hospital stay was 5.38 days. In CD patients, the most frequent intervention was laparoscopically assisted resection of a previous ileotransversostomy and ileocecal resection. Conversion rate was 16.6% due to a marked inflammatory reaction that difficulted the dissection. Mean operating time was 126 minutes and postoperative complication rate was 13.8%, two of them required reintervention. Mean hospital stay was 5.43 days. **Conclusion:** This results suggests that laparoscopic surgery in patients with IBD is a safe and feasible option, even in patients with previous abdominal conventional surgery.