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P-89

INTESTINAL OCCLUSION AND LAPAROSCOPIC SURGERY. REPORT OF 3 CASES

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Introduction: Laparoscopic surgery has allowed the development of new diagnostic and therapeutic techniques for a lot of digestive diseases, including the patients who suffer of some kind of intestinal occlusion. **Purpose:** To show 3 cases in which the laparoscopic approach was useful in the diagnostic and treatment of intestinal occlusion owing to peritoneal bands. **Cases report:** There are 2 female patients, one of them with 12 weeks pregnancy. Both patients presented severe abdominal pain mainly localized in the right iliac fossa, an exploration compatible with acute abdomen and a high WBC count. The pregnant patient had an abdominal ultrasound with free liquid in pelvis, the X-ray in the other patient showed an occlusive ileus. The third patient is a male one, 78 years old who began with abdominal pain in mesogastrium, a high leukocyte count and rebound tenderness on palpation, the X-ray showed gross bowel walls in the left segment of the abdomen. The 3 patients were operated laparoscopically. In the first 2 cases acute appendicitis was excluded; in both patients we found a peritoneal band crossing over and occluding the terminal ileum, the non pregnant patient had an ischemic portion that was liberated and no resection was needed. The male patient had an intestinal infarction of jejunum in a length of 90 cm, the laparoscopic procedure was converted by the way of a minimal 12 cm incision to allow the resection, the etiology of the disease was again a peritoneal band which led to the intestinal torsion. The postoperative course of the patients was uneventful. **Conclusion:** Laparoscopic surgery is an excellent method for detection of unsuspected diseases in patients with acute abdominal pain and probable intestinal occlusion, this approach has the advantages for diagnosis and treatment of a great number of intraperitoneal diseases with minimal invasion.

P-90

A CASE REPORT: MALIGNANT LYMPHOMA OF THE SMALL INTESTINE CAUSING INTUSSUSCEPTION IN A PATIENT WITH THE WALDENSTROM'S MACROGLOBULINEMIA; BENEFITS OF LAPAROSCOPY IN CASE OF INTUSSUSCEPTION

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We present the case of a patient with the Waldenstrom's macroglobulinemia (WM) who developed an intussusception due to malignant lymphoma of the small intestine. A 68-year-old man was admitted to the hospital because of bowel obstruction. Abdominal CT scan visualized a concentric lamellar structure in the small intestine, and ileal intussusception was strongly suspected. Therefore, the patient was diagnosed with WM and high concentration of soluble IL-2 receptor by a suspicious-looking malignant lymphoma associated with intussusception. Laparoscopic examination was performed after decompression of the expanded small intestine utilizing a long tube. Upon laparoscopy, midileal lesion was identified and found to be intussuscepted. Moreover, another tumor measuring 40 mm in diameter was also identified in the 60 cm oral side of intussusception. Therefore, laparoscopy-assisted partial ileotomy was performed on each tumor. Histopathologically, these tumor lesions were diagnosed as diffuse large B-cell type lymphoma (DLBCL). After this operation, moreover, gastric lymphoma measuring 40 mm in diameter was found in systemic evaluation for chemotherapy, laparoscopy-assisted partial gastrectomy was performed because of the risk of gastric perforation in chemotherapy. This patient recovered rapidly uneventfully and took chemotherapy as the adjuvant therapy. Laparoscopic examination and treatment for intussusception is rarely reported and must be considered for this clinical condition. Intussusception is a well-known complication and a possible symptom of small bowel tumor. In our case, laparoscopy identified not only the tumor lesion causing intussusception but also another lesion which was not associated with intussusception, there by avoiding a long skin incision for laparotomy. Therefore, laparoscopy as less invasive surgery certainly contributed to the therapeutic effect of the adjuvant chemotherapy. The role of laparoscopy in managing intussusception is not clearly established. However, this case shows that laparoscopic approach should be attempted in most cases of small bowel intussusception, especially when lymphoma is suspected.

P-91

INCIDENCIA DE PATOLOGÍAS DUODENALES EN LOS ESTUDIOS DE ENDOSCOPIA REALIZADOS EN EL SERVICIO DE ENDOSCOPIA DEL HOSPITAL DE ESPECIALIDADES DEL CENTRO MÉDICO NACIONAL SIGLO XXI, DE ENERO A SEPTIEMBRE DEL 2003

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Antecedentes: El duodeno es la primera porción del intestino delgado, en él pueden manifestarse diversas patologías, en muchas ocasiones no se da la importancia debida para su estudio, algunas lesiones pueden identificarse con el endoscopio de visión directa, pero a veces estas lesiones pueden quedar ocultas o bien no manifestarse macroscópicamente, de ahí que se requiere dar una mayor importancia al estudio de esta parte del tubo digestivo. Definiendo duodenitis es la inflamación de la primera porción del intestino delgado, aunque las enfermedades del duodeno son raras éstas se caracterizan por presentar principalmente un cuadro obstructivo o de sangrado, estas patologías se pueden clasificar en congénitas, pépticas, tumorales e infecciosas. **Objetivo:** Identificar el número de alteraciones duodenales diagnosticadas macroscópicamente o por biopsia, así como la correlación clínica, endoscópica e histopatológica en los estudios endoscópicos realizados del mes de enero a septiembre del 2003, en el servicio de endoscopia del Hospital de Especialidades del CMN Siglo XXI. **Material y métodos:** Se realizó un banco de datos de 3,310 estudios realizados del mes de enero al mes de septiembre del 2003 en el servicio de endoscopia de nuestro hospital, se anotó el tipo de estudio, diagnóstico de envío, diagnóstico endoscópico y diagnóstico histológico en los casos en que se tomó biopsia duodenal. **Resultados:** Se revisaron 3,310 estudios. En 420 se encontró patología duodenal, en 237 casos por erosiones, 89 por úlceras, 56 inflamación de la mucosa, 13 pólipos, 8 estenosis, 8 por sospecha de neoplasias, 3 divertículos y una angiodisplasia. De las 420 endoscopias con patología duodenal se realizaron 61 biopsias de las cuales los reportes fueron 32 con inflamación aguda y crónica, 6 duodenitis péptica, 6 úlcera duodenal, 6 adenocarcinoma de papila duodenal, 3 pólipos hiperplásicos, 2 duodenitis hemorrágica, 2 metaplasia gástrica, 1 tumor neuroendocrino, 1 tumor carcinoide, 1 adenoma de glándulas de Brunner. Una duodenitis linfangiectásica. La hemorragia de tubo digestivo alto en estudio y diarrea crónica fueron diagnósticos de envío frecuentes. Se encontró que la patología duodenal más frecuente fue duodenitis erosiva secundaria a enfermedad péptica y por medicamentos. El 64.4% de los hallazgos endoscópicos sí correlacionaron con el diagnóstico de envío, y el 49.1% de los reportes histopatológicos sí correlacionaron con el diagnóstico de envío. **Conclusión:** La duodenitis erosiva fue la patología más encontrada en un 56.4%, los reportes de histopatología más frecuentes fueron de duodenitis aguda y crónica con alteraciones de las vellosidades en un 52.4%. La patología duodenal ocupa un lugar importante en las enfermedades del tubo digestivo y en ocasiones ésta puede pasar desapercibida en los estudios endoscópicos, se requiere toma de biopsia en la sospecha de patología a este nivel aunque no se encuentre evidencia macroscópica.

P-92

SPLEEN PSEUDOCYST: LAPAROSCOPIC MANAGEMENT

Salinas G, Saavedra L, Angulo H.

Purpose: Describe a conservative laparoscopic treatment of a splenic pseudocyst. **Method:** Under general anesthesia, a 68% years female with a splenic pseudocyst was treated by laparoscopy and laparoscopic ultrasound used to identify confirm and guide the wide resection of the roof of the cyst. **Results:** The procedure was done successfully the dis-

charge was 36 hours after surgery. **Conclusions:** Even though the spleen is not a vital organ, splenectomy is related to overwhelming infections. Splenic cyst is a rare pathology. Splenic pseudocyst are mainly post-traumatic sometimes from unknown trauma even for the patient. The most common treatment is conventional or laparoscopic splenectomy, we describe the management of splenic pseudocyst by laparoscopy preserving the organ in a 68% years female patient.

P-93

TRANSANAL ENDOSCOPIC MICROSURGERY
González GJA.

Transanal endoscopic microsurgery (TEM) was introduced into surgical practice by a German group at the beginning of the 80-decade. By using 40 mm, operating rectoscope sealed with a gastight working insert to prevent pressure loss after creation of a pneumorectum and a stereoscopic optic, exact visualization of a rectal tumor can be achieved. Principal indications for TEM are adenoma, adenocarcinoma *in situ* and rectal polyps. **Methods:** The TEM procedure was performed with a 20 mm, long rectoscope (external diameter 4 cm) the optical system consisted of three dimensional stereoscope with a bidimensional 40 angle lens connected to a video system. An electrosurgical knife, a needle holder, forceps, clip applicator and suction device providing both suction and coagulation were employed in the procedure. In a two/year revision, 25 patients were operated of villous adenoma of the rectum and 12 patients with moderately differentiated PT1 carcinoma of the rectum. **Results:** In 23 cases, a full thickness excision was performed including perirectal fat and adjacent lymph nodes and 14 patients underwent mucosectomy removing the mucosal from the inner circular layer of the muscularis. Postoperative pain was minimal; bleeding was observed and controlled in two cases. Patients were allowed a liquid diet on the third postoperative day; the average hospital stay was 4 days. Their bowel movement was normal and in 2 weeks, the recovery was complete. **Discussion:** Surgeons interested in this technique have to have the desire to dominate the procedure. Transanal endoscopic microsurgery permits safe full thickness removal or rectal tumors with very low morbidity, a short hospital stay and a rapid return to normal activities.

P-94

MULTIPLE SURGICAL PROCEDURES IN ONE LAPAROSCOPIC APPROACH
Guereque E, Mendoza-Márquez J.

Purpose: To demonstrate that it is possible and safe to perform multiple surgical procedures in one laparoscopic approach. **Methods:** From 1991 to 2003, multiple surgical procedures had been performed in 75 patients (72 with two procedures and 3 with three of them) for a total of 153 procedures.

Nissen + Cholecystectomy 16
Cholecystectomy + CBD Exp 9
Gastric Banding + Chole 5
Chole + Oforectomy 4
Tenchoff Rescue + Adhesiolysis 4
Chole + Abscess Drainage 4
Bilateral Inguinal Repair 4
Chole + Hepatic Wedge Biopsy 3
Appendectomy + Abscess Drainage 3
Appendectomy + Ovarian Cyst 3
Chole + Inguinal Repair 1
Chole + Hepatic Cyst 1
Chole + Peridiverticular Adhesions 1
Choledoco-Duodenostomy + Pancreas B 1
Esophagel Diverticula + Nissen + Esophagomiotomy 1
Vagotomy + Pyloroplasty 1
Nissen + Inguinal repair 1
Chole + CBD Exp + Tube Ligation 1
Chole + Ovarian Cyst 1
Chole + Hepatic Abscess 1
Chole + Spleenectomy 1
Chole + Abdominal Hernia 1
Appendectomy + Tube Ligation 1
Inguinal + Umbilical Repair 1
Abdominal Hernia + Ovarian Cyst 1
Meckel + Inguinal Repair 1
Meckel + Chole 1
Meckel + Volvulus 1
Chole + Appendectomy 1
Appendectomy + Inguinal Repair + Endometriosis 1

Results: Age from 12 to 78 years. Average time of 105 minutes. No mortality. 3.2 minor morbidity. **Conclusion:** Laparoscopy gives us the opportunity to resolve two or more abdominal or pelvic pathologies in one stage.

