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Artículo:

Resúmenes de Trabajos Libres y Video del FP-222 a FP-274

FP-222

LAPAROSCOPIC APPROACH FOR SPLENIC DISORDERS. NINE YEARS EXPERIENCE WITH A SERIE OF 234 PATIENTS

Balagué C, Targarona EM, García A, Pey A, Kobus C, Davins M, Gaya JM, Medrano R, Garriga J, Trias M. Service of Surgery, Hospital de Sant Pau, UAB. Barcelona. Spain.

Introduction: Laparoscopic splenectomy (LS) has been shown as an effective and safe treatment for haematological disorders, especially in cases of normal sized spleens. However, the anatomical and clinical variability of different haematological diseases may difficult LS. By other hand, long term assessment of the clinical outcome of LS is lacking, and this information is essential to validate the procedure. **Aim:** To evaluate the long term outcome of a single team experience on LS in a series of 234 cases, according to the different hematological diagnosis. **Material and methods:** From February to August/02, 234 non-selected laparoscopic splenectomies (LS) were attempted and clinical information was prospectively recorded. Indications for LS were ITP (n = 105), AIHA (n = 11), spherocytosis (S) (n = 17), Evans syndrome (n = 6), HIV-ITP (n = 7), malignancy (n = 55), myelofibrosis (n = 9), TTP (n = 1) and others (n = 23). Op. Time, conversion, postop complications and hospital stay were prospectively recorded. Postop f-up was obtained through clinic notes, follow-up visits and phone interviews with all the patients and the referring hematologist. **Results:** This series included 93 m and 141 f with a mean age of 44 ± 20.1. Short term results: Mean Op time: 138' (ITP:120', ITP-HIV:159', HS:177', AHAI:146', Evans:122', TTP:120', Malign:148', Myelof: 197', others: 128 p >) with a conversion rate of 6.8% (ITP:4%, ITP-HIV:11% HS:6%, AHAI:0%, Evans:0%, TTP:0%, Maligns:11%, Myelof:17%, others:13%), morbidity of 19% (ITP:14%, ITP-HIV:22%, HS:18%, AHAI:11%, Evans:0%, TTP:0%, Malign:29%, Myelof:33%, others:20%), no operative mortality and hospital stay of 5 d (ITP:4, ITP-HIV:4, HS:4, AHAI:4, Evans:3, TTP:4, Maligns:6, Myelof:6, others:6). 2. Mean f-up of 35 m. Has been possible in 188 patients (80%). ITP group (ITP + ITP-HIV): 91 patients followed (81%) with complete remission in 82%. HS:13 patients followed (76%) with complete remission in 92%, AHAI:8 patients followed (89%) with complete remission in 50%, Evans:4 patients followed (67%) with complete remission in 100%, TTP:the only patient was followed and presented a complete remission, Malign:46 patients followed (84%) with mortality rate of 31%, Myelof:6 patients followed (67%) with mortality rate of 25%, others:17 patients followed (74%) with no mortality. No cases of sepsis related with aplenectomy in follow-up. **Conclusion:** Ls can be offered to most hematological diagnoses requiring splenectomy, with optimal short and long term results.

FP-223

LAPAROSCOPIC SPLENECTOMY FOR HEMATOLOGIC DISEASE: REPORT OF A THREE YEAR EXPERIENCE

Garteiz D, Weber A, Ovilla R, Zimbron A, Bravo C.

Purpose: Laparoscopic splenectomy has been described as part of the treatment of various hematologic diseases. We present our experience with laparoscopic splenectomy at Hospital Angeles de las Lomas, Mexico City. **Methods:** This is a retrospective review of our cases of laparoscopic splenectomy in patients with hematologic disease, performed at Hospital Angeles de las Lomas, Mexico City. All cases were studied and referred by the hematologist and sent to surgery as part of their definitive treatment from January 1999 to July 2003. We report the indications for surgery, operating time, surgical complications, length of hospital stay and postoperative follow up. **Results:** In this period, 13 patients with an average age of 35.4 years (13 to 79) were referred to surgery by the hematologist do to hematologic diseases. There were 7 male and 6 female patients. Indications for surgery were autoimmune thrombocytopenic purpura 46% (6), hereditary spherocytosis 23% (3), autoimmune bicytopenia 7.6% (1), autoimmune hepatitis 7.6% (1), variable common immunodeficiency 7.6% (1), lymphoma 7.6% (1). The patient with lymphoma had a giant spleen (more than 30 cm) and was not eligible for the laparoscopic approach, the other 12 patients were operated by laparoscoopy. Average operating time was 3.4 hours (range 2-5 hours). Only one patient required blood transfusion in the immediate post-operative period. There were no operative complications. There were no surgery related deaths in this series. Average hospital stay was 3.3 days (range 2-7 days). **Conclusions:** The indications for splenectomy in patients with hematologic disease have not changed but laparoscopic approach has now proven to be safe and feasible. The use of the harmonic scalpel as well as stapling devices help to ensure adequate hemostasis and reduce blood requirements in these patients. The size of the spleen is a relative contraindication to this approach. Morbidity and mortality are low, hospital stay tends to be lower and postoperative results are comparable to the open approach. We believe that in the future this approach will be widely accepted in our country. All patients are complete remission of their hematologic disease at an average follow up of 35.5 months (3-44).

FP-224

MINIMAL INVASIVE TECHNIQUE IN THE SURGERY OF THE SPLEEN

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Purpose: The minimal invasive surgical technique has rapidly become the method of choice in the surgery of the spleen. The purpose of this study was to determine the safety and efficacy of laparoscopic surgery in the treatment of different splenic disorders. **Patients and methods:** Over 60 months we performed 18 splenectomies for idiopathic thrombocytopenic purpur (n = 15), lymphoma (n = 1), hereditary sphaerocytosis (n = 1), metastatic melanoma (n = 1) and laparoscopic unroofings for symptomatic non-parasitic splenic cyst (n = 6). The mean age was 43 years (16-72), all patients had preoperative radiographic imaging, the mean splenic cranio-caudal length was 15 cm (10-28). The laparoscopic procedures were performed in a supine position, four or three operating ports were used. In case of splenectomy the hilar vessels of the spleen were secured with clips or Endo-GIA vascular cartridge(s). For laparoscopic unroofings the harmonic scalpel were used. All but one patient with metastatic melanoma the specimen was mechanically fracture-morcellated via exteriorized extraction bag. **Results:** There were two conversions (11.1%) to an open procedure in the splenectomized group. The average surgical time of splenectomies and laparoscopic unroofings was 130 min (90-180) and 50 min (40-90), respectively. The mean splenic weight was 310 g (200-2,100). There were no major intra or postoperative complications. The mean length of hospital stay was 3, 5 days (2-5). There were no splenic bed or wound site recurrences in malignant cases at a mean follow-up of 18 months (12-24). **Conclusions:** Our results suggest that the laparoscopic technique should be proposed for the management of both benign and malignant disorders of the spleen. Laparoscopic splenectomy can be safely performed even for massively enlarged spleens.

V-225

LAPAROSCOPIC SPLEEN PRESERVING DISTAL PANCREATECTOMY WITH SPLENIC ARTERY RESECTION

Targarona EM, Balagué C, Kobus C, Garcia A, Pey A, Garriga J, Gaya JM, Medrano R, Davins M, Trias M. Service of Surgery, Hospital de Sant Pau, UAB. Barcelona. Spain.

The pancreas is considered a difficult organ for laparoscopic assisted surgery due to the anatomic relations and inflammatory or

tumoral disease that require resection. However, selected case may benefit of distal resection, and magnification and detailed dissection may facilitate the preservation of the spleen. Case report: 18 years old woman, that suffered an attack of acute pancreatitis, A CT scan showed a 3 cm mass in the body of the pancreas, with dilation of the Wirsung duct. A laparoscopic approach was proposed. The access to the transgastric pouch was done preserving the gastroepiploic and short gastric vessels to preserve spleen irrigation. The pancreatic tail resection was performed after careful dissection of the vein and splenic artery in spite of scarring inflammatory tissue due to previous pancreatitis. The artery was encased by the tumor and should be resected. The spleen vascularization was well preserved in spite of the resection of the artery. The patient evolved satisfactorily and was discharged at the 5th day. **Comment:** The video shows the main steps of pancreatic resection, demonstrating the feasibility and potential advantages of laparoscopic pancreatic resections.

V-226

SPLENIC CYST TREATED WITH LAPAROSCOPIC SPLENECTOMY

Urbina F, García LJL, Vargas S, Ceballos A.

This case is about a 19 year old male with no important medical background in which a splenic cyst was diagnosed by ultrasound. The ultrasonic measurement was 7 x 7 x 7 cm. He was treated by laparoscopic splenectomy using morcelator to extract the spleen. We used a 4 trochar (10 mm each) technique, inserting three of them in the middle line and the fourth one in the left lower quadrant. After pneumoperitoneum was achieved we began by dividing the splenocolic ligament. Posterior to that, we initiated with the section of the short vessels using for all of them the armonic scalpel. After completing the section of the vessels we began the dissection of the splenic hilium; once the splenic artery and vein were identified and dissected, a nylon suture was placed along with staples. The artery and vein where then cut with armonic scalpel. After this was achieved, the splenorenal ligament was divided after which the spleen was completely free. After this, hemostasis was verified; the cyst was punctured and aspirated, the spleen was introduced inside an endo bag and the morcelator was then used to extract the spleen from the abdomen. The laparoscopic splenectomy is a feasible technique for treating patients with different pathologies, including splenic cysts. In this presentation we present a 4 trochar technique without the need of performing a small laparotomy for extraction of the spleen.

FP-227

LAPAROSCOPIC TREATMENT OF LEFT HEPATIC LOBE LESIONS: INITIAL EXPERIENCE IN A SMALL SERIES OF PATIENTS

Weber A, Garteiz D, Zimbrón A, Bravo C.

Purpose: Laparoscopic hepatectomy has been described for benign and malignant liver tumors in selected cases. We present our experience with laparoscopic partial liver resection at the Hospital Angeles de las Lomas in Mexico City. **Methods:** This is a retrospective review of our cases of laparoscopic liver resections at the Hospital Angeles de las Lomas from January 2000 to October 2003. We report operative time, surgical complications, and postoperative course of each patient. **Results:** We report 4 cases, 1 male and 3 females, with an average age of 57.5 years (37-86). Diagnosis of liver masses included focal nodular hyperplasia (FNH) (2), non parasitic biliary cyst (1) and carcinoma with unknown primary origin (1). Both cases of FNH were incidental findings during laparoscopy for other conditions not detected by ultrasound while the other two cases were diagnosed preoperatively and programmed as elective surgeries. All lesions were confined to the left lobe of the liver, with sizes ranging from 3 to 18 cm in diameter, and were resected completely. Operative time averaged 3 hrs, including the additional procedures performed (two cases with cholecystectomy and one with gastric band placement). There were no operative or postoperative complications. Surgery related mortality was 0%. Hospital stay averaged 2.7 days. No patients required blood transfusion or intensive care in the immediate postoperative period. The 3 patients with benign disease have been followed up from 1 to 7 months postoperatively and are asymptomatic. The patient with malignancy received chemotherapy and died 7 months after surgery due to progression of his disease. **Conclusions:** Laparoscopic partial hepatectomy for liver tumors and cysts is safe and feasible. The use of the harmonic scalpel is extremely helpful during the resection in order to control hemostasis. Care must be taken when tumors are large because of the risk of injuring intrahepatic bile ducts or vessels. When adequate resection is performed, the postoperative course should be expected without complications, low transfusion requirement and little morbidity.

FP-228

LAPAROSCOPIC ULTRASOUND-NAVIGATED RESECTION IN LIVER SURGERY

Hildebrand P, Kleemann M, Bruch HP, Birth M.

Introduction: Regardless of the ongoing technical and instrumental progress in laparoscopic surgery, its use in liver surgery is still limited to a few indications and centers. The aim of our investigation was the development and following use of a laparoscopic, ultrasound supported navigation system for online-navigation of a laparascopic laser-scalpel. To our knowlegment for the first time world-wide we report about the development and use of a laparoscopic, ultrasound supported navigation system in liver surgery in an animal model. **Material and methods:** The ultrasound supported navigation system UltraGuide 2000 (UltraGuide Ltd., Israel), which is based on a calculation of distance and angle in accordance with the common satellite navigation, was connected to a laparoscopic ultrasound probe (B&K, Denmark) by means of an adapter, especially created by us for this purpose. After calibration of the system, the laparoscopic instrument for resection can be guided outside of the planned resection-plane (Out-of-plane modus) with the help of a triangulation algorithm under laparascopic ultrasound control. The system was calibrated by using an ultrasound phantom. The first use for the evaluation of the technical feasibility and the detection of possible interference by the laparoscapic instrumentarium occurred in an animal model (pig). **Results:** After connection of the laparoscopic ultrasound probe with the electromagnetic navigation system the calibration could be put through with the same exactness as with the usual 3,5 MHz curved array-probe. There where no objective interference between the navigation system and the laparoscopic instrumentarium. The guidance of the laparoscopic resection instruments occurred under parallel guidance of the navigated laparoscopic ultrasound probe outside of the planned resection-plane. **Conclusion:** Our investigations showed that en online-navigation of a laparoscopic ultrasound-transducer and the laparoscopic resection instrument is possible. This could result in an increased surgical degree of freedom. Further investigations concerning the sterility and the system-based exactness must be made, bevor a clinical use can be taken under consideration.

FP-229

TRANSCUTANEOUS OPEN AND LAPAROSCOPIC RADIOFREQUENCY ABLATION (RFA) FOR LIVER TUMORS-A NATIONWIDE SURVEY

Birth M, Hildebrand P, Dahmen G, Ziegler A, Kleemann M, Bruch HP.

Introduction: Radiofrequency-ablation (RFA) represents a new technique for local destruction of liver tumors. Indication and procedure are poorly validated at present. **Method:** For the record

of the actual status of the radiofrequency-ablation (RFA) of liver tumors a survey of 2,026 surgical, radiological and medical hospitals with a standardized questionnaire was conducted. **Results:** With a respond rate of 17.5% the results of 58 hospitals were analyzed. This number represented 70% of all the hospitals using RFA in Germany at that time. The Analysis refers to 1,700 ablated patients with considerable individual differences in the experience (< 10 to 120 Patient per institution). The application of the RFA - probe occurs via different approaches, in which 37.9% only proceed transcutaneously and 17.2% via laparotomy or laparoscopy only. The indication was mostly applied interdisciplinary but one third of it was internally managed by the hospitals. In 25.9% the RFA is already used in potentially curative resectable tumors, 22.4% even when incomplete ablation for tumor mass reduction is expected. 75% combine resection and RFA to reach "R-0"-situation. The maximal tumor size to achieve a complete ablation differs from smaller than 3 cm to 11 cm. A safety area from 0.5 to 1 cm is preferred by most of the hospitals but 5.2% do without. As contraindication for RFA the size of the tumor (median > 5.8 cm), number of Tumors (> 5), critical localization of the tumor and disorders in the liver function were mentioned the most. Regarding to the adjustment of the equipment and time of ablation 60.3% fit in with statements of the manufacturers, the rest of the institutions use individual application times between 5 and 25 minutes dependent on the tumor size. An additional inflow-occlusion is optional carried out in 32.8% but never obligatory. More than 80% use CT or MRT as well for the preoperative staging as for postinterventional control. In this connection the first controls mostly occurs between the first and the 14th day following ablation. 86.3% of all hospitals combines RFA with an additional chemotherapy in which different first-line protocols are preferred. Only 8 hospitals made a statement on there recurrence rates in which the rates of persistent tumors (incomplete ablation) were 0-25% and of local recurrence (renew tumor in the localization of ablation in the course of time) 0-50%. 60% of the analyzed hospitals registered at least one complication, of which most were minor complications. The exact percentage of the maintained complications was not represented in the survey answers. **Conclusion:** The survey documents a significant discrepancy in the indication, application and results of the RFA concerning the therapy of liver tumors. The lack of general standards and an overestimation of therapy methods lead to an uncritical-application or to the neglect of standard therapy and demonstrate the necessity of randomized clinical studies.

V-230

LAPAROSCOPIC TREATMENT OF DIAPRAGMATIC EVENTRATION

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Purpose: Show a case of laparoscopic repair of a diaphragmatic eventration. **Methods:** 74 years old female, had rest dyspnea, heartbeats and dyspepsia, without any previous traumatism or thoracic surgery. Hydroaerial levels with hemidiaphragmatic elevation in the left hemithorax were observed at the chest X-ray. The contrasted exams demonstrated stomach subdiaphragmatic organ axial volvulus. The left hemidiaphragm reaches 4th back costal arc. Laparoscopic procedures was performed with total left diaphragmatic eventration with previous suspected diagnosis, descending the stomach, colon, large omentum and spleen, exposing a 10 cm -12 cm ring without peritoneal sac. An expanded politetrafluorethylene (ePTFE) mesh covered the defect, fixed with tackers, polyglycolic acid points and continuous suture of ePTFE 3-0 to the diaphragm. **Results:** Good evolutions without recurrence of disease, based on the clinical controls and complementary examinations. **Conclusions:** Treatment of diaphragmatic eventration by laparoscopic procedure is technically available with good result in this case.

FP-231

PRELIMINARY RESULTS IN A NEW PROSTETIC PLACEMENT METHOD, THE TWO LAYER PROSTETIC "SANDWICH REPAIR"

Treviño JM, Franklin ME, Berkhoff KR, Glass JL, Jaramillo EJ, Manjarrez A.

Introduction: The use of prosthetic devices has become the Standard of care in the management of the hernias because of it is associated low rate of recurrence, despite there is as high as a rate of 5-15% of recurrence with primary repair. When the margins of the hernia cannot be brought together without tension, the two layer prosthetic repair technique is a good option. In the event of incarcerated/strangulated hernias, however, placement of prosthetic material is controversial due to the increased risk of infection. The same is true when hernia repairs are performed concurrently with potentially contaminated procedures such as cholecystectomy, appendectomy or colectomy. We present our preliminary result with a two layer prosthetic placement repair for recurrent hernias in a potentially infected field, using a 4 ply mesh of porcine submucosa by combining laparoscopic and open techniques to construct a two layered prosthetic repair. **Material and methods:** From September 2002 to September 2003, 6 patients (2 male and 4 female) who underwent laparoscopic and open placement of surgisis mesh for either incisional or inguinal hernia repairs in a recurrent contaminated field. These patients were studied in a prospective, non randomized fashion 3 incisional and 3 inguinal hernias repairs were performed. 5 procedures in a potentially contaminated field (with incarcerated/strangulated bowel within the hernia), and 1 procedure was performed in an infected field, with an infected polypropylene mesh. **Results:** 6 patients were enrolled. Mean age was 56.4 years. The average operating time was 156.8 minutes. Operative findings included 5 incarcerated hernias and one strangulated inguinal hernia. In one case, there was an abscess of the previous polypropylene mesh. All procedures were completed with two layer SIS mesh. Median follow up was 10 months. Complications were minimal, included 1 seroma, 1 UTI, 2 atelectasias, 1 prolonged ileus, there were no wound infection. The average postoperative length of stay was 7.8. There have been no mesh-related-complications or recurrent hernias in our early postoperative follow-up period. **Conclusion:** Successful treatment of recurrent hernias is a difficult problem. The use of a new prosthetic device in infected fields and the two layered approach shows promising results. This is encouraging and provides an alternative approach for the management of recurrent hernias.

FP-232

LAPAROSCOPIC HERNIOPLASTHY. TEN YEARS OF EXPERIENCE

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The first laparoscopic method for the repair of hernia inguinal belongs to Ger that in 1990 published the first experimental laparoscopic description in dogs. After transabdominal preperitoneal technique (TAPP) described in 1991 by Arregui and the totally extraperitoneal (TEP) described by Mackernan in 1992. Our experience began in 1992 first with TAPP technique and soon we changed to TEP. The objective of this work is to show the results of our experience in ten years. **Material and method:** Between September of 1992 and August of 2003, we have incorporated to a prospective protocol 364 patients with 440 hernias. The patients entered to the protocol were selected under a common criteria and based on Nyhus classification. According to this the patients with Nyhus II and III and IV were incorporated to the procedure. Also bilaterals and associated with another abdominal or urological pathologies. Patients with infraumbilical previous surgery and the cases with abdominal irradiation and ingui-

onoescrotal hernias no were included. Surgical Technique: The mechanical expansion of the extraperitoneal space in the patients with TEP took place with Balloon Disector. The patient is put in dorsal position and Trendelenburg of 30º. In all the cases use quimioprofilaxis, General anesthesia is used and the configuration of trocars is located infraumbilical line. We used Polypropylene mesh of 12 x 15 cm and fixed with Takers. **Results:** We operated 364 patients with 440 cases distributed in 74 patients with TAPP technic with 84 cases and 290 patients with TEP with 356 cases. The age average was of 48 years (17-75). 20.8% had bilateral hernias, and men was the 77% of cases. The mean operating time was 55 minutes. In 8.5% of the cases was associated another surgery with a 5% of lap. Chole. Three serious operating complications ocurred. One vesical injury by balloon and two cases of intestinal injury. Also three cases of important epigastric bleeding. Conversion was in 2.1% of the cases. Two of TEP to TAPP, four cases to open inguinal surgery and one to open preperitoneal. The immediate postoperative complications were 6.8% of which only three cases were serious and were reoperated. 98.6% of the patients remained between one and two days hospitalized and 90% of the patients returned to work between the 4 and 7 day. The follow up was conducted personally by the authors for 10 years. Rejection and or infection of the mesh has not been observed. No mortality and we observe 8 cases of recurrence (1.64%). **Commentary:** The good results of our experience based on a low index of complications and a recurrence similar to the best open techniques encourage to us to, continue this protocol in a selected group of patients

V-233

USEFULNESS OF GASLESS METHOD BY DOUBLE SUBCUTANEOUS WIRING FOR LAPAROSCOPIC SURGERY IN CHILDREN
Takanobu H, Odaka A, Yokomori K, Hashimoto D.

Description: Objective: In order to avoid adverse cardiopulmonary effect of pneumoperitoneum particularly on small children such as neonates and infants, we have developed gasless laparoscopic method by Double Subcutaneous Wiring (DSW) method. In this study, the usefulness of gasless method by DSW was evaluated. **Method:** DSW method was created in 1991, and has been utilized in over 1,500 cases of gasless laparoscopic surgeries. Among them, 26 cases were children (0-12 y.o.), which include 6 cases of splenectomy, three cases of gonadectomy (for mixed gonadal dysgenesis), two cases of suture-rectopexy (for full-thickness rectal prolapse). Besides them, infantile giant liver cyst, infantile ovarian cyst, adrenal tumor, and other variety of diseases were also treated by this method. Appropriate sizes of subcutaneous wires and lifting apparatus were selected each time, depending upon the age and physique of the patient. **Results:** All surgeries were successfully completed under adequate intraabdominal exposure, without any complications, with no adverse effect on cardio-pulmonary conditions even in infants and neonates. Surgical cost was substantially less in DSW method than in laparoscopic surgery under pneumoperitoneum (approximately 1:10) because most of the instruments and trocars can be reusable in DSW method. **Conclusions:** Gasless laparoscopic surgery by DSW method appears to be beneficial in termes of safety, smoothness, and cost-effectiveness in pediatric patients as well as in adults.

FP-234

TEN YEAR EXPERIENCE WITH FIRST TROCAR DIRECT INSERTION WITHOUT PNEUMOPERITONEUM
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There are three techniques to perform pneumoperitoneum for diagnostic, therapeutical and minimal invasive surgery. The Hasson technique is the least frequently used and it's almost risk-free. The most commonly used procedure is the Veress needle and it has the most number of complications. The average used technique is the direct insertion of the first trocar without pneumoperitoneum, which produces minimum complications. In this document the authors present their 10-year experience in third-level private hospitals. **Material and methods:** From January 1993 to December 2002, 2,117 minimally invasive procedures were performed in General and Gynaecological surgery, without selection, in emergency and elective surgery. Patients with previous surgery were not eligible for this study. Age, sex, attempts, failures and conversions, complications and types of surgery were evaluated. Neither reusable trocars nor trocars with an optical device were used. **Results:** 457 patients were males and 1,660 were females (5 to 1), in a range of 10 to 84 years of age, averaging 48.5 years old. Ten failures -change to Veress needle- and 4 conversions to Hasson were reported. There were no vessels lacerated in the abdominal wall or injuries in the abdominal cavity. A second attempt was necessary in 357 patients (16%). Three attempts (5 mm trocars) were performed in 213 patients (10%). The insertion's surgical time varied from 45 seconds to 3 minutes, except on patients with failure and/or conversion. Morbid obesity was found in 106 patients (5%) and the technique was modified. The type of surgery was not important in this study. **Conclusions:** Surgeons performing minimal invasive surgical procedures have to have alternatives for pneumoperitoneum. This study shows that the insertion of the first trocar without pneumoperitoneum is a safe technique with minimum complications and conversions, and has a 0 mortality and morbidity rate.