P-95

IS LIVE DONOR KIDNEY FUNCTION IMPROVED BY HEPARIN?
Vemulapalli P, Lopes J, Gibbs KE, Farkas D, Greenstein S, Teixeira J.

Introduction: Our aim was to access whether heparin administration during laparoscopic donor nephrectomy (LDN) affected kidney function in the transplant allograft. In addition we sought to determine whether age impacts on heparinization. **Methods:** We retrospectively reviewed the charts of all patients undergoing LDN by one surgeon from January 2000 through July 2002. Fifty-seven patients underwent LDN with systemic heparin and fifty-four patients did not receive systemic heparin. Patient were divided four cohorts Groups A, B, C, D based on age and heparin usage. The four groups were compared in reference to immediate postoperative days 1, 2 and 6 month graft function. Data analyzed by ANOVA. **Results:** One hundred and five patients were included in the study. There were no significant differences in the donor group in regards to sex, preoperative medical history, operative time or warm ischemia times.

	N	Cr day 1	Cr day 2	Cr 6 mos
Group A: Age < 40 + heparin	23	3.8	2.32	1.0521
Group B: Age < 40 no heparin	33	4.618	2.884	1.461
Group C: Age > 40 + heparin	33	4.138	2.466	1.5058
Group D: Age > 40 no heparin	16	3.968	3.568	1.5
P-value		> 0.05	> 0.05	< 0.01

Conclusions: Neither heparin nor age impact early graft function. Mid-term graft function correlates to heparin usage in donors who are less than age 40. The kidneys for this subgroup of donors benefit from systemic heparinization. The reason for this difference is unclear.

P-96

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

P-97

PROPUESTA DE UNIFICACIÓN DE CRITERIOS PARA LA CLASIFICACIÓN DE LA CIRUGÍA MINILAPAROSCÓPICA

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Se considera como cirugía minilaparoscópica, aquella que utiliza instrumental de menor diámetro del que se usa habitualmente en la cirugía laparoscópica tradicional (5, 10, 12 mm). Hasta el momento no se encuentra en la literatura una clasificación o descripción detallada de lo que es la minilaparoscopia, únicamente se ha acuñado el término de cirugía acuscópica o micropunción a aquella que se realiza con instrumentos de menos de 3 mm de diámetro. Esta técnica surge por la tendencia a minimizar el número de puertos y el tamaño de los mismos, lo que marca la diferencia con la laparoscopia convencional o tradicional. Hay reportes de la utilización de técnicas con instrumentos de 5, 3, 2 y hasta 1 mm, con el objeto de optimizar los resultados de la cirugía endoscópica. Actualmente existe una clasificación para la cirugía abierta, y partiendo de esta terminología para la laparotomía y minilaparotomía, homologamos dicha nomenclatura pero aplicada a la cirugía minilaparoscópica.

Cirugía abierta tradicional:

Laparotomía convencional	> 10 cm
Minilaparotomía convencional	10 a 6.1 cm
Minilaparotomía moderna	6 a 4.1 cm
Minilaparotomía micro	< 4 cm

Clasificación propuesta de cirugía minilaparoscópica:

Laparoscopia convencional	5 mm o mayor
Minilaparoscopia convencional	4.9 a 3.5 mm
Minilaparoscopia moderna	3.5 a 2.1 mm
Minilaparoscopia micro	< 2 mm

El presente trabajo pretende uniformar criterios en cuanto a la nomenclatura de las técnicas minilaparoscópicas y estandarizarlas de acuerdo a ello, permitiendo su uso universal para el análisis estadístico de los procedimientos.

P-98

CEFOTETAN INDUCED HEMOLYTIC ANEMIA AFTER BARIATRIC PROCEDURES: DIAGNOSIS, MANAGEMENT, AND OUTCOME

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Description: Purpose: The goal of this study was to review the complication of hemolytic anemia following weight loss surgery. Strategies for diagnosis and treatment are described and the literature on this subject is reviewed. **Methods:** Retrospective chart review. **Results:** Three patients who underwent bariatric operations by two surgeons at different hospitals subsequently developed jaundice and anemia. The operations were laparoscopic roux-en-y gastric bypass (1), open roux-en-y gastric bypass (1), and laparoscopic adjustable gastric band (1). All patients were given perioperative dosages of cefotetan to prevent wound infections, discharged home after uneventful post-operative courses and subsequently re-admitted with non-specific complaints and icterus. Work-up included an indirect Coomb test that was positive in all patients, indicating an autoimmune hemolysis. Each of the patients was treated with admission to the hospital, intravenous steroids, transfusion of blood products, and supportive care. All cases resolved without further intervention. A review of the literature on the subject revealed over 15 cases of fatal cefotetan-induced hemolytic anemia, although none specific for bariatric surgery patients. **Conclusions:** Cefotetan can induce a life-threatening hemolytic anemia when used as a prophylaxis for weight loss operations. Diagnosis is by Coomb test and treatment consist of supportive care and corticosteroids. After this experience we have changed our antibiotic prophylaxis regimen.

P-99

DIAGNOSTIC AND THERAPEUTIC LAPAROSCOPY IN CLOSED ABDOMINAL TRAUMA

Blas R, Trejo D, López F, Salmerón J, González F, Leal G.

Background: If within diagnostic laparoscopy blood or gastrointestinal content is found, the next step is to identify and treat the visceral injuries when the patient is hemodinamically stable, with closed abdominal trauma. **Methods:** 28 year old female, suffers car accident type flip, being a seatbelt protected pilot, temporary loss of state of alert, goes to public institution and 17 hours later, I treat her, identifying right thoracoabdominal pain, left occipital headache. Physic E= T.A.-100/70 mmHg, FC= 80x', FR = 18x', TEMP= 36° C, painful expression, regular hydration, paleness of skin, right lung base hipoventilated; abdomen; muscle resistance, hypersthesia and hyperbaralgesia, peristalsys decreased in frequency and intensity; requisitions; creatine CAT, facial and thoraco-abdominal solid, presurgery profile integrating the following diagnoses; a) closed abdominal trauma, b) acute abdomen, c) hepatic concussion, d) policoncussed, e) left occipital fracture, f) costal fractures 2, 3, and 4 left side, program her for diagnostic laparoscopy (VIDEO), findings: hemoperitoneum 150 ml + round ligament haematoma + hepatolic ligament + d:1 diaphragm face liver. I was and vacuum the abdominal cavity, I apply surgicell in hepatic injury diaphragm border Penrouse ½ inch. **Results:** She canalizes gases via rectum and initiates oral passage after 24 hours being dismissed after 48 hours, after being evaluated by orthopedics, neurosurgery and cardiology. **Conclusion:** Diagnostic laparoscopy can also be therapeutic in hemodinamically stable patients, with quick recovery and shorter hospital sojourn, it avoids post-surgery adhesions.

P-100

LAPAROSCOPIC ABDOMINAL TUMOR RESECTION WITH A DIAGNOSIS

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Introduction: Laparoscopic surgery, which is less invasive, is suitable for diagnosis of an abdominal cavity tumor including a submucosal tumor (SMT) of the stomach. We have performed laparoscopic abdominal tumor resections with a diagnosis in 11 cases. These 11 cases were as follows: a retroperitoneal cyst, a neurinoma of vagus nerve origin, a medullary carcinoma with lymphocytic infiltration which was formed like a SMT, two GIST of the uncommitted type, two aberrant pancreas of the mass-formed type, two GIST with pedunuculated and extragastric growth of the stomach, an anisakis granuloma formed like a SMT, and a cystic tumor of spleen. In all cases we achieved good results by our original lifting method. This method, including the surgical field and the indication to operate, will be discussed. **Methods and procedures:** We will perform gasless surgery because this operation is performed for pathological-undiagnosized tumors (this is to prevent port site recurrence). We established the surgical field using our original lifting bar that consists of bent stainless steel rod 5 mm in diameter. **Results:** There are neither major complications or conversions to conventional open surgery. **Conclusions:** With regard to the indication to operate, in the case of an abdominal cavity tumor, a solid tumor is a good indication, but there is the danger of seeding with a cystic tumor. We should therefore decide to operate after great deliberation when dealing with a cystic tumor. In the case of SMT, the tumor from 2 to 5 cm in diameter should be the indication to operate. However the SMT with an abnormality in it's form or an increasing size should undergo a laparoscopic resection, even if it's diameter is less than 2 cm.

P-101

USEFULNESS OF LAPAROSCOPY IN PATIENTS WITH GENERALIZED PERITONITIS

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Purpose: During the early years of laparoscopic surgery, its usefulness in cases of purulent peritonitis was not accepted by the surgical community. Some of the arguments noted that increasing intra-abdominal pressure may cause bacterial translocation and thereby generalized sepsis. Critics of laparoscopic surgery did not accept its reach and its advance. Currently many experimental and clinical studies demonstrate that it is able to carry out this technology on patients with this pathology. The aim of this report is to communicate our experience in 53 patients with suspected generalized peritonitis that was confirmed laparoscopically. **Methods:** From January 1997 to August 2003, we revised the cases of 53 patients with suspected generalized peritonitis initially submitted to diagnostic laparoscopy. We included only patients with purulent fluid at least in two quadrants of the abdominal cavity. **Results:** All patients were initially submitted to diagnostic laparoscopy and subsequently the main pathology was treated laparoscopically too. The procedure was performed in 53 patients, 4 women and 29 men, ages between 16 and 90 years old. All patients were operated with general anesthesia, all received irrigation of the abdominal cavity with 10-15 liters of saline solution, and all received parenteral antibiotics too. Forty seven patients (87%) had purulent peritonitis caused by perforated acute appendicitis, in 6 patients (10%) the main cause was a perforated peptic ulcer. In one patient (1.8%) it was secondary to a ruptured piosalpinx. There was one major complication (1.8%), a residual abscess that was treated laparoscopically, and 3 minor complications (5.6%) port-site infection. Two conversions (3.7%) due to giant peptic ulcers, one of these patients (1.8%) had multiorganic failure and died. One female patient (1.8%) developed intestinal occlusion due to an adherencial process 4 months after surgery. **Conclusions:** We think that laparoscopy is useful upon treating generalized peritonitis although it requires patience and surgical dexterity to carry out an adequate exploration and intra-abdominal lavage. Another usefulness of laparoscopy in the cases is to identify the right location of the pathologic process to create a target incision.