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DIRECT VISUAL INSERTION OF THE PRIMARY TROCAR IN PATIENTS UNDERGOING THE LAPAROSCOPIC ROUX-N-Y GASTRIC BYPASS
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Obtaining access to the peritoneal cavity during laparoscopic procedures has inherent risks and difficulties. The use of the veress needle for access to the peritoneal cavity has shown to be at higher risk for bowel and vascular injuries while the open technique is time consuming and with risk of bowel injury as well as incisional hernia postoperatively. These problems are amplified in the morbidly obese population. We investigated the safety and ease of using the direct visual insertion technique for insertion of the primary trocar during the Roux-N-Y gastric bypass. **Methods and procedures:** 3 surgeons at two institutions performed 648 gastric bypass procedures over 3 years. Six hundred and thirty three procedures were completed laparoscopically. The average BMI of the patients was 55 kg/m^2. For 619 procedures the ENDOPATH® Bladeless Trocar with visual entry system was used to access the abdomen. Interoperative and postoperative complications of bowel and vascular injury, wound infection, and incisional hernia were evaluated. Patients were examined at 2 weeks, 6 weeks, 6 months, 1 year and 2 years postoperatively. A review of prospectively collected data was performed. **Results:** Follow up was from 1-24 months with a mean follow up of 10 months. There were no interoperative bowel or vascular injuries noted. The incidence of symptomatic incisional hernia was 0%, wound infection 3.6%, and hematoma at the port site 0.35%. **Conclusion:** This is the first serie describing the use of the direct visual access technique in the morbidly obese population. The optical access trocar allows a safe and quick technique for placement of the primary trocar in obese patients. This has become our standard method for accessing the abdomen in patients undergoing the Roux-N-Y gastric bypass.

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VIDEO-ASSISTED MINILAPAROTOMY SURGERY (VAMS) USING PIERCING ABDOMINAL RETRACTORS

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Purpose: Even with the improvements in laparoscopic instrumentation, the procedures which require solid organ removal and delicate suture placement still require abdominal incision. We have devised a modified surgical technique of video-assisted surgery through minilaparotomy. It is a hybridized form of conventional open and laparoscopic surgery using a novel concept of piercing abdominal retractors introduced through the abdominal cavity via minilaparotomy. Piercing retractors 3-dimensionally increase the operative space, and with conventional retractor blades, the minilaparotomy wound can be moved about thus maximizing the area of surgical procedure performed. Since the minilaparotomy is made through the rectus fascia, the postoperative pain and scar/bulging are minimized as in laparoscopic surgery, yet maintaining the techniques and safety of conventional open surgery. **Methods:** We retrospectively reviewed procedures performed using video-assisted surgery though minilaparotomy from January 1992 to May 2002. With the use of specially designed retractors and readily available blades (Thompson Surgical Inc, USA; Solco Inc, Korea), all procedures were performed with a minilaparotomy 5-88 cm long. Abdominal muscles were not cut but rather stretched to avoid unnecessary nerve damage. **Results:** There were 363 patients with mean age of 40.2 years (range: 16-70). The procedure performed were, 3 partial nephrectomies, 157 live donor nephrectomies (J Urol 165: 1099, 2001), 64 radical nephrectomies; 20 ureterolithomies, 19 pyeloplasties. The operative time for -assisted surgery through minilaparotomy ranged from 79 to 290 minutes (mean 125). There was no conversion to open surgery, no peri-postoperative complications, and only 3 patients needed a blood transfusion at any stage. Pain was significant on the first day but resolved quickly. All patients resumed consistent oral intake on the second day. All patients commenced ambulation by the second postoperative day and were able to resume full ambulatory activity by the 4th postoperative day. **Conclusions:** Video-assisted minilaparotomy surgery is a minimally invasive technique maintaining the advantages of both laparoscopic and conventional open surgery. Our method may be used as a first-line approach for procedures requiring incision for solid organ removal (eg. donor nephrectomy, hepatic lobectomy)/device insertion (eg. anterior spinal fusion, artificial vertebral disc placement) or delicate suture repairs (eg. vascular surgery).

FP-237

SEVERE COMPLICATIONS RELATED TO CREATION OF THE PNEUMOPERITONEUM IN LAPAROSCOPIC SURGERY. TEN YEARS OF EXPERIENCE

Fernandez J, Benavides M, Maya A, Gómez J, Baqueiro A.

Purpose: The purpose of this to show severe complications related to the creation of the pneumoperitoneum at hospital general private (Hospital Español de México) between January 1993 and December 2002. **Material and methods:** This is a linear and retrospective clinical trial, developed between January 1993 and December 2002. The archives of the OR have been reviewed, and only general surgical procedures have been included. Procedure done in the ambulatory OR were excluded. We looked for type and frequency of the complications. **Results:** 4,661 laparoscopic procedures were done in this period, 82% (n = 3,822) with Veress needle puncture and 28% (n = 839) with open technique. The more frequent complication were vascular lesions (n = 6, 0.12%) of these the more frequent was the iliac artery, the aorta and the umbilical vein; intestinal lesions (n = 5, 0.1%) and severe hypoxia (n = 1, 0.02%). We found a 0.04% (n = 2) mortality rate and 0.2% (n = 12) morbidity. We found these complications in the first four years of laparoscopic surgery in our hospital. **Conclusion:** The number of complications in our experience is similar of those reported in the literature. We concluded that time has reduced the number of complications, and that these are related to the learning curve.

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BEDSIDE DIAGNOSTIC LAPAROSCOPY IN THE INTENSIVE CARE UNIT

Jaramillo EJ, Franklin ME, Glass JL, Berghoff KR, Treviño JM.

Purpose: To present an analysis of our experience with diagnostic laparoscopy done in the intensive care unit. **Methods:** From 1991 to 2003, 11 critically ill patients underwent bedside diagnostic laparoscopy in ICU. Indications for diagnostic laparoscopy were abdominal pain in 3 patients, intestinal obstruction in 2, free air in KUB and sepsis in 1, metabolic acidosis in 2, second look after bowel resection secondary to mesenteric thrombosis in 2 patients, and fever and leucocytosis in 1 patient. In all patients the procedure was done at the bedside in the ICU under local anesthesia and intravenous sedation. Pneumoperitoneum was established with carbon dioxide to a pressure of 10-14 mmHg. A 5-mm scope and one or two 5-mm trocars were used for the exploration. There were no intraoperative complications. **Results:** Total mean procedure time was 36 min (17-55). Mean age of patients was 75.5 years (56-86). There were seven male and four female. Six patients were found to have extensive mesenteric ischemia, did not undergo further procedures and died the same day or the next day of the procedure. One patient was found to have a colonic perforation with massive fecal contamination; no heroic maneuvers were done and the patient died the same day. Four patients were found with normal abdominal cavity; of these, two patients died and two survived. **Conclusions:** Diagnostic laparoscopy is a valuable diagnostic tool in the intensive care unit in properly selected patients with severe medical conditions and in whom the possibility of an intra-abdominal process is uncertain. Expensive, time-consuming and high-risk diagnostic tests can be avoided, and earlier decision-making processes can be instituted to determine the best course of action in a given patient.

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RELAPAROSCOPY IN THE POSTOPERATING COMPLICATION

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Purpose: Consider relaparoscopy as a procedure to evaluate and treat immediate post operating complications of laparoscopic surgery. **Methods:** 44 patients underwent relaparoscopically between February 1995 and June 2003. Evaluate type of complications, emergency and urgency, type of site port, relation between operatory findings and presumptive diagnose, use of relaparoscopy, procedures, morbidity and mortality in order to complications or relaparoscopy. **Results:** Etiologies were 8 choleperitoneum, 8 hemoperitoneum, 7 abscesses, 6 generalized peritonitis, 4 intestinal suboclusion and 1 severe dysphagia. Urgencies: 26 and emergencies: 8. The approach was by employing left hypochondrium site port in 12 cases and 22 primitive site port reopening. There were 29 diagnostic relaparoscopy, 3 “in white”, 1 no conclusive and 1 error. The utility of relaparoscopy was 33 diagnostic, 25 therapeutic, 4 assisted and 3 converted. It was performed 32 abdominal irrigation and suction cases, 7 bleeding controls, 5 intestinal sutures, 1 clip to the cystic duct, 1 bile duct repair, 1 mesh re-fixation, 1 re-funduplication and 4 bowel resection assistance. The morbidity was 2 trocars wounds suppurations and 1 eventration. A death corresponded to respiratory distress by sepsis. **Conclusions:** Relaparoscopy allows to obtain satisfactory results in treatment of immediate post operating complications.

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MALPOSITION (SINISTROPOSITION) OF GALLBLADDER

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A left-sided gallbladder is an integral component of *situs inversus*. In the absence of this condition, abnormal location of this organ is gen-

erally recognized as an uncommon anomaly. Two types of gallbladder malposition in the absence *situs inversus* have been described by beck: medioposition of the gallbladder and sinistroposition. In sinistroposition the gallbladder lies under the left lobe (usually segment III) to the left of round ligament. We present one case of sinistroposition of gallbladder, in a 54 age female scheduled for laparoscopic cholecystectomy.

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COLECISTECTOMÍA LAPAROSCÓPICA. RESULTADOS EN SEIS AÑOS DE TRABAJO. HOSPITAL GENERAL SANTIAGO. SANTIAGO DE CUBA, CUBA

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Introducción: La colecistectomía videoendoscópica constituye actualmente en el mundo la idea más racional en el tratamiento quirúrgico de las enfermedades benignas de la vesícula biliar. En el año 1996 se comenzó a realizar este tipo de proceder en nuestra provincia y ya en estos momentos arribamos a la cifra de 3,000 colecistectomías considerando necesario hacer un análisis de nuestros resultados. **Método:** Se realizó un estudio descriptivo y longitudinal de 3,000 pacientes colecistectomizados en nuestro servicio consecutivamente, en el período comprendido entre Marzo de 1996 y Julio del presente año (7 años), que incluye hasta el seguimiento postoperatorio en la consulta especializada. Se realizaron pruebas de confiabilidad estadística. **Resultados:** Se realizaron un total de 3,000 colecistectomías endoscópicas con una edad media de los pacientes de 49 años. El 23.7% de los enfermos se encontraban en edades geriátricas, con una relación hombre/mujer de 5.1: 1 a favor de estas últimas. Se exhibe 1.8% de complicaciones perioperatorias siendo éstas más frecuentes en los varones (45%), así como 26 % de complicaciones postoperatorias. El índice de conversión fue de 2.1% fundamentalmente por dificultades anatómicas. Se reintervinieron el 0.3% de los enfermos. La estadía hospitalaria fue de 1.01 días y la mortalidad de 0.1%. **Conclusiones:** consideramos muy buenos nuestros resultados en el período de estudio, lo que confirma las ventajas señaladas a este tipo de cirugía entre las que se destacan el mejor confort para el enfermo, la corta estadía hospitalaria, la baja incidencia de complicaciones y una mortalidad casi nula.

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FÍSTULAS BILIARES: EXPERIENCIA DE 5 AÑOS EN EL SERVICIO DE ENDOSCOPIA DEL HOSPITAL DE ESPECIALIDADES DEL CMN SXXI IMSS

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Antecedentes: La patología del colédoco tiene una gran importancia en relación a la gravedad de los cuadros que presenta; una de las patologías encontradas son las fístulas biliares, éstas pueden ser espontáneas causadas por aumento de la presión como en la coledocolitiasis o iatrogénicas. Un pequeño porcentaje de pacientes requiere un manejo quirúrgico, sin embargo, la mayoría de los pacientes tiene una buena evolución con cierre espontáneo de la fístula, esto va en relación a las características de la fístula: etiología, sitio de la fístula, tamaño, etc. en base a esto se determina el manejo. En nuestro medio es poco conocida la incidencia y evolución de las fístulas biliares. **Objetivo:** Conocer las características de la epidemiología, etiología, manejo y evolución de los pacientes con fístula biliar en nuestra población. **Material y métodos:** Revisamos 2,776 estudios de CPRE entre Enero de 1999 a Septiembre del 2003 de pacientes enviados al servicio de endoscopia del Hospital de Especialidades del CMN SXXI IMSS. Se seleccionaron 86 estudios de pacientes con diagnósticos de fístula biliar. Se analizaron las siguientes variables: (edad, género, diagnóstico de envío, diagnóstico de la CPRE, características de la fístula, tratamiento y evolución de algunos pacientes. **Resultados:** Se incluyeron en el estudio 86 pacientes con fístula biliar (38H y 48M). La edad promedio fue de 51.1 años, rango (17 a 90), siendo más frecuente de la 4a a 7a década de la vida, con predominio del género femenino en una relación de 1.7:1. Los diagnósticos de envío más frecuentes fueron: fístula biliar y coledocolitiasis en 45 (52.2%) y 16 (18.6%) respectivamente. Los diagnósticos que predominaron en la CPRE fueron: fístula biliar a nivel del cístico con antecedente de colecistectomía en 47 (54.6%), coledocolitiasis en 17 (19.76%), otras 22 (25.81%) como fístulas espontáneas, hepáticas, pancreaticoduodenales. La localización más frecuente de la fístula fue a nivel del cístico en 38 (44.2%) casos, bilioduodenal 17 (19.8%) y bilioperitoneal en 8 (9.3%), intrahepática en 8 (9.3%) y a otros niveles en 15 casos (17.4%). El manejo de las fístulas con esfinterotomía en 31 casos (36.1%), colocación de endoprótesis en 19 (22.1%), colocación de catéter nasobiliar en 9 (10.5%), vigilancia en 22 pacientes (25.5%) y otros en 5 casos (5.8%). La evolución en general fue satisfactoria, la mayoría de pacientes sólo continuaron vigilancia en su HGZ ya que no requirieron control endoscópico por las características de la fístula. Sólo en 9 pacientes se realizó seguimiento endoscópico, en 6 de ellos cerró la fístula, en uno la fuga fue menor dando manejo conservador, en los dos restantes: en uno se realizó retiro de catéter nasobiliar con colocación de prótesis y en el otro recambio de prótesis biliar, en el seguimiento de ambos tuvieron cierre de fístula. **Conclusión:** En nuestro estudio encontramos una incidencia del 3% de fístulas biliares, con predominio del género femenino. La etiología más frecuente fueron las fístulas posquirúrgicas en más de la mitad de los casos, seguida de coledocolitiasis. La evolución en todos los pacientes fue satisfactoria con cierre de fístula. Sólo en el 10% de los casos fue necesario realizar control endoscópico y en dos de ellos un segundo tratamiento. El manejo ofrecido en la mayoría de los casos fue con esfinterotomía y prótesis biliar, y los que fueron tratados en forma conservadora se infiere que tuvieron evolución satisfactoria, ya que no fueron enviados nuevamente de su HGZ.

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MANEJO DE LA COLEDOCOLITIASIS POR CIRUGÍA ENDOSCÓPICA CON TRES PUERTOS. REPORTE DE 50 CASOS

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Antecedentes: La coledocolitiasis (CDL) es frecuente en asociación con colecistitis litiásica e ictericia en 10% o presentarse asintomático en 7%. La conducta terapéutica dependerá de situación clínica, edad y estado del paciente. Reportamos el manejo laparoscópico con tres puertos y uso de coledoscopio en un grupo de 4 cirujanos. **Material y métodos:** Efectuamos 50 colecistectomías endoscópicas y exploración de vías biliares (EVB) 4 cirujanos, colocando 3 puertos: umbilical de 10 mm, subxifoideo de 5 mm y flanco derecho 5 mm, la colangiografía y EVB se realizó por puerto subxifoideo. Se utilizó equipo marca Storz y coledoscopio de 4.5 mm exterior y 2.2 de canal de trabajo, cestas de Dormia de 3, 4 y 6 alambres, balones de Fogarty, catéter de 5 Fr, sondas de Catell 16 Fr. La anestesia fue mixta BDP y/o subdural, general o ambas. **Resultados:** De 50 pacientes operados, 11 (22%) fueron hombres y 39 (78%) mujeres con rangos de edad de 10 a 80, con media de 51.9 años, operados en fase aguda 30% y crónica (programados) en 70% de ellos, en 29 pacientes se realizó colangiografía TO corroborando CDL, en 21 no fue necesaria por ser evidente clínica y USG, realizándose la EVB y extracción de litos transcística en 11 pacientes (22%) y por coledocotomía en 39 (78%) con un rango de litos de 1 a 7, en el primer caso sin dejar sonda en T. En ningún caso se usaron grapas, sólo sutura o ligadura. Un caso de la EVB fue 8 días después de colecistectomía por ictericia y dolor, en otro existió fuga importante de bilis por Penrose que cedió en una semana. Se convirtió a colecistectomía abierta un caso por múltiples adherencias, pero éxito de EVB por coledoscopia. No hubo mortalidad. **Discusión:** Presentamos

estos casos por considerar que puede ser suficiente y técnicamente útil la exploración biliar con tres puertos (2 de 5 mm) y sobre todo la posibilidad de efectuarla vía transcística sin dejar sonda en T, bajo la certeza de una colangioscopia adecuada y negativa. Consideramos, que ésta es una forma más de realizar una EVB con buenos resultados.

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FACTORES ASOCIADOS A LA CONVERSIÓN DE LA COLECISTECTOMÍA LAPAROSCÓPICA. CINCO AÑOS DE EXPERIENCIA EN EL HOSPITAL ABC

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La colecistectomía laparoscópica ha sido aceptada como el método de elección para el tratamiento de las patologías quirúrgicas de la vesícula biliar. Sin embargo, a pesar de que es considerada como un procedimiento laparoscópico básico, en ocasiones debe convertirse a un procedimiento abierto. Se estudiaron 1,843 pacientes sometidos a colecistectomía laparoscópica del 1 de enero, 1999 al 31 de julio, 2003 en el Hospital ABC. Fueron 1,175 mujeres (64%) y 668 hombres (36%). La edad promedio fue de 49 años. Cuatrocientos veintiún pacientes (22.8%) fueron intervenidos de urgencia y 1,416 en forma electiva (76.8%). Hubo 20 complicaciones (1.08%), siendo las más frecuentes sangrado del lecho y sangrado de algún puerto. Se convirtieron 30 casos (1.62%) y en sólo cinco de ellos hubo complicaciones (16.66%), entre las cuales se encontraron dos casos de lesión de la vía biliar y dos sangrados del lecho mayores de 1,000 cc. La edad promedio en este grupo de pacientes fue de 57 años. Veintidós casos fueron intervenidos de forma electiva (73.33%) y 8 pacientes de urgencia (26.66%). El tiempo de estancia intrahospitalaria promedio fue de 5.96 días. El tiempo quirúrgico promedio fue de 223 minutos. La causa más común de la conversión fueron la presencia de adherencias y las dificultades técnicas. Cincuenta porciento de este grupo de pacientes presentaban colecistitis aguda, el 30% colecistitis crónica, el resto de los pacientes presentaban otras condiciones asociadas como síndrome de Mirizzi, disfunción del esfínter de Oddi, coledocolitiasis, pancreatitis, cáncer y colangitis. En 1,801 casos (97.66%) se utilizó el ultrasonido como método diagnóstico. Las causas de la conversión no dependen del cirujano, en la mayor parte de los casos se debe a las condiciones inherentes al paciente. No existen factores que puedan predecir si la cirugía laparoscópica tendrá que convertirse.

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COLECISTECTOMÍA LAPAROSCÓPICA AMBULATORIA

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Antecedentes: La primera colecistectomía laparoscópica se realiza en Alemania en 1985. Los franceses en 1987 la dan a conocer al mundo. En los EUA el grupo de Olsen y otros modifican la técnica europea y la promueven en el Continente Americano, finalmente Leopoldo Gutiérrez realiza la primera colecistectomía en México y se generaliza en todo el país. **Objetivo:** Demostrar que la colecistectomía por laparoscopia ambulatoria es un procedimiento quirúrgico seguro si se efectúa en forma seleccionada. **Material y métodos:** El presente es un estudio de cohorte (observacional, prospectivo, descriptivo y longitudinal). Se realiza en el Hospital General Regional No. 196 del IMSS, del 19 mayo de 1999 al 12 de noviembre 2003. Seleccionamos a los pacientes con cuadro clínico, de colecistopatía corroborado por US o colecistografía oral de ser necesario y con criterios de inclusión preoperatorios, transoperatorios y posoperatorios, y se ingresan al programa de cirugía ambulatoria. Al término de la cirugía se les administra 1 g de metamizol y 10 mg de metoclopramida endovenoso, a las 4 h de postoperatorio inmediato son valorados y egresados en un intervalo de tiempo de 5 a 12 horas con una media de 8 h, todos con hoja por escrito con indicaciones precisas del manejo del dolor, vómito, dieta y datos de alarma para regresar al hospital de ser necesario, que se entrega al familiar y al paciente. El cirujano se comunica con el paciente a las 20 h del día de la cirugía y a las 8 h del día siguiente para reajustar manejo y se cita 5 a 7 días en la consulta externa para valoración, retiro de puntos, alta con médico familiar para continuar el control e indicación de cita abierta a cirugía general en caso de cualquier eventualidad. **Resultados:** Se realizaron 590 colecistectomías laparoscópicas ambulatorias, la población fue conformada por 515 mujeres y 75 hombres, un rango de edad de 15 a 83 años, con una media de 42 años, el sangrado calculado fue menor de 100 mL con una media de 13 mL, el tiempo quirúrgico fue menor a 100 min con una media de 59 min. Los 590 pacientes que ingresaron al programa de cirugía ambulatoria, permanecieron en el área de cirugía ambulatoria de 4 a 10 h, con una media de 8 h. Ningún paciente reingresa a hospital y la morbimortalidad fue de cero. **Conclusiones:** La colecistectomía por laparoscopia ambulatoria es un procedimiento quirúrgico seguro si se selecciona bien a los pacientes. Se aprovechan los beneficios de la cirugía de mínima invasión y del programa de cirugía ambulatoria, de una rápida recuperación que se puede realizar en el núcleo familiar sin disminuir la calidad de la atención ni poner en riesgo al paciente, además con menor angustia, así como mayor tranquilidad y satisfacción de él y los familiares. El hospital aumenta la calidad de la cirugía en general y en particular de la ambulatoria, con la consecuente disminución de los gastos de operación por hospitalización. El equipo de salud siente satisfacción de brindar una atención de calidad al paciente que los motiva a trabajar en equipo.

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EXPERIENCIA EN COLEDOCOSCOPIA POR MÍNIMA INVASIÓN

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Introducción: La cirugía de mínima invasión ha revolucionado los estándares quirúrgicos de nuestra era, por lo que resulta lógico el realizar cada vez mayor número de procedimientos quirúrgicos por vía laparoscópica. La primera exploración de vía biliar abierta fue realizada por Ludwig Courvosier en 1889. Bakes en 1891 pudo visualizar el interior de la vía biliar con un instrumento de su creación, Mc Lever en 1941 describe el coledocoscopio óptico. Jacobs fue de los primeros cirujanos en describir la coledocotomía por vía laparoscópica. La literatura reporta que el 15% de los pacientes que presentan litiasis vesicular, presentan coledocolitiasis. Estableciéndose el procedimiento laparoscópico como opción diagnóstica y terapéutica para este grupo de pacientes, evitando las desventajas del procedimiento abierto. La literatura refiere que la exploración de vías biliares laparoscópica presenta una mortalidad que oscila del 0 al 1% y morbilidad del 1 al 12%, dependiendo de la vía de abordaje (transcística *vs* transcoledocociana). Otros métodos para tratar la coledocolitiasis presentan cierta morbilidad ya descrita para la esfinterotomía vía colangiopancreatografía retrógrada endoscópica (CPRE) se presenta sangrado en un 3%, pancreatitis 2%, perforación duodenal 1% y estenosis de papila de un 10 a 31% por otro lado la exploración de vía biliar abierta (EVBA) aumenta la morbilidad hasta 3 veces con el inconveniente de que se realiza a ciegas. La coledocoscopia por vía laparoscópica (CVL) tiene reportada una incidencia de complicaciones en un 7% con menor tiempo de estancia intrahospitalaria y menor trauma quirúrgico. Presentamos la experiencia en un hospital de tercer nivel de Petróleos Mexicanos. **Material y métodos:** Se estudiaron de manera aleatoria, prospectiva y longitudinal 8 pacientes programados para cirugía electiva en un período comprendido de 6 meses, Noviembre del 2002 a Mayo del 2003, de los cuales 6

correspondían al sexo femenino y 2 al masculino con edades que oscilan de los 46 a 76 años con una media de 67 años. Todos con diagnóstico ultrasonográfico de colelitiasis (CCL) y 7 de coledocolitiasis y 3 con antecedente de pancreatitis. A 2 de los pacientes se les realizó colecistectomía laparoscópica y coledocoscopia de los cuales 3 fueron vía transcística, 3 transcoledociana y 2 tanto trancística como transcoledociana. En los 8 se logró visualizar la vía biliar tanto proximal como distal. **Resultados:** De los 8 pacientes estudiados sólo 5 tuvieron confirmación coledocoscópica de coledocolitiasis, de los cuales a 4 pacientes se les extrajeron los litos de manera exitosa (80% de eficacia terapéutica), al único paciente que no se le consiguió extraer el lito por vía laparoscópica requirió de conversión a cirugía abierta dado que presentaba litos múltiples adheridos a la pared coledociana. El tiempo quirúrgico promedio fue de 160 min, los días de estancia intrahospitalaria postoperatoria oscilaron de 1 a 15 días (el paciente que permaneció 15 días del postoperatorio fue por causa ajena al procedimiento quirúrgico- RC-) con un promedio de 4.5 días, ninguno de los pacientes presentó hiperamilasemia o pancreatitis postoperatoria, al grupo de pacientes sometidos a coledocotomía laparoscópica se les colocó sonda de Kehr sin evidencia de fuga y con retiro exitoso a las 4 semanas. El dolor postoperatorio fue mínimo (escala visual análoga 3/10) controlado con ketorolaco trometamina a dosis de 30 mg cada 8 hrs, se inició la vía oral a las 12 horas del postoperatorio con tolerancia adecuada en todos los pacientes. Únicamente se encontraron como complicaciones tardías la presencia de un paciente con seroma en puerto umbilical (paciente con obesidad GIII) y atelectasia en otro paciente resuelta con terapia respiratoria. De los pacientes con coledocolitiasis y extracción satisfactoria de litos ninguno presentó litos residuales (corroborado por colangiografía). **Conclusiones:** La coledocoscopia laparoscópica disminuye de manera considerable la incidencia de litiasis residual. En nuestro estudio se obtuvo un 100% de visualización de la vía biliar proximal y distal y un 80% de éxito para la extracción de litos, no hubo morbilidad relacionada al evento quirúrgico además de un 0% de mortalidad. Ninguno requirió de reintervención. El acceso transcístico disminuyó los días de estancia intrahospitalaria (uno de los pacientes se egresó a las 24 hrs de postoperado). Nuestro estudio también muestra que la exactitud diagnóstica del ultrasonido es menor en comparación con la CVL. La coledocoscopia transcoledociana requiere de mayor experiencia y habilidad quirúrgica en técnicas de laparoscopia avanzada. La coledocoscopia se presenta como una opción confiable, segura y factible de efectuar en manos entrenadas y contando con el equipo adecuado.