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SONOSURG SYSTEM GIVE LAPAROSCOPIC OPERATION BENEFITS WITH RESPECT OF REUSE AND SAVING COST BY SINGLE ULTRAVIBRATING ENERGY SOURCE

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Ultrasonic coagulating shears was the most outstanding instrument for controlling bleeding in laparoscopic surgery. Ultrasonic aspirator was useful to expose vessels at their origin during lymph nodes dissection. Third instrument using ultrasonic vibrating energy was ultrasonic trocar, it could decrease the force for inserting trocar and achieved a bloodless insertion through abdominal wall. SonoSurg System: The SonoSurg System (Olympus) consists of shears, aspirator and trocar. Two frequency, 23.5 KHz and 47 KHz are prepared. Electric cautery connectors are equipped in SonoSurg scissors and aspirator. Detachable connector could connect each other with energy source via single cable. **Experience:** We used this system in the operation for cholelithiasis and gastrointestinal malignancies over three years. At least, five seconds were saved in each action during exchange of devices. SonoSurg scissors could shorten operation time, and we could also re-use scissors in more then 50 cholecystectomy cases. Built-in electric cautery was useful to dissect thin tissue or control tiny bleeding. Aspirator could be also useful to expose the vessels from adjacent tissue, which was difficult to expose by SonoSurg scissors. SonoSurg system was compact in size. Trocar was easily inserted through abdominal wall without bleeding. We could save $92,000 per 100 laparoscopic operations a year by using this reusable system instead of disposable trocars and ultrasonic shears. **Discussion and conclusions:** We evaluated SonoSurg System. This unification could prepare small sized ultrasonic instrument in the operation room compared than separated aspirator and shears. Ultrasonic trocar is reusable and maintains the sharpness more than 900 times, which could save the cost in the laparoscopic surgery. This unified system can be useful instrument in the laparoscopic operation.

P-103

LEIOMYOSARCOMA OF THE INFERIOR VENA CAVA

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Background: Sarcoma of the inferior vena cava (IVC) is a rare clinical entity, by 1996 the international registry of inferior vena cava leiomyosarcoma reported 218 cases and until our days we have fewer than 300 patients registered. Our current knowledge of IVC sarcomas is based on individual case reports and small case series. According with Hollenbeck S. et al. Only 25 cases were admitted from July 1982 to July 2002 at the Memorial Sloan-Kettering cancer center. These tumors appear more frequently among women (68%) in the sixth decade of life, the median age for most of the patients is 56 years. The tree most common presenting symptoms are vague abdominal pain which is found in more than half of patients, followed by abdominal distention occurring in one fifth of patients and by deep venous thrombosis found in 10-15%. Less than 10% of the cases are diagnosed preoperatively. The ultrasonography, CT scan and MRI may strongly suggest the diagnosis, but it can only be confirmed by histologic examination. The pathological examination shows than most if not all of these tumors are considered high-grade leiomyosarcomas. The size of the primary tumor at the time of diagnosis usually exceed 10 cm, at least half of them show an intraluminal growth pattern. Gross surgical resection is completed in more than 80% but microscopic analysis reports more than 60% with positive margins leading to a poor prognosis and local recurrence of 30-40%. Chemotherapy and radiotherapy will give some degree of palliation but do not affect the outcome. **Methods:** To present an additional case of leiomyosarcoma of the inferior vena cava and review the literature. **Results:** A 62 year old previously healthy women presents with one-month history of vague abdominal pain located in the right upper quadrant irradiated to the back with mild edema of both lower limbs, all the laboratory findings were normal, an ultrasonography showed a 12 x 10 cm tumor located in the right suprarenal retroperitoneal region, both CT scan and MRI confirmed the presence of these lesion. The patient underwent complete surgical resection of the tumor of the IVC, both proximal and distal margins were closed primarily and no vascular graft was needed in spite of good collateral circulation. The pathological examination reported a 12 x 10 cm high-grade leiomyosarcoma originating from the IVC, all the surgical margins reported were microscopically tumor free. At 6 months after surgery, the patient is asymptomatic and the CT scan shows no recurrence. **Conclusion:** Leiomyosarcoma of the IVC is a rare and aggressive tumor which represents a diagnostic and therapeutic challenge for the surgeon.

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PREDICTING IMPROVEMENT IN LAPAROSCOPIC SKILLS AFTER FORMAL LAPAROSCOPIC TRAINING

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Purpose: Laparoscopic skills training is a current tissue that all surgical educator are attacking. This set of skills requires specialized dexterity and training beyond those of open surgery. Some of the obstacles in performing laparoscopic surgery include decreased tactile feedback, unique eye-hand coordination, translation of a two-dimensional video image into a three-dimension working area, and fulcrum effect. Certain nonsurgical skills may aid in trainees overall ability to learn these laparoscopic skills. Predicting if possession of certain nonsurgical skills may make it easier to train individuals in laparoscopic surgery will help further refine the education of basic laparoscopic surgery skills. This investigation explores which nonsurgical skills predict improvement of laparoscopic surgery skills. **Methods:** First and second year medical students were given a survey regarding nonsurgical dexterity skills. The survey inquired about typing skills, playing computer games, ability to sew, skill in music instruments, using chopsticks, and experience in operating tools. All students underwent a task: “running” the bowel and were evaluated for time. Then, the patients underwent training with virtual reality and/or inanimate box trainer. Students were re-tested with the same task

("running the bowel"). Those students that improved in task time were compared to those who did not improve in task time. **Results:** Forty-six preclinical medical students participated in this investigation. Gender, medical student year, ethnicity, desire to go into a surgical field, and age were not associated with increased performance in the task. None of the non-surgical tasks nor type of training was associated with increased performance ($p < NS$). Students who had an increased performance did worse on the pretest time (Increased performance 214 secs *vs* No increased performance 101 secs; $p < 0.0001$). **Conclusions:** Nonsurgical technical skills did not predict which students would improve in laparoscopic skills. Interestingly, those who did not do well initially were more likely to improve. Focus on more advanced training for those who did well initially may have lead to increased improvement. Individualizing laparoscopic basic skill training may help create more efficient laparoscopic skill acquisition.

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BISTURÍ ULTRASÓNICO EN LA ESPLENECTOMÍA LAPAROSCÓPICA. EXPERIENCIA EN HOSPITAL GENERAL "DR. GUSTAVO A ROVIROSA PEREZ"

Alfaro-Ruiz JL, Blanco-Gallardo A, León-Vilchis FM, Cisneros-Aljuria RC, Zárate-Hernández SA, Samaniego-Arvizu G, Bautista-Cruz R, Villaseñor-Jaime A, Zavala-Luján L, Rincón-Taracena R. Departamento de Cirugía. Departamento de Anestesiología del Hospital General Dr. Gustavo A Rovirosa Pérez, Villahermosa Tabasco México.

Objetivo: Presentar en video las ventajas del bisturí ultrasónico y nuestra experiencia. Los avances tecnológicos han permitido ampliar las indicaciones para la cirugía mínimamente invasiva, también en la extracción de órganos sólidos como el bazo. Las indicaciones que con mayor frecuencia se presentan son púrpura trombocitopénica idiopática, anemia hemolítica autoinmune, esferocitosis entre otras más raras. Estudiamos prospectivamente a quiénes se les practicó esplenectomía laparoscópica durante el periodo de mayo del 2000 a junio del 2002, como indicación terapéutica del servicio de hematología. Analizamos las indicaciones, características clínicas, descripción de la técnica, exámenes de laboratorio, tamaño del bazo, transfusiones y complicaciones postoperatorias. Se realizaron 9 esplenectomías por vía laparoscópica, todas del sexo femenino, con edad promedio de 31 años ± 6. Los diagnósticos fueron cuatro por púrpura trombocitopénica idiopática (PTI) y tres por anemia hemolítica autoinmune (AHA), 1 por hematoma subcapsular no traumático. Ocho pacientes recibieron vacuna neumocócica 5 a 10 días previos a la cirugía. En los casos de PTI se observó en el postoperatorio inmediato elevación significativa de las plaquetas, ameritando aplicación de plaquetas 3 pacientes, una vez ligado el hilio esplénico, la anemia hemolítica se limitó en forma inmediata con el procedimiento, el tamaño promedio del bazo fue de 12 ± 2 cm. El tiempo quirúrgico fue de 110 ± 10 minutos. En 1 paciente se localizó y se retiró en el hilio esplénico un bazo accesorio (11%). En el primer paciente hubo necesidad de convertir por hemorragia (11%), a dos pacientes se les amplió la incisión para retirar el bazo (22%). En los dos últimos pacientes se utilizó el bisturí ultrasónico. La estancia hospitalaria promedio fue de 72 horas, una paciente desarrolló lupus eritematoso a los seis meses de operada, la respuesta durante el periodo de estudio fue de 100%. Una paciente desarrolló neumonía con atelectasia respondiendo a manejo convencional. **Conclusiones:** Es una técnica segura con ventajas ya bien conocidas. La morbimortalidad es menor, así como el tiempo quirúrgico y la estancia hospitalaria, esto se optimiza con el uso del bisturí ultrasónico.

P-106

VASCULAR SEALER (LIGASURE®): APPLICATIONS AND ADVANTAGES

Ciaccia J, Parraga R, Penissi O, Romano J. Centro Policlínico Valencia Edo. Carabobo. Venezuela. 2003.

Introduction: The Ligasure®, is a vascular sealer device that produces hemostasia through a seal that fuses the collagen of the vascular walls and it obliterates its light, creates a permanent closure, autologic, replacing sutures and metallic clips. It can be used with trust, in veins or arterial sanguine vessels, up to 7 mm of diameter. The smoke production and the thermal dispersion are minimum and there is no lateral transmission of heat, tissues are only sealed taken among the jaws of the instrument. **Objectives:** Our study wants to show the different applications and advantages of the use of the Ligasure®, in open and laparoscopic surgery. **Material and methods:** We use the Valley lab Ligasure Vessel Sealing System. In laparoscopic surgery the Ligasure Lap and Ligasure Atlas were used respectively with diameters of 5 mm and 10 mm. In open surgery we use the Ligasure Max and the Ligasure Precise. **Results:** The study demonstrated that the produced stamp is permanent, unbend, easily identifiable, which allows to evaluate its integrity and to carry out a sure cut. In none of the cases there was dehiscence of the seal, neither bleed postoperative. **Conclusions:** The produced seal is safe and reliable. Decrease risk of infection and adherences for absence of strange material. Decrease of postoperative pain, for absence of tense sutures. It allows to reduce costs for less material consumption (suture and clips) and to shorten surgical time.

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TUMOR GLÓMICO GÁSTRICO. REPORTE DE UN CASO

Villanueva SKR, Hernández CA, Alonso RC, Castro RJM, Dorado RJD, Martínez JA, Rendón CE, Huizar SP, Mata QC.