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RIESGO BENEFICIO DE LA COLANGIOGRAFÍA TRANSOPERATORIA DE RUTINA EN PACIENTES SOMETIDOS A COLECISTECTOMÍA POR LAPAROSCOPIA. ESTUDIO RETROSPECTIVO A 5 AÑOS

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Introducción: Desde 1933, Mirizzi introdujo la colangiografía transoperatoria, la cual fue inicialmente adoptada en la mayoría de los procedimientos abiertos (80-85%). Posteriormente esta práctica fue disminuyendo llegándose a practicar en la actualidad como procedimiento rutinario sólo en un 6% de las instituciones. Con el advenimiento de la cirugía laparoscópica aumentó considerablemente el número de lesiones de la vía biliar. Muchos estudios han demostrado que con la colangiografía transoperatoria se puede reducir considerablemente este tipo de lesiones, además resulta en un procedimiento diagnóstico y terapéutico que en manos expertas puede sólo aumentar un promedio de 10 minutos al procedimiento convencional. Se decidió realizar un estudio retrospectivo a 5 años en donde se identificó el riesgo beneficio de la colangiografía transoperatoria de rutina. **Material y métodos:** Estudio retrospectivo a 5 años que abarcó de enero 1999 a octubre del 2003 en el Hospital ABC Medical Center, México D.F. Se incluyeron todos los pacientes sometidos a colecistectomía laparoscópica y abierta. **Resultados:** Se realizaron 1,276 procedimientos de colecistectomía, (443 hombres y 814 mujeres, promedio de edad de 48.6 años, entre 15-90 años), de éstos 1,204 fueron por abordaje laparoscópico (95.8%) y 53 abiertos (4.2%). Se realizaron solamente 176 colangiografías transoperatorias. El tiempo promedio de la cirugía laparoscópica sin colangiografía fue de 96.5 *vs* 113 minutos del procedimiento laparoscópico con colangiografía. No se reportaron complicaciones agudas posteriores a colangiografía. De los pacientes con colecistectomía sin colangiografía se reportaron 4 complicaciones que fueron: 3 lesiones de vías biliares (1.7%), de los cuales uno fue por Sx Mirizzi y tres por variantes anatómicas no identificadas preoperatoriamente (0.31%). **Conclusiones:** La colangiografía transoperatoria puede considerarse un procedimiento seguro. En este estudio no se reportó morbi-mortalidad posterior a la colangiografía transoperatoria y el tiempo de cirugía se incrementó en 16.5 minutos en promedio. La extracción de cálculos fue exitosa en el 100% de los pacientes. Las complicaciones que se presentaron posteriores a colecistectomía por laparoscopia fueron lesiones de la vía biliar en 1.7%, las cuales se podrían evitar con identificación previa de la anatomía. La morbilidad posterior a una reintervención quirúrgica por lesión de vía biliar es muy alta. La litiasis residual, que requiera reintervención quirúrgica para exploración de la vía biliar o CPRE, puede ser evitada si se identificara y tratara con éxito la obstrucción de la vía biliar en el transoperatorio. Por lo tanto podemos concluir que la colangiografía transoperatoria por laparoscopia es un procedimiento seguro, la cual debe de realizarse en todas las colecistectomías por laparoscopia, ya que el costo-beneficio es alto y tiene una muy baja morbimortalidad.

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COLECISTECTOMÍA ENDOSCÓPICA DIFÍCIL EXPERIENCIA DE 199 CASOS

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El perfeccionamiento de la cirugía endoscópica, ha hecho posible la ejecución de cualquier tipo de colecistectomía, lo que ha conducido a un incremento en el hallazgo de cuadros anatómicos y clínicos de particular dificultad técnica, así como a un menor riesgo de complicaciones intraoperatorias. Es un estudio descriptivo, retrospectivo en donde se miden mediana, moda, promedio y porcentaje de los resultados. **Objetivo general:** Analizar los procedimientos que han tenido un grado alto de dificultad técnica en la cirugía de vesícula por vía endoscópica. **Resultados:** Un total de 1,410 colecistectomías por vía endoscópica se realizaron en los años de 1993 a 2003; de éstas 199 (14.1%) se catalogaron como procedimientos difíciles, con edad promedio de 46 años, mediana de 45 y una moda de 44, siendo masculinos 59 (30%), femeninos 140 (70%), procedimientos llevados por cirugía electiva fueron 107 (54%), por cirugía de urgencia 84 (46%). Los procedimientos que se convirtieron a cirugía abierta fueron 78 (39%). Las causas de catalogar una colecistectomía difícil con más frecuencia son: piocolecisto 52 (26%), hidrocolecisto 42 (21%), sangrado 20 (10%), variaciones anatómicas 14 (7%), CCL, agudizada 10 (5%). **Conclusión:** Es importante tener en cuenta las variaciones anatómicas y tener cuidado en los procesos crónicos agudizados ya que hacen más difícil la colecistectomía endoscópica, los cuales requieren una disección meticulosa para no dañar estructuras importantes. Proponemos que para tratar esta entidad se obtengan créditos o certificación necesarios, se realicen evaluaciones y cursos posteriores para certificar habilidad y conocimientos teórico-prácticos.

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LITIASIS DE VÍAS BILIARES INTRAHEPÁTICAS EN PACIENTE CON DERIVACIÓN BILIODIGESTIVA

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Se presenta el caso de una paciente joven con derivación biliodigestiva realizada por lesión de la vía biliar principal durante una colecistectomía dos años antes, quien presentó litiasis múltiple en vías biliares intrahepáticas. La lesión de vía biliar es una de las complicaciones más temidas por el cirujano. La mayor parte de las lesiones completas son manejadas mediante derivación biliodigestiva, siendo un procedimiento que puede establecer complicaciones mediatas o tardías. La presencia de litiasis múltiple en los conductos biliares intrahepáticos posterior a una derivación biliodigestiva es un evento poco frecuente. En estos casos la endoscopia retrógrada vía oral es inoperante por las condiciones anatómicas. En este trabajo reportamos el caso de una paciente joven delgada con derivación biliodigestiva y cuadro clínico de ictericia y prurito intermitentes. Se establece el diagnóstico preoperatorio de litiasis múltiple y se somete a exploración de vías biliares intrahepáticas, litotricia intracorpórea y extracción activa de litos mediante asistencia endoscópica, ferulización sin desmantelamiento de la derivación biliodigestiva. El curso posoperatorio es altamente satisfactorio y la paciente se mantiene con manejo médico ambulatorio. Se presentan las ventajas de la asistencia entre especialidades y el manejo menos traumático para resolver casos difíciles.

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BANDA ADHERENTE INTRACOLEDOCIANA

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Con la aparición de la colecistectomía por laparoscopia se abrió la puerta para también acceder con técnicas laparoscópicas a la vía biliar y con el paso de los años refinándose y estandarizándose la técnica hasta permitir realizar la exploración y extracción de cálculos en un solo tiempo quirúrgico, evitando así la colangiopancreatografía endoscópica retrógrada previa a la colecistectomía laparoscópica en aquellos pacientes con sospecha o con evidencia de cálculos en la vía biliar. Durante la exploración laparoscópica del colédoco de una paciente que tenía un cálculo impactado distal, se realizó extracción del cálculo de la vía biliar con técnica transcística, empujándolo al duodeno; al retirar el coledocoscopio de la vía biliar se apreció una banda adherente firme y rígida como una columna con extremos en forma de capitel posicionada en la mitad del colédoco. Realmente no teníamos conocimiento de esta patología intracoledociana y no pudimos encontrar alguna descripción en la literatura de ella. Nos hacemos muchas preguntas referentes a su origen; si es congénita o inflamatoria, su relación con la coledocolitiasis de la paciente, y lo que ésta implique en un futuro para la formación de nuevos cálculos. Sí está claro que con la coledocoscopia se abren nuevos horizontes para el manejo de patologías intrahepáticas y de la vía biliar (cálculos, estenosis, infecciones, etc). El video muestra la banda adherente intracoledociana.

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ESTUDIO SISTEMATIZADO DE LAS VESÍCULAS BILIARES EN UN ESQUEMA DE CONTROL DE CALIDAD DE INTERVENCIONES QUIRÚRGICAS DEL HOSPITAL SANTA FE DE LA CIUDAD DE MÉXICO

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La patología de la vesícula biliar es muy variada con un claro predominio de los cuadros de colecistitis y colelitiasis. Por esta razón las colecistectomías son piezas quirúrgicas frecuentes en los laboratorios de patología quirúrgica; sobre todo en los últimos años debido a la utilización de la cirugía laparoscópica. Esto ha traído como consecuencia un amplio espectro de lesiones inflamatorias, cuya evaluación no ha sido realizada de manera sistematizada. Con lo anterior en mente se revisaron 140 colecistectomías. Para evaluar el grado de inflamación se utilizaron los siguientes criterios morfológicos de Barcia J.J. (Ann Diagn Path 7:147,2003). a) Grado de infiltración linfoide, b) hipertrofia de músculo liso, c) grado de fibrosis, d) evaluación de ganglio cístico y e) otros hallazgos en la pared de la vesícula biliar que incluyen metaplasia, colesterolosis, características y tipo de cálculos, búsqueda de cambios neoplásicos benignos, displasia, carcinoma *in situ* y carcinoma infiltrante. Los resultados se encuentran representados en el siguiente cuadro:

	Grado I	Grado II	Grado III	Sin cambio	Total
Inflamación	64 (46%)	41 (29%)	35 (25%)		140 (100%)
Fibrosis	57 (41%)	51 (36%)	7 (5%)	25 (18%)	140 (100%)
Hipertrofia capa muscular	38 (27%)	64 (46%)	16 (11%)	22 (16%)	140 (100%)

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REINTERVENCIÓN LAPAROSCÓPICA POR LITIASIS RESIDUAL DE COLÉDOCO

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Antecedentes: La laparoscopia demostró ser un procedimiento reproducible y seguro para el tratamiento de la coledocolitiasis. Hoy nuestro desafío es demostrar que también es segura y efectiva en la reintervención por litiasis residual. **Objetivo:** Mostrar resultados de 9 años sobre reintervención laparoscópica por litiasis residual de colédoco. Lugar de aplicación Servicio de Cirugía Hospital Italiano de Mendoza y Clínica Pelegrina. **Diseño:** Observacional retrospectivo. **Población:** En 9 años fueron reintervenidos por laparoscopia 42 pacientes portadores de litiasis residual de colédoco. En 14 la endoscopia fracasó, 2 tenían colecistectomía laparoscópica previa, 3 Kehr, 1 drenaje transcístico, 1 stent biliar endoscópico, 1 coleperitoneo con lesión quirúrgica y litiasis residual y 1 eventración asociada a litiasis intrahepática. **Método:** Neumoperitoneo. Disección del colédoco, colangiografía dinámica por punción o por el muñón cístico, coledocotomía transversa, exploración con Dormia y radioscopia, coledocoscopia. Otros recursos: sonda balón, Beniqué, pinza de Mirizzi y cucharillas. Se utilizó en 2 casos endoscopia bipolar (fibrocoledocoscopia lap y duodenoscopia intraoperatoria), 2 mano asistida por cálculo papilar. **Resultados:** Se resolvieron 9 casos con Kehr, 24 cierre primario de colédoco, 8 coledocoduodenostomías, 1 conversión (coleperitoneo y lesión quirúrgica). No hubo complicaciones por laparoscopia. **Conclusiones:** La reintervención sobre vías biliares por litiasis es recurso mandatario frente al fracaso de la endoscopia. Se demostró efectividad en 41 (97.6%). Las dificultades mayores fueron disección del colédoco en pacientes con Kehr y resolución de la macrolitiasis.

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RESECCIÓN DE COLON POR VÍA LAPAROSCÓPICA *VS* ABIERTA EN EL TRATAMIENTO DE LA ENFERMEDAD DIVERTICULAR NO COMPLICADA: EXPERIENCIA DE UNA INSTITUCIÓN PRIVADA

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El tratamiento quirúrgico electivo de la enfermedad diverticular de colon en pacientes jóvenes (< 50 años) con episodios recurrentes

de diverticulitis es una indicación absoluta. El abordaje quirúrgico puede ser convencional (abierto) o por vía laparoscópica; esta última ofrece ventajas sobre todo en el periodo de recuperación posoperatorio. El objetivo del presente trabajo es evaluar los beneficios del abordaje laparoscópico contra el abordaje abierto en nuestra institución. **Métodos:** Se incluyeron en el estudio a pacientes con enfermedad diverticular no complicada con al menos un episodio comprobado de diverticulitis aguda. Se dividió el grupo en dos subgrupos: Grupo A formado por pacientes sometidos a cirugía laparoscópica y Grupo B formado por pacientes sometidos a cirugía abierta. Las variables a estudiar fueron edad, sexo, síntomas, periodo de tiempo entre primer episodio de diverticulitis aguda y cirugía definitiva, estudios de gabinete prequirúrgicos, procedimiento quirúrgico realizado, tipo de anastomosis, sitio de extracción del espécimen, tiempo quirúrgico, conversiones (sólo Grupo A), complicaciones transquirúrgicas, inicio de la vía oral, requerimiento de analgésicos, complicaciones postquirúrgicas y días de estancia intrahospitalaria. Los criterios de inclusión fueron: pacientes en etapa crónica no complicada de la enfermedad, cirugía electiva, anastomosis primaria; los criterios de exclusión fueron: pacientes con cuadro agudo de la enfermedad, enfermedad diverticular complicada (fístulas, abscesos, estenosis), cirugía de emergencia, información incompleta. **Resultados:** Se revisaron retrospectivamente 237 expedientes hospitalarios de pacientes egresados con diagnóstico de enfermedad diverticular de colon. El grupo de estudio se redujo a 75 pacientes que cumplieron con los criterios de inclusión. La edad promedio fue 52.4 años con predominancia del sexo masculino con 57.3%, el intervalo de tiempo entre el primer cuadro agudo y la cirugía fue mayor de 30 días en general (89%). La tomografía computada como examen de gabinete angular prequirúrgico se realizó en 45 pacientes (60%). En el Grupo A se incluyeron 48 pacientes y en el Grupo B, 27 pacientes. Se compararon entre ambos grupos las diferentes variables encontrando una diferencia marcada en: tiempo quirúrgico (39.5% *vs* 63% < a 180 min), tolerancia a la vía oral (43.7% *vs* 11% el 1er día PostQx), requerimiento de analgésicos fuera del esquema habitual (2 *vs* 10 pacientes), días de estancia hospitalaria (4.9 *vs* 6.3 días) y complicaciones postquirúrgicas (2.7% *vs* 36.4). La tasa de conversión de los casos laparoscópicos fue del 8.3%. El resto de las variables fueron similares en sus resultados para ambos grupos. **Conclusiones:** El abordaje laparoscópico para el tratamiento quirúrgico de la enfermedad diverticular no complicada ofrece mayores beneficios para el paciente en cuanto a su convalecencia postquirúrgica, de igual manera reduce el tiempo de ausentismo laboral. El abordaje por laparotomía o abierto, aunque representa menor tiempo quirúrgico, tiene mayor morbilidad y un periodo de convalecencia más prolongado y tedioso para el paciente. Los tiempos quirúrgicos prolongados en el Grupo A corresponden a los primeros casos realizados en nuestra institución; los últimos casos realizados reportan tiempos quirúrgicos menores de 180 minutos, por consiguiente, la única desventaja del abordaje laparoscópico tiende a desaparecer conforme se alcanza la meseta de la curva de aprendizaje, se mejora la coordinación del equipo paramédico de quirófano y se cuenta con instrumental adecuado para este tipo de cirugía.

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LAPAROSCOPIC SURGERY OF COLON. EXPERIENCE OF LAST FIVE YEARS IN PRIVATE PRACTICE

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Moisés Jacobs, an American Surgeon, performed the first laparoscopic colectomy in 1990. From then on, three colectomy techniques have been used: Totally laparoscopy, assisted laparoscopy, and facilitated laparoscopy. We used the assisted technique. **Objective:** To inform our experience in laparoscopic surgery of Colon in the last 5 years. **Design:** Retrospective Study, transverse observational non-aleatory and non-comparative. **Headquarters:** Third degree of attention at private hospitals. **Patient and methods:** 35 procedures were carried out between May of 1999 and October of 2003. The surgical technique was performed on all patients placed in supine position (French position). The insertion of the first trocar to produce pneumoperitoneum was done in the periumbilical area. Two or more ports were placed under direct vision. The colons, mobilization was carried out along with the vascular dissection with a Harmonic Scalpe. The clipping of the arteries, main veins and the intestinal resection was done with 35 mm endoscopic staples. A 5 cm supra-pubical vertical incision was done to extract the piece of colon to insert the intraluminal anvil and return the colon to the cavity. The wall was closed and the finished anastomosis was endoscopically carried out with a circular 29 mm stapler. In totally colectomies an assisted reservorio ileal type “J” is carried out, with a Multifire 60 3.5 stapler. The anvil was placed in the reservorio and the anastomosis ileo rectum was finished under endoscopic vision. **Results:** 8 male patients and 27 female patients aged from 34 to 68 (average = 51). Four totally colectomies were carried out (1 for hemorrhage and 3 for colonic inertia), 31 partial colectomies, and 6 out of these were for Cancer in sigmoides and in the left colon. The remaining 25 were for diverticulitis (with two previous episodes of diverticulitis in one year) in sigmoides upward and transverse colon. At first totally colectomies lasted 540’ and at present they last 270’. Partial colectomies range from 120’ to 240’ (averaging 195). Hospital stay averaged 4 days for total colectomies and 2.4 days for partial. There were two complications: 1 wound infection and 1 patient with a fistula corrected with NPT. There were neither conversions nor deaths. The follow-up period was 2 months up to 48 months. **Conclusions:** Once again, it is corroborated, that Laparosopic Surgery in the colon offers multiple benefits, and although the sample is not a big one, we conclude that this procedure can be carried out in patients with benign and malign pathology.

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LAPAROSCOPIC COLON SURGERY

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Purpose: Laparoscopic colon resection has been described for both benign and malignant colon disease. Results in large series indicate its safety and feasibility as well as its good overall results. We present the results of our series of laparoscopic colon resections at the Hospital Angeles de las Lomas in Mexico City. **Methods:** This is a retrospective review of laparoscopic colon surgery performed in the private setting by our surgical team. All cases were selected and operated at the Hospital Angeles de las Lomas in Mexico City, from October 2000 to July 2003. We report indications for surgery, operating time, surgical complications, length of hospital stay and postoperative follow up. **Results:** In this period, 12 patients with an average age of 59.1 years (range 35-75) were submitted to laparoscopic colon surgery. There were 9 male and 3 female patients. Indications for surgery were colonic neoplasia (10), diverticular disease (2). Surgeries performed were sigmoidectomy (3), left hemicolectomy (5) and right hemicolectomy (4). One patient with diverticular disease was operated electively due to chronic diverticulitis and one was operated during the acute phase of the disease. All four right hemicolectomies were assisted in order to perform the anastomosis. Average operating time was 5.1 h (range 4 to 8 h). There were no operative complications and one patient with postoperative intestinal occlusion due to an incisional hernia who had to be reoperated. There were no surgery related deaths in this series. Average hospital stay was 7.3 days (range 4 to 15). No patients required intensive care in the immediate postoperative period. Histopathologic diagnosis in patients with neoplasia were well differentiated adenocarcinoma (4), moderately differentiated adenocarcinoma (2), poorly differentiated adenocarcinoma (1), tubular adenomas with dysplasia (2) and tubular adenoma with focal well differentiated adenocarcinoma (1). Lymph nodes recovered in the resected segments ranged from 3 to 33 (mean 14.5). Only three patients showed lymph node metastasis. Average follow up has

been 18.2 months (range 3 to 36 months). One of the patients with lymph node metastasis died 24 months after surgery and postoperative chemotherapy. The rest of the patients with malignant disease are alive and free of disease. We have seen no trocar site metastasis until now. **Discussion:** Laparoscopic colon resection for benign and malignant disease is a safe and feasible procedure in selected cases. Postoperative morbidity and mortality are low and overall survival is comparable to the conventional surgery. In patients with neoplasia, it is possible to perform oncologic resections including high vascular ligation and extensive lymph node resection. In patients with inflammatory disease, selection of patients for the laparoscopic approach depends on the extent of extraintestinal inflammation and the experience of the surgical team.

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RESECCIONES COLORRECTALES POR LAPAROSCOPIA - EXPERIENCIA EN EL INSTITUTO NACIONAL DE CANCEROLOGÍA, BOGOTÁ, COLOMBIA

Muñoz A.

Objetivo: Mostrar la experiencia de nuestra institución con una mayor incidencia de tumores rectales que neoplasias en otras localizaciones del colon, por medio de un trabajo descriptivo. **Metodología:** Revisión de las historias clínicas de todos los pacientes sometidos a cirugía colorrectal laparoscópica o videoasistida, desde 1993 hasta el año 2003, para el tratamiento de neoplasias malignas, con énfasis en el tipo de cirugía practicada, tasa de conversión, morbimortalidad operatoria y sobrevida global. Se comparan los resultados con otras series en tiempo operatorio, nódulos linfáticos resecados, estancia hospitalaria, recurrencia y sobrevida. **Resultados:** De 48 casos operados 44 correspondían a pacientes con tumores malignos: adenocarcinoma (89%), carcinoma escamocelular (7%), linfoma (2%) y tumor maligno (2%). En orden de frecuencia se practicaron las siguientes cirugías: hemicolectomía izquierda 1 caso, colectomía total 2 casos, colostomía 3 casos, hemicolectomía derecha 5 casos, sigmoidectomía 9 casos, resección anterior baja 10 casos y resección abdominoperineal 14 casos. Se convirtió la cirugía en 18% de los casos. Se presentaron complicaciones mayores en 20.5% de casos. La sobrevida a 5 años fue del 42%. Se obtuvieron en promedio 19 nódulos linfáticos. Tiempo promedio 316 minutos. **Conclusiones:** Nuestra curva de aprendizaje es distinta a la de otros centros dado el mayor número de casos de tumores a nivel rectal, con mayores dificultades técnicas y % de conversión. Tuvimos de mortalidad dos casos en ancianos. No hubo siembras en los puertos de entrada.

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APENDICECTOMÍA POR LAPAROSCOPIA VS CONVENCIONAL

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La primera apendicectomía laparoscópica (AL) fue descrita por primera vez por el ginecólogo Kurt Semm en 1982. En 1985 Flemming reportó la primera AL en un paciente con apendicitis aguda. En 1990 Pier et al publica la primera serie grande de casos de AL con buenos resultados. A pesar de lo anteriormente mencionado, aún no ha sido aceptada la laparoscopia como un procedimiento de rutina para el manejo de la apendicitis aguda. Nuestro grupo realiza de forma rutinaria la AL. Presentamos nuestra casuística de los últimos tres años, periodo de tiempo en el que se ha logrado reunir un grupo de 200 pacientes y el cual lo comparamos con número homónimo de procedimientos abiertos. No se observaron diferencias de significancia estadística en los datos demográficos. Los tiempos quirúrgicos fueron más reducidos en el grupo de AL (57 ± 17 *vs* 46 ± 17 horas), así como el tiempo de estancia hospitalaria (56 ± 25 *vs* 20 ± 9 horas). El dolor posoperatorio fue menos en el grupo AL, siendo más patente en las primeras horas del posoperatorio (2.3 en gpo. convencional *vs* 1.4 en AL por EVA) y a las cuatro semanas (0.41 *vs* 0 respectivamente). De igual forma hubo una más pronta reincorporación a las actividades rutinarias en el grupo AL. No existió diferencia significativa entre ambos costos en los rubros de complicaciones de herida quirúrgica y costos. Nuestro estudio demuestra las bondades de la cirugía laparoscópica en apendicitis aguda, demostrando que no hay incremento significativo en costos y sí ventajas palpables, por lo que debería ser el procedimiento de rutina para esta enfermedad.

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APENDICECTOMÍA POR CIRUGÍA ENDOSCÓPICA ¿ACTUALMENTE HAY CONTROVERSIA?