Reporte de caso: Paciente femenino de 30 años de edad, casada originaria del D.F. dedicada al hogar. *Antecedentes heredofamiliares:* tía materna con d.m a.p.p cesárea hace un año y medio. *Padecimiento actual:* 7-mayo-2002 ingresa a urgencias por hematemesis y melena que ameritó transfusión, efectuando panendoscopia de tubo digestivo alto que reportó tumor ulcerado de la pared posterior del antro gástrico con sangrado que ameritó escleroterapia se tomaron biopsias de antro reportando gastritis folicular activa asociada a *Helicobacter pylori*. Se egresa por mejoría después de dos días. Se indica tratamiento para erradicación del *H. pylori*. El 9 de junio se efectúa la endoscopia de control, encontrando la tumorización de 40 mm aproximadamente en curvatura menor, subcutánea cubierta de mucosa lisa y umbilicada en su centro y se le toman biopsias. Se reporta: gastritis aguda ulcerada focal con tejido de granulación y gastritis crónica inactiva leve. El reporte de tomografía computarizada del 23 de mayo concluye: engrosamiento de la pared gástrica. El 7 de julio la tomografía de control reporta: tumoración en antro gástrico de características sólidas sin extensión a estructuras adyacentes. El 9 de mayo la endoscopia de control se efectuó para nueva toma de biopsias las cuales reportan: tumor glómico de antro gástrico con gastritis crónica activa folicular. El primero de agosto es llevada a cirugía efectuándose resección en cuña de la tumoración, con cierre primario de estómago. Reporte de patología: tumor glómico de antro gástrico. **Comentario:** Entre los tumores submucosos de estómago se encuentra el leiomioma, el páncreas ectópico y los tumores neuro-endocrinos incluyendo el carcinoide y el tumor glómico, en la literatura internacional son pocos los casos reportados.

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CISTOGASTROSTOMÍA ENDOLUMINAL PARA PSEUDOQUISTE PANCREÁTICO

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Objetivo: Evaluar la técnica quirúrgica aplicada en los pacientes sometidos a cirugía gástrica endoluminal para pseudoquiste pancreático. **Metodología:** Se estudiaron en forma prospectiva observacional a cinco (05) pacientes con diagnóstico de pseudoquiste pancreático sometidos a cistogastrostomía endoluminal de agosto del 2000 a abril del 2003. Se recolectó los datos en fichas ad-hoc. **Resultados:** Cinco pacientes con edad media de 31 años fueron sometidos al procedimiento. Hubo una conversión. El tiempo operatorio promedio fue de 229 minutos. Tiempo de hospitaliza-

ción promedio posoperatorio fue de 16 días. No hubo complicaciones abdominales. Dos pacientes desarrollaron neumonía intrahospitalaria. Controles tomográficos posteriores mostraron resolución del pseudoquiste. **Conclusión:** El abordaje con cirugía gástrica endoluminal es una buena alternativa para el tratamiento de pseudoquiste pancreático. Es seguro, factible y tiene una morbilidad aceptable.

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ESPLENECTOMÍA LAPAROSCÓPICA. REVISIÓN DE LOS CASOS REALIZADOS EN 3 AÑOS EN EL HOSPITAL REGIONAL 1º DE OCTUBRE

Tort MA, Velázquez GR, Domínguez CL, Méndez VG, Olvera HH, Nuñez GE, Licona OA, Ugalde VF, Ojeda VG, Cortés MS.

Introducción: La esplenectomía laparoscópica constituye actualmente un recurso terapéutico útil en algunas enfermedades hematológicas. Con el abordaje laparoscópico los resultados son comparables con los logrados en la técnica abierta, además de incisiones pequeñas, ausencia de tracción parietal, menos dolor postoperatorio, recuperación rápida del peristaltismo, deambulación y alta en menor tiempo. **Material y métodos:** Se incluyeron en el estudio todos los pacientes operados de esplenectomía laparoscópica de ambos sexos, independientemente de la edad, durante el periodo de enero de 2000 a julio de 2003. Las variables a estudiar incluyeron diagnóstico preoperatorio, edad, sexo, índice de conversión, complicaciones y evolución posoperatoria. **Resultados:** Se operaron un total de 10 pacientes, 5 hombres (50%) y 5 mujeres (50%), con edades de 9 a 68 años, con una edad media de 40.7 años. Cuatro casos (40%) correspondió a PTI, 2 casos (20%) esplenomegalia, uno de los cuales resultó ser absceso esplénico, 4 casos (40%) con hiperesplenismo. Contamos con un índice de conversión del 40% (4 casos), 30% por sangrado (3 casos) y 10% (un caso) por absceso esplénico y múltiples adherencias. El sangrado transoperatorio es la causa principal de conversión en nuestra serie en 30%. El último control plaquetario fue satisfactorio en 90% de nuestros pacientes, hasta el momento sin presentar complicaciones en 2 años de seguimiento. **Conclusión:** La esplenectomía laparoscópica actualmente es el estándar de oro para el tratamiento de enfermedades hematológicas y el éxito terapéutico depende de la experiencia del equipo quirúrgico. La PTI y el hiperesplenismo son las indicaciones más frecuentes para dicho procedimiento.

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DRENAJE Y DESBRIDACIÓN DE ABCESO INTRAABDOMINAL PERCUTÁNEO GUIADO POR LAPAROSCOPIA

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A través de la evolución de la cirugía, las infecciones intraabdominales han seguido diagnosticándose, sin embargo la terapéutica se ha cambiado radicalmente, reduciendo de forma drástica la mortalidad y realizándose con un menor grado de invasividad para el paciente. Presentamos nuestra experiencia con el caso de una femenina de 28 años, sin antecedentes médicos de importancia, quien fue sometida a colecistectomía laparoscópica 28 días previos a su ingreso. Su cuadro clínico inicia a la segunda semana del procedimiento quirúrgico con fiebre e intolerancia a la vía oral, es manejada con antibioticoterapia y antipiréticos. Presenta una evolución tórpida y se agrega dolor abdominal. Se realizan estudios paraclínicos en donde se evidenció una colección en hipocondrio derecho de aproximadamente 300 mL y derrame pleural derecho. Se aborda por vía laparoscópica por puerto umbilical de 10 mm visualizando área del abceso, posteriormente se punciona vía percutánea obteniendo líquido purulento, en seguida se introduce trócar de 5 mm por el sitio de la punción y se extraen 300 cc, del mismo material. Se realiza aspiración e irrigación con aproximadamente 3,000 mL de sol. fisiológica en la cavidad del absceso. Se introdujo trócar de 10 mm por esta misma incisión para colocar drenaje blando tipo Jackson Pratt. La paciente es egresada a las 18 horas del procedimiento quirúrgico, evolucionando satisfactoriamente, retirando drenaje al cuarto día posoperatorio con resolución completa del padecimiento. La laparoscopia es un excelente método de drenaje para abscesos intraabdominales, ya que se visualizan órganos y estructuras, evitando así su lesión, además de la buena desbridación de los mismos, la baja morbimortalidad y rápida recuperación del paciente.

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ENDOANATOMÍA DE LA PELVIS FEMENINA; CORRELACIÓN ANATÓMICA ESQUEMÁTICA Y QUIRÚRGICA EN CADÁVER Y EN VIVO

Cantón JC, López MA, Saucedo P, Calderón R, Fregoso AJM, Sereno ST, Ruiz CJ, Altamirano LMA, Hernández RR, García IJA.

Antecedentes: En la última década, después de los trabajos del Dr. Harry Reich, la cirugía ginecológica laparoscópica se ha difundido prácticamente en todo el mundo. El conocimiento de la anatomía por laparoscopia requiere de una orientación en el espacio y el conocimiento de la óptica del laparoscopio. Este trabajo presenta una correlación anatómica entre la descripción esquemática, la visión a cielo abierto y endoscópica de la pelvis femenina en cadáver y durante la cirugía en pacientes. **Métodos:** Los elementos anatómicos de la pelvis femenina fueron disecados en cadáveres frescos y filmados a cielo abierto y endoscópicamente con un lente de 30°, así como imágenes en vivo durante diferentes procedimientos quirúrgicos ginecológicos laparoscópicos, realizando correlación de las imágenes. **Resultados:** Mediante disecciones en cadáveres y pacientes, se identificaron el útero, la salpinge en sus diferentes posiciones, el ovario, los ligamentos ancho, redondo, cardinal, útero sacro, infundibulopélvico, umbilical y vesico-cervical, espacios paravesical, pararrectal y fosa obturatriz, trayecto del uréter desde el ingreso a la pelvis hasta su desembocadura en la vejiga, la bifurcación de la aorta, las arterias y venas iliaca común, iliaca externa e interna, ovárica, uterina, vesical media e inferior y obturatriz, nervio génito-femoral y obturador, músculos psoas y obturador interno, fascia pericervical y cúpula vaginal. **Conclusiones:** La anatomía laparoscópica ofrece una excelente visión del campo quirúrgico, mejor acercamiento óptico al campo operatorio, identificación y relación precisa de las estructuras anatómicas, así como la realización segura de las técnicas quirúrgicas, pero requiere del conocimiento de la anatomía, las técnicas de abordaje laparoscópico, así como la orientación en el campo quirúrgico a través de la visión laparoscópica, y la disección segura y precisa de las estructuras.

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EXPERIENCIA DE CINCO CURSOS-TALLER DE CIRUGÍA ENDOSCÓPICA

Fregoso AJM, Sereno TS, Vargas LR, Altamirano LMA, Zermeño RJJ, Ruiz CJ, García IJA, Hernández HS, Hermosillo SJM.

Antecedentes: Alfred Cushieri determinó que el concepto de “Curva de Aprendizaje” es inaceptable en actividades laparoscópicas en pacientes. Alrededor del mundo se realizan cursos teórico-prácticos para ayudar a los cirujanos y residentes quirúrgicos a desarrollar las habilidades necesarias para realizar este tipo de procedimientos. Este trabajo muestra los resultados y experiencia obtenida de los cursos realizados en el Hospital de Especialidades del Centro Médico Nacional Occidente. **Métodos:** Se implementó un Curso Teórico-Práctico con actividades teórico-prácticas de seis meses de duración para residentes quirúrgicos y especialistas. Éste se integra por tres módulos: 1) Programa académico y práctica en modelos biológicos con tejidos de animales en simuladores diseñados exprofeso. 2) Disección endoscópica en cadáveres humanos y práctica de cirugía endoscópica de urgencia en un modelo canino vivo. 3) Procedimientos quirúrgicos endoscópicos en pacientes bajo la tutela de cirujanos expertos. Los participantes fueron sometidos a instrumentos de evaluación para determinar el impacto de estos cursos en los educandos. **Resultados:** A partir de marzo de 2001 a la fecha, se han desarrollado 5 cursos, de los cuales se han graduado 75 alum-

nos: 48 residentes de cirugía general, 2 residentes de ginecología, 4 de urología, 14 cirujanos generales, 1 cirujano oncólogo y 6 urólogos. Los graduados han realizado cirugía endoscópica electiva en sus hospitales, tanto privados como institucionales; algunos fueron invitados como oradores en simposa nacionales e internacionales, y participado en el entrenamiento de cirugía endoscópica abdominal y torácica. **Conclusiones:** Este programa de entrenamiento permite a los cirujanos y especialistas en formación, familiarizarse con la cirugía laparoscópica y mejorar sus habilidades. La baja complejidad de los aspectos técnicos de este programa, lo hacen fácilmente transpolable a otras instituciones.

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ADIESTRAMIENTO LAPAROSCÓPICO MEDIANTE MODELOS BIOLÓGICOS

Sereno TS, Fregoso AJM, Orozco A-MO, Ruiz CJ, Zermeño RJJ, Altamirano LMA, Cantón JC, Pulido GLR, Hermosillo SJM, Vargas LR.

Antecedentes: El adiestramiento laparoscópico actualmente es una actividad cotidiana en los centros de enseñanza quirúrgica a nivel mundial. Para ello se han utilizado diferentes tipos de simuladores. Durante los últimos tres años se ha implementado un Curso-Taller de Cirugía Endoscópica en el Departamento de Cirugía General del Hospital de Especialidades del Centro Médico Nacional de Occidente del Instituto Mexicano del Seguro social, empleando piezas biológicas obtenidas de animales, como modelos de entrenamiento similares a los tejidos humanos. **Métodos:** El simulador consiste en una caja de madera con luz, una cámara de video que transmite la imagen a un monitor de televisión, e instrumental quirúrgico laparoscópico. *Modelo de colecistectomía:* Se emplea vesícula de cerdo incluyendo un segmento de parénquima hepático y de la vía biliar, en el cual se realiza colecistectomía, canulación del conducto cístico y cierre del lecho hepático con sutura. *Modelo de apendicectomía:* Se utiliza el útero y trompas de una cerda, simulando el apéndice cecal, donde se procede a apendicectomizar y a la aplicación de nudos intracorpóreos. *Modelo de fundoplicación:* Un segmento de intestino delgado de cerdo es plegado de manera que al colocar detrás de éste un trozo de bistec, se aprecia una imagen similar a la del hiato esofágico humano donde se pueden practicar diferentes tipos de fundoplicaturas. *Modelo de anastomosis:* Se realiza anastomosis del intestino delgado de cerdo en un plano, construyendo anastomosis término-terminal, latero-terminal y latero-lateral. **Resultados:** Durante estos tres años se han llevado a cabo cinco Cursos-Taller de Cirugía Laparoscópica en esta institución. Mediante el uso de éstos y otros modelos biológicos con tejidos de animales, los alumnos trabajan con órganos que replican de forma bastante eficaz la morfología y textura de los tejidos humanos, logrando desarrollar habilidades técnicas indispensables en cirugía endoscópica. **Conclusiones:** El uso de modelos experimentales con tejido biológico de animales no sólo permite reproducir la apariencia macroscópica, sino además la consistencia de las estructuras humanas, mejorando las habilidades y eficacia de los cirujanos en adiestramiento en situaciones específicas de la cirugía laparoscópica dentro del simulador, las que posteriormente serán transpoladas a la actividad quirúrgica.

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ENDOANATOMÍA DE LA REGIÓN INGUINAL. CORRELACIÓN ANATÓMICA, ESQUEMÁTICA Y QUIRÚRGICA EN CADÁVER Y EN VIVO

Fregoso AJM, Orozco A-MO, Sereno TS, Ruiz CJ, Altamirano LMA, Solano MH, Vargas LR, Pulido GLR, Hermosillo SJM.

Antecedentes: La región inguinal es escenario de intervenciones quirúrgicas en el quehacer del cirujano general. Con el advenimiento de la cirugía endoscópica, el aprendizaje de la anatomía desde una óptica diferente a la tradicional representa un nuevo reto para los cirujanos. Este trabajo presenta una correlación anatómica entre la descripción esquemática, la visión a cielo abierto y endoscópica preperitoneal en cadáver de ambos sexos y durante la cirugía también en pacientes de ambos sexos. **Métodos:** Los elementos anatómicos de la región inguinal fueron disecados en cadáveres frescos de ambos sexos y filmados a cielo abierto y endoscópicamente con un lente de 30°. Se obtuvieron también imágenes en vivo durante procedimientos quirúrgicos endoscópicos tanto en hombres como en mujeres, y se realizó una correlación de las imágenes. **Resultados:** Mediante las disecciones en cadáveres y pacientes, se identificaron el cordón espermático y ligamento redondo respectivamente. Pubis, anillo inguinal profundo, vasos epigástricos, corona mortis, iliacos y femorales, nervio femoral, ligamento inguinal de Poupart, cintilla iliopectínea, ligamento de Cooper y lacunar, región conjunta, triángulo del peligro (vascular), triángulo del dolor, espacios de Retzius, y Bogros, músculo psoas y transverso, agujero obturador, nervios ilioinguinal, iliohipogástrico, génito-femoral y femorocutáneo. **Conclusiones:** Desde el punto de vista endoscópico, es posible identificar todos los elementos anatómicos de la región inguinal que el cirujano debe conocer antes de involucrarse en la cirugía endoscópica de esta región. Al correlacionar las imágenes de las preparaciones anatómicas en el cadáver y después en los pacientes el cirujano puede aprender la configuración y localización de las estructuras durante el abordaje quirúrgico de la región inguinal.

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RIGHT LOWER QUADRANT CHRONIC ABDOMINAL PAIN. SUCCESSFULLY TREATED BY LAPAROSCOPY

Lancaster B, Robles PP.

Objective: The propose of this study is to report a case of one patient who suffered chronic right lower quadrant abdominal pain diagnosed and treated via laparoscopic approach. **Design:** Description of one case. **Setting:** Third level health care hospital. **Description of the case:** A 43 year old female with a chief complaint of right lower quadrant abdominal pain, sudden onset 8 months prior to her admission to the hospital. The patient was seen by several physicians who performed routine blood profiles, as well as abdominal ultrasound being diagnosed as colitis and treated accordingly. On Jan 24, 2000 the patient developed acute abdominal pain for which she was hospitalized; on admission to the hospital PE, was unremarkable, the only important finding was a positive Mc Burney's sign, appendicecal ultrasound was normal. We then performed laparoscopy, finding edematous cecal appendix, laparoscopic appendectomy was carried out without any complications. The pathologist reports benign appendicecal mucocele. Her post op course was uneventful, she begun tolerating oral liquids well and was out of bed the same day, she was also given oral analgesic non-narcotics. The patient was discharged the next day after surgery. She was seen in my office on a monthly basis for routine follow-up and she was remained asymptomatic. **Conclusion:** We recommend laparoscopy as a very important part of the diagnostic armamentarium when diagnosis can not be established by routine method's for example; physical exam, laboratory test ultrasound etc.

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SIMULTANEOUS LAPAROSCOPIC OPERATIONS FOR A RENAL MALIGNANCY

Loutsevitch O, Bronstein A, Gordeev S, Prochorov J.

Introduction: In spite of success of endoscopic surgery, laparoscopic methods in the treatment of renal malignancy is rather seldom, and usually may be used in patients with small (< 5 cm) renal tumors. As a rule, simultaneous operations for associated surgical pathology usually doesn't performed. **Material:** For treatment of hypernephroid cancer laparoscopic nephrectomy (LN) was successfully performed in 27 patients (16 female and 11 male in the age limit 34-68 years). Right-side localization of tumor was registered in 15 cases, left-side-in 12. The size of the tumors was from 45 to 76 mm. In 8 cases the main disease was connected with gallbladder stones (5) hyster fibroids (2) and inguinal hernia (1). To these patients combined operations (laparoscopic cholecystectomy, hernia repair laparoscopic supracervical hysterectomy) were performed. **Results:** Usually we used 4 port site operation technique. All operations had a radical character with removing of kidney, fat tissue, Gerota's fascia, ipsilateral adrenal (in 17 cases) and gallbladder (or hyster). The organs removed from abdominal cavity in the imperme-

able entrapment sack. In all cases we used abdominal drainage. Operation time was 120-270 min (a, 150 min), hospital stay –3-5 days. We had no major intra-or postoperative complications, no mortality. **Conclusion:** Laparoscopic radical simultaneous operations for renal malignancy (to 70-80 mm tumor), associated with another surgical pathology, is safed, effective and can be the operation of choice.

Poster-117

LAPAROSCOPIC SURGERY (LS) WITH PERIOPERATIVE SPECIAL METABOLIC-NUTRITION SUPPORT (SPOMNS), DECREASES MORBIMORTALITY IN AIDS PATIENTS WITH PERITONEAL SEPSIS (PS)

Fuentes del Toro S. Mexico City.

Purpose: To evaluate the advantage of LS plus SPOMNS over Open Surgery (OS) and standard perioperative support in the management of AIDS patients with (PS) on morbidity, organic failures and mortality. **Fundamental:** LS is a non invasive method with lesser systemic inflammatory response than OS. Levels of cytokines, and monocytes II ar remarkably lesser than OS, and peritoneal clearance of bacterium is high, not in OS. **Methods:** We evaluated 15 patients with acute and chronic abdominal pathology, AIDS, and wearing out syndrome. It enclouses: severe acute pancreatitis, acute cholecystitis, acute appendicitis.... Patients were divided in two groups. Group I with LS and SPOMNS with 3 antiviral drugs (AZT, ZOVIRAZ, HIVID or 3TC), hypocaloric TPN, Growth Hormones (r-hCH, GGHI, FECG, eritropoyetin) glutamine, arginina and L-carnitine, Group II with OS, 3 antiviral drugs, Standard TPN and eritropoyetin. We studied also ocurrence of mortality and morbidity by biochemical tests, to evaluate organic function reserves (pulmonary, hepatic, renal, hematology, immunology and hemodinamia). **Results:** Mortality were higher in Group II than Group I (40%/20%), morbidity were also higher in Group II than Group I: Indirect Calorimetry, Respiratory Cocient (0.76/1.06). Nitrogen excretion (18.5/13.1), Hemoglobin (10.1/8.8), Amilase (938/368), Transferrine (125/72), Albumine (2.9/1.7), CD4/CD8 (0.59/0.8), days in hospital (13/27). **Conclusions:** LS with SPOMNS in AIDS patients with PS, is better than OS with standard support, because morbimortality may be decreased.

P-118

EMERGENCY LAPAROSCOPY

Rodero AC, Rodero RD. General and Digestive Surgery II. Laparoscopic Surgery. University Hospital “La Fe”. Valencia. España.