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Propuesta: Se realiza un resumen de la historia y antecedentes de la cirugía endoscópica como procedimiento para resolver apendicitis aguda en sus diferentes etapas. Desde la primera apendicectomía laparoscópica realizada por el Dr. Kurt Semm en Alemania, incluyendo trabajos como los de Wullstein con 1106 procedimientos de los cuales 717 son endoscópicos, el de Longet analizando 198 pacientes con 93 procedimientos vía laparoscópica, estudios randomizados de laparoscopia *vs* apendicectomía tradicional por el Dr. Attwood SE, Hill AD en St. James's Hospital, Dublin, Ireland. Y una revisión de SAGES por el Dr. Jefferson P. Castro. **Antecedentes:** La apendicectomía es uno de los procedimientos quirúrgicos abdominales más comunes en la práctica médica. El porcentaje de internamiento hospitalario es de 25 y 40% en laparotomía de urgencia. Afecta al 9% de los hombres y al 7% de las mujeres. El diagnóstico de certeza es de 79% en hombres y 60% en mujeres. Si se diagnostica a tiempo su morbi-mortalidad disminuye a 1%. **Resultados:** La cirugía endoscópica tiene numerosas ventajas sobre la cirugía tradicional. Menor dolor, recuperación más rápida, revisión total de la cavidad abdominal, realizar diagnóstico diferencial visual, confirmación de diagnóstico de apendicitis, se evita extirpar apéndices sanos, reduce complicaciones en niños, disminuye la posibilidad de adherencias post-qx. Y la gran controversia, el costo, actualmente es menor. Se presenta video (experiencia personal) del procedimiento en: 1. Apendicitis aguda temprana. 2. Apendicitis supurada aguda. 3. Apendicitis gangrenada aguda. 4. Apendicitis perforada. **Conclusión:** La apendicectomía por cirugía endoscópica es un procedimiento que va ganando terreno, se realiza cada vez más y con mayor éxito por los cirujanos hoy en día, y que ofrece los beneficios ya bien documentados en todas las partes del mundo.

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PRESENTACIÓN ATÍPICA DE DIVERTICULITIS DE MECKEL RESUELTO POR LAPAROSCOPIA

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La diverticulitis de Meckel es una de las entidades a tomar en cuenta en el escrutinio del abdomen agudo no traumático. Desde principios de la década pasada la laparoscopia diagnóstica ha facilitado el diagnóstico preciso y se ha convertido en una herramienta terapéutica, además de su valor diagnóstico. Presentamos nuestra experiencia con una paciente femenina de 25 años de edad, quien una semana previa a su ingreso le fue colocada banda gástrica ajustable por vía laparoscópica y quien presenta cuadro de dolor abdominal agudo en región epigástrica e hipocondrio derecho, distensión abdominal e intolerancia a la vía oral. Por exámenes paraclínicos se encontró leucocitosis de 18,000 de predominio de neutrófilos, radiológicamente en proyecciones simples abdominales se evidenció patrón de oclusión

intestinal, sin hallazgos ecográficos relevantes. La endoscopia superior se reportó como normal. Se realizó laparoscopia diagnóstica encontrando ciego en hipocondrio derecho y divertículo de Meckel con datos de inflamación a 40 cm de la válvula ileocecal, realizándose la resección del mismo con grapadora endogia de 4.5 x 2.5. La evolución de la paciente fue satisfactoria egresándose a las 36 horas del posoperatorio. La laparoscopia es un excelente método diagnóstico y resolutivo para un padecimiento quirúrgico, esto toma gran importancia en aquellos casos con cuadros clínicos atípicos.

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ABDOMEN AGUDO POR DIVERTÍCULO DE MECKEL RESOLUCIÓN VIDEOASISTIDA

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Se presentan 2 casos de abdomen agudo por divertículo de Meckel. **Caso 1:** Paciente de 16 años con cuadro de dolor abdominal agudo de 48 horas de evolución. Comienzo en epigastrio, vómitos, posterior generalización de dolor continuo. Presenta leucocitosis, radiografía simple de abdomen que observa discreta dilatación de asas de intestino delgado. Al examen físico, abdomen plano, con defensa generalizada, contractura en fosa ilíaca derecha. Diagnóstico presuntivo: peritonitis apendicular. **Caso 2:** 33 años sospecha de apendicitis aguda. En los dos casos se realiza videolaparoscopia, colocación de trócar de 10 mm umbilical y suprapúbico, y 5 mm en flanco izquierdo. Se constata distensión de intestino delgado, a punto de partida de vólvulo provocado por persistencia del conducto onfalomesentérico que se libera del ombligo, y luego se diseca el mismo observando divertículo de Meckel a 70 centímetros de la válvula ileocecal. Por pequeña prolongación de la incisión umbilical se exterioriza el divertículo, se reseca el mismo, sutura transversal del intestino en 2 planos. Buena evolución postoperatoria, alta a los 5 días. Anatomía patológica: divertículo de Meckel con metaplasia gástrica y ulceración. Control alejado a los 2 y 17 meses sin complicaciones.

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COMO INICIARSE EN LAPAROSCOPIA UROLÓGICA

Nifuri G, Ramírez IF, Ghelfi M, Abendaño D, Acevedo J, Gasparini M, Braz MI.

El inicio de la experiencia laparoscópica para el urólogo suele ser dificultoso debido a la falta de disponibilidad de patología que por su frecuencia y complejidad sean una fuente accesible para su entrenamiento. Se presentan distintas alternativas en formato de clips de video, donde se muestran patologías diversas que son útiles como válidas, con indicaciones indiscutidas que nos permiten ingresar en el excitante mundo de la laparoscopia. El comienzo muestra la resección de un quiste renal. La disposición de los trócares para el abordaje por vía retroperitoneal, su ingreso y disección de la celda renal, la exposición del quiste, su resección y comprobación de la hemostasia. A continuación se observa una ureterolitotomía laparoscópica, con abordaje retroperitoneal. Se muestra la exposición del ureter, la apertura del mismo, la extracción del cálculo y el cierre ureteral. Siguiendo con la vía retroperitonal se realiza una nefrectomía simple, mostrando la liberación completa del riñón, la exposición del pedículo y su tratamiento, la excéresis del órgano y el drenaje de la cavidad. Por último se realizan una nefrectomía radical derecha e izquierda, por vía transperitoneal mano asistida, donde se observa la exposición y disección del hilio, el clampeo y sección de los vasos renales y la resección de la celda renal y suprarrenal cuando está indicada. **Conclusiones:** La laparoscopia es una técnica revolucionaria, con un lugar indiscutido en otras especialidades quirúrgicas, que se va convirtiendo en un arma más en las técnicas urológicas, a medida que se consigue más experiencia y confianza en el método.

V-262

CURA DE VARICOCELE Y VASECTOMÍA BILATERAL POR LAPAROSCOPIA

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Se presenta el caso de un paciente de 26 años, el cual acude por dolor de tipo punzante en testículo izquierdo de 6 meses de evolución, el cual se irradia hacia región lumbar, refiere aumento de dolor y congestión testicular en la posición de pie. Tiene antecedente de cirugía de palomo hace 2 años. Se realizó ultrasonido el cual reportó varicocele izquierdo traía urografía excretora, la cual es normal. Se realizó cura de varicocele izquierdo y vasectomía bilateral por laparoscopia, posteriormente el paciente evolucionó en forma satisfactoria.

V-263

MIRIZZI SYNDROME, LAPAROSCOPIC APROACH

Robles PJ, Lancaster B.

Purpose: We report a case of Mirizzi syndrome Mc Sherry type I to draw attention to the importance of this rare condition that was treated successfully by laparoscopic abdominal approach. **Methods:** 18 Y/0 white female who presented with acute Cholecystitis ultrasound preoperative diagnosis was made consistent with a large stone impacted in the gallbladder neck leading to extrinsic compression of the common bile duct, our patient had normal preoperative liver function serum biochemistry, laparoscopic meticulous careful dissection of the biliary anatomy was performed however periductal inflammation was present and fistula was ruled out. Laparoscopic Cholecystectomy was the procedure of choice in this particular case. **Results:** Ultrasound preoperative diagnosis was accurate and laparoscopic cholecystectomy did not increase morbidity or mortality the patient's recovery time was short with minimal pain. **Conclusion:** Laparoscopic treatment of Mirizzi type I is technically feasible and safe when performed by high skilled trained surgeon. In the case of a patient with Mirizzi type II an open operation is preferred because of the extreme anatomic distortion.

FP-264

PDA OCCLUSION: ENDOVASCULAR OR THORACOSCOPIC

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Patent Ductus Arteriosus is one of the most common congenital cardiovascular disorders among prematures, infants and preschool children. When it does not close pharmacologically nor spontaneously, it should be occluded. Surgical closure by thoracotomy has shown to be safe, reliable with a mortality below 1% and minimal morbidity, reason why it has been situated as it's gold standard management. By the 90's decade, PDA thoracoscopic occlusion and chest tube to complicated cases only, became as a modality that offers the minimal invasion benefits together with the conventional surgical definitive therapy. PDA endovascular management has taken great impulse through the last years, with development of several occluding dispositives: Detachable Cook coil systems, Sideris and Amplatzer occlusors among them, all with good short and medium follow up results. **Purpose:** To evaluate the outcome of thoracoscopic and Endovascular PDA occlusion in our Hospital, prematures not included. **Methods:** This is a retrospective review of 40 cases of Thoracoscopic PDA clipping and ligation, from March 1996 to October 2001 (Group 1) and 25 cases of Endovascular PDA occlusion from March 2002 to October 2003 (Group 2) Several variables are analyzed and statistical relevance is calculated. Results are summarized on next table:

Characteristics and results	Group 1	Group 2
Number	40	25
Age (months)	50.3 (8-216)	76 (6-576)
Sex female (%)	67.5	80
Weight (kg)	16.3 (6-50)	14.9 (6-44)
PDA diameter	6	5.2
Total occlusion (%)	100	100.0
Primary occlusion (%)	97.5 (39)	88 (22)
Dispositive number/patient	—	30/25
Morbidity (%)	7.5	25
Mortality (%)	0	0
Length of stay (days)	3-4 (2-7)	2-3 (1-11)
Cost of occlusor material (pesos)	262.65	4,500.00 Cook 39,675.00 Amplatzer 47,000.00 Sideris

Conclusions: No mortality has been observed. Residual shunts and need for extra procedures to reach secondary closure is greater in the Endovascular Group and it's morbidity is also greater, it has a radiation risk and the need of a foreign body to stay inside the vascular system, the procedure's time and length of stay are shorter, coils are cheaper and have been effective only in small ducts but not 100**%**. For larger ducts there is a need of expensive occluders effective but with some morbidity. PDA Endovascular occlusion is an effective procedure but it's definitive place in the management of PDA is yet to be defined. There is a need of prospective and aleatorized comparative series to probe at least the same success rate, lesser morbidity and cost than Thoracoscopic occlusion. We believe that there is a must to sit a solid scientific evidence of therapeutic effectiveness, so the logic frontiers of diverse therapeutic modalities for the same pathology can be established.

V-265

VIDEO ASSISTED THORACOSCOPIC SURGERY (VATS) FOR THE TREATMENT OF EMPYEMA IN CHILDREN

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Introduction: Video Assisted Thoracoscopic Surgery (VATS) for the treatment of empyema when the patients are not responding to medical therapy is feasible, and safe, the cure rate is 100% with low percentage of complications from the procedure. **Materials and methods:** The data of 25 consecutive patients from a multicentric study carried out from 1997-2002 was retrospectively analyzed. Patients where submitted to Video Assisted Thoracoscopic Surgery (VATS) for the treatment of empyema. Pediatric patients with documented evidence of empyema where enrolled in the study. Inclusion criteria were as follows: Evidence of collection on one or more of the following: CxR, US, or CT, Leucocitosis of > 15,000, pH < 7, Glu < 40 LDH > 1,000, Prot > 2.5 Grav > 1.018, Positive GRAM stain on thoracocentesis. The most common physical findings were fever and cough, the most common symptom dyspnea. **Results:** Of the 25 patients enrolled 20 male 5 female, age ranging from 4mo. to 12yr (mean 6.2yr). Medical treatment before surgical intervention was attempted for approximately 3 days. Patients were followed with US, CxR or chest CT, and failure of drainage and worsening clinical conditions determined the need for VATS. Positive culture on aspirate was found in 28% positive for *E. coli* or *S. aureus*. All patients had imaging studies preoperatively CxR 100% (n = 25), US 80% (n = 20), CT 30% (n = 7). Five patients had drainage procedures before VATS. Operative time ranged from 50 to 150 minutes. Length of stay was from 3-7 days. Four patients required mechanical ventilation for more than 24 hours after the procedure and 2 patients required blood transfusion for excessive bleeding during the procedure. There was no mortality in the series.

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RESULTS OF "COMPLETE VATS LOBECTOMY" AND LYMPH NODE DISSECTION FOR LUNG CANCER WITH ALL WORKS PERFORMED UNDER ONLY THORACOSCOPY

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Background: Although lobectomy, and lymph node dissection by video-assisted thoracic surgery (VATS lobectomy) is a well-established and wide-spread therapeutic method for treating small peripheral lung cancer, few reports of "complete VATS lobectomy" with all work performed under thoracoscopy are available. **Methods:** We defined "complete VATS lobectomy" as the operation, in which all operative work of pulmonary lobectomy and nodal dissection was performed under thoracoscopy with no rib-spreader used. The patient was fully flexed in the lateral decubitus position. Operative approach was a small access window (4 cm) and three access ports at the lateral thorax. A thoracoscope was introduced through the 7 th ICS at the midaxillary line. During lobectomy, pulmonary arteries and veins were transected with a vascular endostapler or ligated with silk threads. The bronchus was closed with a bronchial endostapler. Following lobectomy, the mediastinal lymph node dissection was performed. **Results:** Between February 2000 and September 2003, we performed forty patients under this operation as the treatment for lung cancer in clinical stage I. Although the operation time of "complete VATS lobectomy", was longer than the conventional VATS, the other results were almost equivalent, partially being superior (average operation time: 260 minutes; blood loss: 95 mL. No of dissected lymph nodes; 32 chest drainage: 4.5 days: hospitalization: 16 days). All patients were discharged with no major complication. **Conclusions:** "Complete VATS lobectomy" is a safe, definite and technically feasible operation for the patients with clinical stage I lung cancer, in which the superior results will be expected with increasing experiences and proficient techniques involved.