Background: The purpose of the communication is to describe our experience using laparoscopy in the management of emergency and acute abdomen. We show retrospective 1,015 consecutive patients. We analyze the indication for operation, intraoperative findings, operating time, therapeutic procedure, conversion rate, morbidity and mortality rates and hospital stay. **Material and methods:** Between March 1992 and April 2003 we treated 1,015 patients (549 woman and 466 men) with acute abdominal pain and abnormal physical examination of the abdomen. All the patients were investigated with the appropriate use of laboratory tests, ultrasound, CT scans and other tests as necessary to establish a preoperative diagnosis. The inclusion criteria were: hemodynamic stability and presence of surgeons experienced in operative laparoscopy. The average age was 42.2 years. The laparoscopic approach was done in 812 acute right lower quadrant abdominal (80%), 100 acute cholecystitis (9.85%), 33 perforated gastric and duodenal ulcer (3.25%), 27 small bowel obstruction (2.66%), 14 mesenteric ischemia (1.37%), 8 abdominal trauma (0.78%), 19 unknown acute abdomen (1.87%) and 2 miscellaneous (0.19%). The overall conversion rate was 8.07% and mean overall postoperative hospital stay was 4.2 days. **Results:** Of the 812 patients with acute right lower quadrant pain, 707 (87%) had acute appendicitis and 105 patients had other diagnosis mainly gynaecological disease and mesenteric adenitis. The appendix was always removed, even if it appeared normal. The conversion rate for acute appendicitis was 4.9%. The conversion rate for acute cholecystitis was 10% (10 cases) mainly due to dense adhesive bands and difficult dissection of Calot’s triangle. There were 33 gastroduodenal perforations with a conversion rate of 8.22%. The intestinal obstruction was found in 27 patients. Adhesions were the most common cause, and were released in 45% of these patients. In the cases of mesenteric ischemia and abdominal carcinosis, laparoscopic surgery was diagnostic and the patients were treated conservatively. Colic perforation was converted to open operation in most cases. A definitive diagnosis was provided in 96.7% and the possibility to treat was 88.9%. The overall conversion rate was 8.07%. **Conclusions:** Laparoscopic exploration is effective for diagnostic confirmation and therapeutic management. Complete laparoscopic approach is particularly effective in the case of acute appendicitis, acute cholecystitis and gastroduodenal perforation. In the case of colic perforation the conversion rate remains still high. In abdominal emergencies it´s a feasible and safe technique in experienced hands. It provides diagnostic accuracy as well as therapeutic capabilities.

P-119

PERITONEAL COCCIDIOIDOMYCOSIS

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Background: Peritoneal coccidioidomycosis is a very rare condition that has been found on immunosupress patients and in patients with dialysis peritoneal. **Objective:** To present a case of a patient with chronic abdominal pain that was found to have peritoneal coccidioidomycosis. **Case:** 54 years-old woman with intermittent abdominal pain referred to epigastrium and abdominal RUQ. The pain increases suddenly for which she is taken to the hospital. On physical exam she had pain localized in RUQ. An US was performed, the findings were diffuse lesions in the visceral and parietal peritoneum in all abdominal, some of them were biopsed. A peritoneal coccidioidomicosis was reported and fluconazol treatment was started. Postoperative evolution was unremarkable at 6 months of follow-up. **Conclusions:** Coccidioideal peritonitis is a rare manifestation of the common pulmonary disease. Very often the patients with this condition have immunocompromissed status more often associated to peritoneal dialysis and AIDS. Peritoneal disease most of the times has a benign evolution and sometimes can resolve without treatment, and resides that, most of the patients are asymptomatic and frequently diagnosed while working up other disease. Best medical treatment has not yet been defined even tough pharmacokinetics and wide spectrum of fluconazol it is an effective antibiotic for this disease.

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RETROPERITONEAL APPROACH FOR VASCULAR SURGERY

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A retrospective study was performed to evaluate the safety and feasibility of videoendoscopic assisted vascular surgery by the combined retroperitoneal and extraperitoneal approach for aortoiliac occlusive disease. Between 1999 and 2002, 15 consecutive patients of aortoiliac occlusive disease requiring peripheral vascular bypass procedures underwent videoendoscopic assisted surgery for accessing the proximal anastomotic site and creating a tunnel for graft placement [iliofemoral bypass (n = 11), iliobifemoral bypass (n = 2), aortobifemoral bypass (n = 2)]. We preferred the combined retroperitoneal and extraperitoneal approach for these procedures. One patient required conversion to open procedure due to inability to access the common iliac artery. The mean blood loss was 108 mL (range 80-150 mL). The mean skin incision length for making the proximal vascular anastomosis was 6.5 cm and for distal vascular anastomosis was 2.5 cm. All patients recovered well with early ambulation. The mean hospital stay was 3.8 days. At a mean follow up of 20 months, all grafts were found to be patient. Videoendoscopic assisted vascular surgery for aortoiliac occlusive disease by combined retroperitoneal and extraperitoneal approach is feasible and safe. The advantages observed were minimal tissue trauma, decreased blood loss, less postoperative ileus, rapid postoperative recovery and short hospitalization.

P-121

THORACOSCOPIC SYMPATHECTOMY, TREATMENT FOR PRIMARY HYPERHYDROSIS

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Thoracoscopic Sympathectomy is an effective technique for the treatment of Primary Hyperhydrosis. Some of the potential complications of the procedure particularly compensatory sweating has restrained physicians from recommending the operation 52 Sympatectomies were performed in 26 patients suffering from Hyperhydrosis either palmaris, axillaris, or cranio-facial, with excellent results, T2 ganglion identification was done following a self develop technique 3 patients developed compensatory sweating, in all of then the resection of the sympathetic chain was carried beyond the level of the T4 ganglion. Correct identification of the T2 ganglion and its removal is essential for the success of the operation. Limiting the resection to T2 and T3 ganglions, maybe only T2 ganglion, will be all that is needed and may prevent the development of compensatory sweating.

P-122

RISK FACTORS OF POSTOPERATIVE PULMONARY COMPLICATION IN THORACOSCOPIC RADICAL ESOPHAGECTOMY FOR CANCER

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Purpose: Risk factors of postoperative pneumonia in thoracoscopic radical esophagectomy for cancer were evaluated with multi-variate analysis. **Subject and method:** Eighty patients who underwent curative thoracoscopic esophagectomy and extended lymphadenectomy by May 2001 were subjected. Fifteen patients in whom postoperative pneumonia was developed were classified as the pneumonia group and the other 65 patients were the Non-pneumonia group. It was evaluated which factors among clinicopathologic factors, results of preoperative biochemistry, preoperative spirometry, and surgical invasiveness related to postoperative pneumonia. **Results:** There was no difference in the clinicopathologic factors and surgical invasiveness. Lymphocyte fraction, serum cholesterol level, and maximum voluntary ventilation were low in the pneumonia group. Multivariate analysis reveals that maximum voluntary ventilation and the number of experienced cases significantly related to occurrence of pneumonia. **Conclusion:** Learning is significant factors to reduce the risk of postoperative pneumonia in thoracoscopic radical esophagectomy.

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SONOGRAPHIC EVALUATION FOR SMALL PERIPHERAL PULMONARY NODULES DURING VIDEO-ASSISTED THORACOSCOPIC SURGERY

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Objective: Small peripheral pulmonary nodules are not always found during thoracoscopic surgery. The value of sonographic guidance during video –assisted thoracoscopic surgery (VATS) was studied in 15 patients with peripheral pulmonary measuring 10 mm or less in diameters. **Subjects and methods:** Between June 2000 and October 2002, 15 patients underwent VATS at our institution. Our study group included 6 women and 9 men who were 37-79 years old. There were primary lung cancer (n = 2), pulmonary metastases (n = 5) and various benign tumor (n = 8). The tumors ranged from 5 to 10 min in size with a mean of 9.1 ± 1.4 mm. The Diagnostic Ultrasound system SSD-1700 (ALOKA instruments, Japan) with a dedicated 7.5 Mhz flexible endosonographic probe were used in this study. **Results:** Thoracoscopic sonography visualizes intrapulmonary structures more clearly in detail than conventional sonography and it also detects peripheral pulmonary nodules. Sonographic guidance visualized peripheral intrapulmonary tumors easily in 12 (80%) out of the 15 patients. In the remaining 3 patients it was failed to visualize because of retained air in the collapsed lung that have severe emphysema in 1 case and lesion in too deep portion from the lung surface in 2 cases, respectively. **Conclusion:** Sonographic guidance during VATS helped to locate lesions and determine the extent of the surgical resection. In this study, thoracoscopic sonography was proved as a safe addition during VATS. Patients had no complications, and surgical procedures were not significantly prolonged.

P-124

VIDEO-ASSISTED MEDIASTINOSCOPIC LYMPH NODE BIOPSY FOR LUNG CANCER PATIENTS WITH PET-POSITIVE MEDIASTINAL NODES

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Background: Mediastinal lymph node involvement diagnosis has been increasingly recognized important in the accurate staging and management of lung cancer. **Objective:** We evaluated the feasibility of video-assisted mediastinoscopic lymph node biopsy using ultra-retractor (Ethicon Endo-surgery) in primary lung cancer patients with positron emission tomography (PET)-positive mediastinal nodes. **Patients and methods:** Primary lung cancer patients were administered 300 MBq of radioactive FDG. Radioactive distribution data was accumulated 60 minutes later. Transverse and sagittal images were reconstructed with a slice-thickness of 7.5 mm and interpreted by a single radiologist. Patients with PET-positive lymph nodes underwent mediastinoscopic lymph node biopsy using ultra-retractor and 5- mm oblique vide-thoracoscope. **Results:** From January 2001 through December 2002, 10 eligible patients underwent ultra-retractor mediastinoscopic biopsy. There were 7 men and 3 women, with ages ranging from 47 to 79 (median: 69) years. Computed tomography showed suspicious metastatic mediastinal nodes in 8 patients. Biopsy took, 35 to 65 minutes, with the average 46 minutes. There were no morbidity or mortality associated with the biopsy procedure. Positive mediastinal nodes were found in 4 patients: 2 in the petracheal, one in the tracheobronchial, and one in the subcarinal nodes. Six patients were negative, and 5 of them underwent lobectomy and systematic node dissection. Two patients were positive for intrapulmonary nodes. One patient received radiotherapy for T4 disease. **Conclusions:** PET findings were correct for positive mediastinal nodes only in 40% of the patients. Mediastinal lymph node biopsy remains indispensable in correct node involvement diagnosis. Video-assisted mediastinoscopic node biopsy with ultra-retractor was safe and sampled as far as subcarinal nodes.

P-125

TORACOSCOPIA DIAGNÓSTICA Y TERAPÉUTICA. EXPERIENCIA EN UN HOSPITAL REGIONAL

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Antecedentes: La toracoscopia actual se refiere a la cirugía torácica videoasistida (VATS) debe ser efectuada por cirujanos de tórax con experiencia endoscópica o bien por cirujanos generales que realicen procedimientos endoscópicos y que cuenten con los recursos para resolver cualquier eventualidad inherente al procedimiento mediante cirugía torácica convencional. **Material y métodos:** Se incluyen 19 toracoscopias realizada por el servicio de Cirugía General del Hospital Regional de Petróleos Mexicanos en Cd. Madero Tamps. de los años 2000 a 2002. Se dividen los procedimientos en dos grandes grupos: Toracoscopia: diagnóstica y terapéutica de localización mediastinal o de parénquima pulmonar. En el protocolo de estudios a todos los enfermos se les efectuaron TAC y estudios de acuerdo a la patología de fondo, hoja de consentimiento informado y se manejaron en forma conjunta con anestesiología, neumología y terapia intensiva en caso necesario. Se utilizó intubación selectiva unibronquial, no se insufló CO_2, lentes de 30 y 0º, elementos de coagulación; bipolar armónico y endoengrapadoras de 35 y 45 mm, en forma rutinaria se dejaron drenajes a succión. **Resultados:** Toracoscopia: diagnósticas 10: mediastinales 4 (neoplásica 3, inflamatoria 1) pulmonares 6 (neoplásica 2, inflamatoria 4). Toracoscopias terapéuticas 9: Mediastinales 6:

quiste pericárdico 1, timectomías 2, schwannoma 1, fibroma de pleura 1. Toracoscopia terapéutica: parénquima pulmonar 3; resección nódulos pulmonares 3. Estancia hospitalaria: diagnósticas 2 días, terapéuticas 5 días. Conversiones 3. Mortalidad 0. Morbilidad: dos casos ameritaron bloqueo intercostal por dolor neural. **Conclusiones:** La toracoscopia es un procedimiento que puede ser realizado por cirujanos generales con márgenes de seguridad aceptables, es responsabilidad de las unidades hospitalarias que a través de los diversos comités supervisen la práctica de dichos procedimientos.

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THORACOSCOPIC SURGERY

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The chest is perhaps the ideal body cavity for minimally invasive procedures (thoracoscopy) because of the ability to collapse the lung in a fixed space, thus obviating the need to create a space, as is necessary in the abdomen. The goals of a surgical procedure are the same whether the procedure is done by thoracoscopy or a thoracotomy. The indications for thoracoscopy may be diagnostic and/or therapeutic. Diagnostic indications are pleural effusions, pleural based masses, indeterminate pulmonary nodules, diffuse parenchymal lung disease, anterior and posterior mediastinal masses, pericardial biopsy, staging for oesophageal and pulmonary malignancy. Therapeutic indications include cervical sympathectomy, thymectomy, persistent or recurrent pneumothorax, early empyema, resection of mediastinal masses, pulmonary wedge resection, VATS lobectomy, VATS pneumonectomy, pericardial surgery, transthoracic vagotomy, trauma (retained haemothorax), benign oesophageal disorders and lung volume reduction surgery. The procedure is performed either under local anaesthesia (for diagnostic purpose) or General anaesthesia with one lung ventilation using double lumen endotracheal tube. The main advantage of thoracoscopic surgery is the reduction in postoperative pain and disability following an operative procedure. The patient is able to return to work much earlier, thus reducing disability and costs.

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PROCEDIMIENTOS LAPAROSCÓPICOS EN UROLOGÍA

Ochoa REH, Alcaraz LB, Zúñiga GF.

Introducción: Con respecto a los abordajes quirúrgicos, un número importante de procedimientos urológicos se realizan con abordajes abiertos como son aquellos para nefrectomía simple o radical o también para tumores uroteliales del riñón y también para cálculos renales o grandes de tercio superior ureteral. Dichos abordajes incluyen incisiones de tipo toraco-abdominales, del flanco extrapleural-extraperitoneal completo de flanco modificado con resección de costillas y siguen siendo el patrón de oro. Estos tipos de cirugía abierta están asociados con morbilidades perioperatorias significativas, como cicatrización anómala, abultamiento y dolor crónico de la herida o incluso diástasis. Por lo tanto para reducir las morbilidades asociadas, se ha sugerido la laparoscopia como una alternativa. **Historia:** La laparoscopia fue concebida por primera vez a comienzos del siglo XX como ayuda a la exploración quirúrgica. En los años 1970, los ginecólogos empezaron a experimentar con la laparoscopia como una técnica quirúrgica de intervención. No obstante esta técnica quirúrgica no ganó muchos adeptos debido a las limitaciones instrumentales. Sin embargo en la década de 1980 se produjeron cambios rápidos, con el desarrollo de mejores instrumentos ópticos quirúrgicos e instrumentos específicos. Con estos avances tecnológicos, la laparoscopia se aplicó en primer lugar en gran escala en la colecistectomía laparoscópica y se convirtió pronto en el patrón de atención porque se pusieron inmediatamente de manifiesto sus beneficios para los pacientes, como un mejor resultado estético y menor tiempo hasta una convalecencia completa. Posteriormente la laparoscopia ha desafiado casi todos los campos quirúrgicos. Schuessler y cols. en 1989 anunciaban la era de la laparoscopia terapéutica en urología. Su trabajo demostró la viabilidad de la disección laparoscópica de los ganglios linfáticos pélvicos en pacientes con cáncer de próstata. Desde entonces la laparoscopia se ha utilizado en varios procedimientos urológicos, como la nefrectomía, la nefroureterectomía, varicocelectomía, la orquiectomía, orquidopexia y la adrenalectomía. **Técnica:** Abordaje laparoscópico para procedimientos urológicos del riñón y tercio superior del uréter: previa preparación intestinal el paciente se coloca en decúbito lateral sobre el lado contrario a operar, se fija el paciente a la mesa. Se colocan 4 trócares; para el abordaje transperitoneal con aguja de Veress o bien con técnica abierta, Hasson seguido de insuflación y colocación de trocar puntiagudo en punto de Mc Burney y bajo visión directa otros tres puertos: umbilical, hipocondrio derecho/izquierdo y en el flanco a nivel de línea axilar anterior correspondiente. Una vez hecho esto se moviliza el reflejo peritoneal lateral desde el borde pélvico a la flexión esplénica o hepática mediante incisión de la línea avascular de Told. Para el abordaje retroperitoneal, no obstante que es un espacio potencial que limita la visualización laparoscópica debido a grandes cantidades de grasa y la ausencia de estructuras anatómicas fácilmente identificables, tiene la ventaja potencial de una cirugía extraperitoneal-extrapleural, en la que el peritoneo puede actuar como un retractor seguro del intestino y permite una disección más rápida para llegar al riñón y reducir la incidencia de íleo postoperatorio menor dolor postoperatorio en comparación con el abordaje transperitoneal. Con el paciente igualmente en posición de decúbito lateral y preparación del intestino previa se realiza incisión de 1 a 2 cm en la punta del arco costal no. 12, se incide la fascia dorsolumbar y se realiza disección del espacio retroperitoneal con el dedo (1992 Gaur, en el espacio creado se inserta una sonda con balón y se insufla con aire o solución para desplazar anterolateralmente al riñón, esto deja expuesto el psoas que es el principal punto de referencia durante la retroperitoneoscopia, después se colocan otros dos trocares bajo visión directa, uno subcostal (p. Murphy) y otro por arriba de la cresta iliaca (p. Mc Burney). En estudios previos se ha sugerido que en las técnicas laparoscópicas se tarda significativamente más tiempo que en las abiertas. De manera específica los tiempos operatorios de la nefrectomía laparoscópica publicados en los primeros artículos oscilaban entre 4.6 y 7.5 hrs. Sin embargo como ocurre en cualquier técnica quirúrgica nueva, hay una significativa curva de aprendizaje.

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VIDEO ASSISTED SUPRAPUBIC CYSTOLITHOTOMY

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Purpose: To describe a technique to extract vesical stone using videolaparoscopy. **Materials and method:** During February to September 2002 cystolithotomies were performed using videolaparoscopy. In operating room, with peridural anesthesia we filled the bladder with water by urethral catheter. Suprapubic incision (1 cm) was made to gain access to bladder. Using laparoscopic devices we observed the stone, then the trochar was placed near to stone and laparoscopic a was removed. The stone was fixed with forceps through the trochar, the trochar and forceps with stone were removed pulled them together. The vesical water was released and wound closure was made in habitual way. The urethral catheter was maintained fifteen days. **Results:** We attended 20 patients. None requires open surgical technique, the surgical times were between 10 to 20 minutes, bleeding was normal to minimal, patients were discharged at 12 hours and there were not fistulas. **Conclusion:** We conclude that video assisted cystolithotomy which we propose is better than open technique and good alternative without endourology devices. Our method all possess all minor surgery advantages.

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PSEUDOVAGINAL SCROTAL HYPOSPADIA. A CASE REPORT

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Introduction: The faulty conversion of testosterone to dihydro-testosterone produces an unique form of masculine Pseudo-hermaphroditism. At birth, the ambiguous external genitalia are manifested by a small hypospadic phallus united below in the form of a cord, a bifid

scrotum and an urogenital sinus that opens up to the perineum. The localization of the testicles is either inguinal or labial. There aren't any Müller structures an the Wolff structures are well differentiated. In the puberty, the affected males virilize. There is remarkable absence of gynecomastia, acne, and presence of hirsutism. The absence of reduction of 5-alpha-reductase of the testosterone to dihydro-testosterone in the uterus during the critical phases of the masculine sexual differentiation originates the incomplete masculinization of the urogenital sinus and the external genital, while the Wolff structures dependent of testosterone are developed in a normal way. The deficiency of 5-alpha-reductase is transmitted with an autosomic recessive range. **Clinical case:** Patient with a external description of a 11 year-old feminine, with familiar background of an 9 year-old brother with micropenis, and a 17 year-old brother with hypospadia. At 9 years old, the patient observes abnormal growth of the clitoris, voice changes presented by a lower voice tone and minimum mammary growth. In the physical exploration, the mammary glands are observed with minimum development (Tanner 1), presence of pubic hair in a male distribution, and a small genital with a phallus of approximately 2.5 cm, a pseudo-vagina of 2 cm is also observed, major vaginal lips with minimum pubic hair and absence of minor vaginal lips. In the CT test, neither uterus and ovaries are identified. The CT mentions 2 ovoid images, both lateral to the bladder, of 20 and 21 mm, with macroscopic character of gonadal testicular tissue. A genetic cariotype is realized, reporting a cariotype of 46 XY. The laboratory reports total testosterone of 2,240 pg/mL (normal 50 pg/mL). Surgery consisted in a laparoscopy diagnostic procedure, localizing an hypotrophic right testicle in the inguinal tract, testicular vessels and a ductus deferens. The surgery biopsy of the hypotrophic mass reports immature testicular tissue. We also recognize a superficial left testicle in the inguinal tract, also hypotrophic. Uterus and ovaries are not observed. The laparoscopic camera is introduced in the vaginal introitus, arriving directly to the bladder. **Conclusions:** The early diagnosis in this type of disease is essential, because a masculine sexual identity should be assign from the beginning and it should be managed biomedical assistance. In case of being diagnosed after the childhood, it will be managed as feminine sex, and the patient has to go under orchidectomy prophylaxis, a medical treatment with estrogens, and a strong psychological support.

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LAPAROSCOPIC DONOR NEPHRECTOMY IN OLDER PATIENTS: DOES AGE AFECT KIDNEY PERFORMANCE?