FP-267

ENDOSCOPY TRANSAXILLARY RESECTION OF THE FIRST RIB FOR THORACIC OUTLET SYNDROME

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The objective is to evaluate the outcomes from new surgical technique for endoscopic transaxillary resection of the first rib for thoracic outlet syndrome. Between September 1997 to September 2003, in the Regional Military Hospital of Puebla was realized 20 first rib transaxillary resection assisted with endoscopy, 14 women and 6 men, age averaged 35 years, normal electromyography reported in 12 (60%) of the patients, 14 (70%) recived rehabilitation and physical medicine therapy without results, 15 (75%) of the patients had neural symptoms; 2 (10%) of the patients had subclavia vein thrombosis (Page-Schroetter Syndrome), 1 (5%) of the patient had necrosis of the fifth right finger because of arterial embolism as a result of a pseudoaneurism with arterial symptoms. It was performed 14 right resection, 5 left resection, bilateral resection none, 0% complication or dead, 100% cure, and 0% relapsed after 4 years of surgery. We conclude that the endoscopy assist in transaxillary resection of the first rib in the thoracic outlet syndrome is very useful with the next advantages: 1. Low morbi-mortality, 2. Visibility magnificate, 3. Biggest first rib resection, 4. Low relapsed rate, 5. Best training.

FP-268

LAPAROSCOPIC HARVEST OF OMENTAL FLAP FOR RECONSTRUCTION OF STERNAL DEHISCENCE FOLLOWING OPEN HEART OR THORACIC SURGERY

Manjarrez TA, Treviño J, Franklin M, Soresh K, González JJ.

Purpose: The management of chest wall defects due to massive sternal infection following open heart surgery is challenging. Omentum with an intact vascular supply has been described as a complement to muscle flaps for chest wall reconstruction. Unfortunately, omental harvest requires a formal laparotomy in an already high-risk, debilitated patient. The application of videoendoscopic techniques has offered a less invasive approach to this difficult problem. We believe laparoscopic omental harvest can be a safe and feasible alternative for repair of anterior chest wall hernias decreasing morbidity/mortality. **Methods:** From January 1996 to April 2003, 15 patients underwent laparoscopic omental harvest for repair of complicated sternal wound infections. Patients with non-healing sternal wound infections following cardiac or thorax surgery that had failed previous attempts at closure, were selected for omental flap reconstruction. Briefly, the patients were taken to the operating room with 2 teams of surgeons to include a plastic surgeon and laparoscopic surgeon. While sternal debridement was performed by the plastic surgeon, the second surgical team mobilized the omentum with the right gastro-epiploic artery as its vascular pedicle. A small hole was made in the diaphragm anteriorly to communicate with the mediastinum. The omentum was then passed through the diaphragmatic defect into the mediastinum where it was received by the plastic surgeon. The omentum was placed within the anterior chest wall hernia, tacked into place, and covered with a split-thickness skin graft for definitive closure. **Results:** All 15 patients had multiple co-morbidities including wound infection, diabetes, renal failure, lung disease, peripheral vascular disease, morbid obesity and coronary artery disease. All procedures were completed laparoscopically with no intraoperative complications. There were one postoperative wound infection. Mortality was 6.6%, only 1 case associated to long term silicosis and sepsis. Omental graft take was between 70 and 100% resulting in definitive wound closure and resolution of the sternal wound infection. **Conclusions:** The use of omental flaps for reconstructing chest wall defects secondary to massive sternal wound infection has been described in the medical literature, traditionally requiring an abdominal incision in a high-risk group of patients. Laparoscopic omental harvest for repair and reconstruction of anterior chest wall hernias appears to be safe and feasible, conferring all the benefits of a minimally invasive approach. We believe that this new method is a valid alternative for treatment of this infrequent but disastrous complication of open-heart surgery.

FP-269

VIDEO-ASSISTED THORACOSCOPIC PERICARDIECTOMY

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Purpose: Thoracoscopy or video-assisted thoracic surgery (VATS) provides excellent visualization of the intrathoracic and mediastinal structures. The pericardium is well seen from either thoracic cavity, and the consequent feasibility of VATS pericardiectomy raises questions as to when surgical route should now be preferred to more traditional approaches. **Methods:** Between 1999 and 2003 we performed 22 video-assisted pericardiectomies. There were 12 men and ten women; age 22 to 79 years, mean 57 years. 7 patients had a hemodinamically significant effusion and required a previous pericardiocentesis to prevent hypotension with anaesthetic induction. In 18 cases pericardiectomy was performed from the left pleural cavity and in 4 cases from the right. We used general anaesthesia with a double lumen endotracheal tube and single lung ventilation. The patients were positioned in full lateral position. The first trocar was placed in the midaxillary line in the seventh intercostal space; the second and third trocars were placed in the anterior and posterior axillary lines in the fifth and seventh intercostal spaces respectively. We illustrate a video showing this technique. **Results:** All pericardiectomies were performed for effusive pericardial disease. Twelve effusions were due to malignancy and 10 were benign etiologies. Ten patients simultaneously had a pulmonary or pleural abnormality. There were no intraoperative complications and during follow-up (mean of 13 months) there were no recurrent effusions or constrictive changes. The average duration of chest tube was 3.5 days for benign effusions and 4 days for malignant. The hospital stay averaged 4.5 for benign effusions but in the malignant there was a large range of hospital stay (10-40 days). **Conclusions:** VATS allows excellent vision of the pericardium through a relative non-invasive approach. Pericardiectomy similar to that performed at thoracotomy is possible while avoiding the peri-operative morbidity of the open approach. VATS pericardiectomy is a safe and effective procedure which may at times offer advantages over other surgical routes.

FP-270

VIDEO-ASSISTED SURGERY IN THORACIC TRAUMA

Staltari DA, Staltari JC, Benavides F, Capellino P, Pierini L, Ramos RA.

Background: Most thoracic trauma patients are managed with pleural drainage. Only 15% require thoracotomy in severe trauma. Thoracoscopy may be a diagnostic and therapeutic method in thoracic trauma with hemodynamic stability. **Objective:** To analize the outcome of video-assisted thoracic surgery in the management of thoracic trauma. **Setting:** Private Hospital affiliated to Buenos Aires University. **Desing:** Retrospective study. **Patients and method:** Forthy one (41) patients with thoracic trauma were analyzed. We included all thoracic trauma patients with pleuropulmonary lesions that could not be solved with simple surgical techniques in patients with hemodynamic stability. **Results:** Average age was 60 years. Twenty seven patients were men. Injury mechanism: 36 patients with blunt thoracic trauma and 5 patients with penetrating thoracic trauma. Surgery was indicated in 18 patients with hemothorax, 13 patients with hemo-pneumothorax, 4 patients with pneumothorax, 4 patients with diaphragmatic injury suspected, 1 patient with gun's shot in mediastinal area and 1 patient with posttraumatic emphyema. All the procedures were successful. Morbility 2 patients (4.8%). Mortality 1 patient (2.4%). **Conclusion:** Videoassisted thoracoscopy is feasible and safe to solve thoracic trauma lesions.

FP-271

HOW DO YOU OPERATE ON PNEUMOTHORAX PATIENTS WITHOUT BULLAE?

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Purpose: Apical partial resection of lung or parietal pleudesis have been generally done for pneumothorax patients without bullae in thoracoscopic surgery. However, it is not always based on EBM whether those two therapy are appropriate or not. For our trial, visceral pleura electro-coagulation has been done for such cases by use of a ball shape electrode in thoracoscopic surgery. The purpose of this study is to examine the effect of visceral pleura electro-coagulation by use of a ball shape electrode on pneumothorax without bullae. **Patients and method:** Thirty-one pneumothorax patients without bullae were selected. They were from 15 to 40 years old (male: 23, female: 8). They often suffered from recurrent pneumothorax. There were no bullae on preoperative chest CT and pleurography. **Results:** Lesions of small emphysema, unevenness and anthracosis were extensively coagulated in 31 cases of upper lobe, in 2 cases of middle lobe and in 6 cases of lower lobe by use of a ball shape electrode. The degree of electro-coagulation was performed with low power of 25 watts by white

change of pleura. There were no complications such as postoperative air leak and hemorrhage. There was not the regeneration of bullae in chest CT of postoperative 3-6 month judgment. In addition there is no postoperative recurrence of pneumothorax at present. **Conclusion:** Visceral pleura electro-coagulation is useful for the pneumothorax patients who don´t have any bullae. This method is simple and easy without a complication and it is economically effective.

V-272

LAPAROSCOPIC OMENTAL FLAP MOBILIZATION FOR COMPLEX MEDIASTINAL WOUNDS

Colunga U, Franklin ME, Berghoff JR, Koneru S, Treviño JM, Jaramillo EJ.

Purpose: Omental mobilization for complex poststernotomy mediastinal wounds has traditionally required a formal laparotomy in often high-risk patients, thus making it the procedure of last resort. The laparoscopic approach has the potential to decrease the physiological stress of laparotomy and the very high risk of abdominal wound infection and to make the omental flap option more available to seriously ill patients when needed. We present the operative technique of this procedure. **Method:** Under general endotracheal anesthesia, the chest wound is initially debrided and lavaged. The abdomen is insufflated up to 14 mmHg, followed by placement of a 5-mm trocar lateral to the left rectus sheath and a 5-mm camera. Three additional trocars are then placed under direct vision, one lateral to the right rectus sheet, one in the umbilicus, and other one lateral to the left rectus sheath. The omentum is first suspended to allow better exposure for detachment of the omentum from the transverse colon, from the hepatic flexure to the splenic flexure. If needed, the omentum can be separated from the stomach in the plane between the gastroepiploic arcade and the stomach wall by using the ultrasonic dissector and the left or right gastroepiploic vessels and divided. Once the omentum is completely freed, and incision is made in the upper anterior abdominal wall near the xiphoid through the median sternotomy wound and the omentum delivered from the abdominal cavity into the sternal wound without tension on the stomach. The omentum is fashioned into position to provide maximal coverage of the chest wall defect. The wound is then closed with partial thickness skin graft placed over the omentum followed by a vacuum-assisted closure device. Trocar sites are then closed. **Conclusion:** Laparoscopic mobilization of omental flap for the reconstruction of complex mediastinal wounds is a valid and potentially less morbid alternative for the treatment of chest wall defects.

V-273

THORACOSCOPIC SYMPATECTOMY TECHNIQUE FOR T2 GANGLION IDENTIFICATION

Rodríguez MI.

In the treatment of primary Hyperhydrosis by minimally invasive Thoracoscopic Surgery the correct identification of the T2 Ganglion is a must. In our video we demonstrate a simple but effective way to identify the 2nd rib and the T2 Ganglion. We have followed our technique in 21 consecutive patients with excellent results.

FP-274

VIDEOLAPAROSCOPIC SURGERY IN ELDERLY PATIENTS

Staltari JC, Capellino P, Benavides F, Pierini L, Ramos R, Statti M.

Given the current expectancy of life, abdominal surgery in elderly patients has been increasing. Minimally invasive procedures such as videolaparoscopic surgery have potential advantages over open surgery with respect to morbidity and mortality rates, length of hospital stay and postoperative functional recovery. The purpose of this study is to analyze the per operative morbidity and mortality in patients over 79 years old that underwent videolaparoscopic surgery. **Patients and methods:** Retrospective study from 01/01/1995 to 31/12/2000. One hundred and seventy five videolaparoscopic procedures were done in patients over 79's. Of them 65% were female. There were 33.7% of procedures done in an elective basis while 63.3% were emergencies. **Results:** The procedure was therapeutic in 124 patients (70.9%), in 4 patients (2.3%) the procedure was videoassisted, 23 patients (13.1%) underwent diagnostic laparoscopy and in 8 patients (4.6%) the procedure were staging laparoscopies. The conversion rate was 10.9% (16 patients). General morbidity was 24.6% and mortality rate reached 10.3%. All dead patients underwent emergency surgery, so mortality rate of procedures done as emergency was 12.9% while there was no mortality in the elective group ($p = 0.007$). For neoplastic disease the mortality rate was 20% while for benign disease was 7.9% ($p = 0.03$). **Conclusion:** Advanced age is not a contraindication for laparoscopic surgery. Morbidity and mortality associated to laparoscopic surgery in patients over 79's are comparable with reports of open surgery. Laparoscopy surgery as elective procedure for benign diseases is well tolerated.