Vemulapallí P, Teixeira J, Gibbs KE, Farkas DT, Goodwin A, Greenstein S.

Introduction: Laparoscopic donor nephrectomies (LDN) have been shown to be a safe and effective alternative in renal transplantation. We sought to determine how older donors recuperated after the operation and whether age affected allograft function. **Methods:** We retrospectively reviewed the charts of all patients undergoing laparoscopic donor nephrectomies by one surgeon at single institution from January 2000 trough July 2003. A totally laparoscopic technique was employed for the dissection, and a pfannensteil incision was used for organ extraction. One kidney was lost to recipient related factors. During the study period sixty-eight patients underwent LDN. Patients were divided into two groups those less than age 50 (n = 80 median age = 33) and those age 50 or greater (n = 11 median age = 55). Recipient creatinine values were collected at 1, 2, 3 and 6 months post-operatively. Data analyzed by Student's t-test. **Results:** Both donor groups were comparable in regards to medical history, surgical history, operative time, pre-operative creatinine and creatinine clearance. When average donor length of stays were compared they were 3 days and 2.5 days respectively (p = 0.10). Age of donor *vs* average creatinines of recipients at various time points

	1 month	2 month	3 month	6 month
Age < 50	1.9	1.6	1.7	1.5
Age > 50	1.7	1.6	1.6	1.6
P value	0.4	0.4	0.9	0.5

Conclusion: Older donors undergoing LDN recover as well as their younger counterparts. The kidneys from older donors perform as well as those donated by younger donors. Age is not a contraindication for kidney donation as long as the donor is without significant comorbidities.

Poster-131

NEFROURETERECTOMÍA LAPAROSCÓPICA POR CÁNCER UROTELIAL DE LA PELVIS RENAL

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Objetivo: Reportar el primer caso de carcinoma de células transicionales operado por laparocopia en el Hospital de la Mujer de la ciudad de Morelia, Mich. México. **Método:** Revisión del expediente clínico del primer caso resuelto por vía laparoscópica. **Resultados:** Mujer de 75 años de edad, dedicada al hogar. Antecedentes de importancia: exposición a humo de leña casi toda la vida. Hipertensión arterial desde hace aproximadamente 10 años de diagnóstico y manejo con captopril 1-1-1. Refiere hematuria macroscópica hace 2 años sin sintomatología urinaria y que cedió de forma espontánea PA: inicia en diciembre del 2002 con cuadro de hamaturia macroscópica abundante de forma súbita y dolor del flanco derecho y lumbar, cólico de moderada intensidad con irradiación a la fosa iliaca derecha, náusea leve sin vómito no hipertermia y sintomatología urinaria irritativa baja posterior a la hematuria. Control médico inicial y disminución espontánea de la hamaturia macroscópica. US renal con leve hidronefrosis no se advierten litos o lesiones. UE con preparación intestinal incompleta y mala visualización de unidades renales con retardo en la eliminación del medio de contraste del RD y dilatación ureteral hasta tercio medio sin observarse tercio inferior se sospecha litiasis ureteral *vs* tumor urotelial ureteral, se realiza ureteroscopia sin evidencia de ambos diagnósticos y por mejoría clínica egresa. Posteriormente reinicia súbitamente hematuria macroscópica con mínimo cuadro de dolor, por lo que se solicita citología urinaria y se reportan positivo a células malignas de epitelio urotelial por lo que se realiza TAC renal con evidencia de lesión ocupante de la pelvis renal del RD con mínima repercusión urodinámica sin evidencia de linfadenopatías parahiliares. Se somete a nefroureterectomía laparoscópica. Se realiza previa preparación intestinal abordaje con cuatro puertos transperitoneal, disección del colon por fascia de Told hacia retroperitoneo hasta el hilio y su ligadura corte, disección ureteral hasta por debajo de vasos iliacos y hueco pélvico, extracción completa de la unidad renal previa ligadura ureteral, colocación de catéter ureteral a segmento distal y extracción vesical con posterior resección de rodete vesical de forma endoscópica y extracción de uretero. Dejando catéter vesical a libre drenaje, drenaje Penrose a cavidad con mínima fuga urinaria y retiro del mismo a las 72 h. Egreso con catéter Foley por 7 días y retiro sin complicaciones. Reporte HP de carcinoma de células transicionales de la pelvis renal uréter sin lesiones tumorales. **Conclusiones:** El carcinoma de células transicionales del tracto urinario superior es poco frecuente y aparece sólo del 6 a 7% de todos los tumores primarios del riñón. Del 82 al 90% son epiteliales (células transicionales), seguidos por los de células escamosas o carcinoma epidermoide 10 a 17% y el adenocarcinoma menos del 1%. Son más frecuentes en el hombre de dos a tres veces más. Es más común en la pelvis y en los cálices (66%) y menos en uréteres (34%). Cuando está comprometido el uréter el tercio distal es el más frecuente. Pueden ser unifocales, pero lo más frecuente es que sean multifocales (16-47%). El riesgo de desarrollar cáncer vesical posterior a cáncer del tracto superior oscila entre el 15 a 50%. El tratamiento estándar para carcinoma de células transicionales de la pelvis renal continúa siendo la NEFROURETERECTOMÍA CON RODETE VESICAL. Muy frecuentemente estos tumores son detectados de forma incidental en estudios radiográficos. El principal estudio para determinar su estadificación es la TAC.

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LITIASIS URETERAL DOBLE DEL TERCIO SUPERIOR. URETEROLITOTOMÍA LAPAROSCÓPICA

Alcaraz LB, Ochoa REH, Zúñiga GF.

Objetivo: Reportar nuestra primera experiencia en resolución de litiasis ureteral Doble por vía laparoscópica. **Métodos:** Revisión de

expediente clínico. **Resultados:** Mujer de 68 años de edad. Ama de casa. **Antecedentes:** Histerectomía por miomatosis y hemotransfusión. Hipertensión arterial desde hace 15 años tratamiento con captopril 2-0-2. G7, P6, A1. Padecimiento actual: un año y medio con dolor de fosa renal derecha y del flanco e HCD, de moderada intensidad en ocasiones intenso relacionado con la ingesta de alimentos náusea y vómito y ocasionalmente con los movimientos de la columna, no refiere sintomatología urinaria baja. Es referida a urología por la sospecha de urolitiasis en Rx simple de abdomen. A la exploración con dolor lumbar puño percusión y dolor a la compresión profunda del HCD y flanco, no se palpan masas. US renal se observa con hidronefrosis moderada a severa sin litos intrarrenales. UE con la presencia de dos litos en tercio medio-superior de uréter derecho con repercusión urodinámica moderada a severa, ambos litos de forma irregular de aproximadamente 1.5 y 1.0 cm ambos. Se realiza procedimiento laparoscópico bajo anestesia general previa preparación intestinal con abordaje retroperitoneal con 3 puertos, disección del espacio retroperitoneal y litotomía extrayendo ambos litos sin complicación, cierre ureteral con vicryl 4-0 y colocación endoscópica de catéter ureteral doble J, colocación de drenaje Penrose a espacio retroperitoneal y con evolución clínica posoperatoria adecuada, no requiere hemotransfusión, tiempo quirúrgico de 3 h y 45 min. Dos días de estancia posoperatoria y egreso con drenaje controlado por fuga urinaria sin repercusión clínica hasta 12 días posteriores. Conclusiones: La historia de la litiasis implica factores diversos en su origen: herencia, medio, edad, sexo, infecciones urinarias, trastornos metabólicos y excesos o deficiencias de la dieta. El pico de incidencia es entre la tercera y quinta décadas de la vida (Blacklcock, 1969) y con una relación 3 a 1 H:M. Los cálculos ureterales se originan en el riñón y luego pasan al uréter, en consecuencia sus causas son las mismas que las de la litiasis renal. Los raros casos de cálculos ureterales primarios, éstos se forman en asociación con ureteroceles, neoplasias, uréteres con extremos ciegos, uréteres ectópicos, saculaciones o segmentos dilatados del uréter proximal a una estenosis. Es poco probable que desciendan los cálculos que tienen un diámetro igual o mayor a 1 cm o que se asocian con infección urinaria. Rara vez los cálculos ureterales pesan más de 2 g, aunque hay reportes de cálculos gigantes en el uréter. Uno de los principales factores que debe de tomarse en cuenta para el tratamiento de los cálculos uretrales es la función renal; la evidencia clínica de daño renal confirmada por urografía implica tratamiento con rapidez. Las principales indicaciones para el tratamiento quirúrgico de cálculos ureterales específicamente del tercio superior son: la litotripsia extracorpórea con ondas de choque (LEOCH), ureterolitotripsia endoscópica flexible, ureterolitotomía abierta y la ureterolitotomía laparoscópica. Esta última además está indicada en procedimientos de cálculos mayores de 1.5 cm y cálculos con otras patologías asociadas como estenosis ureteropiélica. Nuestro caso se resolvió sin complicaciones transoperatorias y la evolución posquirúrgica ha sido muy buena.

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QUISTE RENAL SIMPLE. MARSUPIALIZACIÓN LAPAROSCÓPICA
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Abstract not submitted

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LAPAROSCOPIC LYMPHADENECTOMY PRIOR TO RADICAL LAPAROSCOPIC PROSTATECTOMY
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Iliac lymphadenectomy has played an important role for staging prostate carcinoma prior to radical prostatectomy. Although several papers advocate is not necessary in early stages of the disease, some others mention it as an aid for the completion of the procedure when removing most tumor cells with an influence in survival. We present a complete technique of laparoscopic lymphadenectomy with minimal blood loss, clearly demonstrating the anatomic landmarks that make this, a safe procedure. It depicts the proper handling of three most important structures in the human pelvis; the artery, the vein and the obturator nerve.

P-135

BILATERAL LAPAROSCOPIC VARICOCELECTOMY AND ASSOCIATED HERNIA REPAIR
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Laparoscopic repair of varicocele is still somewhat controversial, specially when unilateral. It is most commonly present on the left side, but with the advent of Doppler ultrasound, the incidence of bilateral cases has increased. Even though we routinely ligate the varicose veins via laparoscopy, little doubt exist when both sides are affected an the presence of an associated unilateral or bilateral inguinal hernia exists. We do present the technique of bilateral varicose vein ligature through laparoscopy with associated hernia repair in with the most important anatomical landmarks are depicted in order to do a satisfactory procedure with an excellent outcome for the patient with correction through three trocars of both entities. Blood loss has been negligible in our series as well as patient discomfort.

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LAPAROSCOPY OR LAPAROTOMY IN THE TREATMENT OF ACUTE CHOLECYSTITIS?
Pejcic Veroljub
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Abstract not submitted

Poster 137

SURGICAL APPROACH TO POLYPOID LESIONS OF GALLBLADDER IN THE ERA OF LAPAROSCOPIC CHOLECYSTECTOMY
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Purpose: Polypoid lesions of gallbladder (PLG) represent a significant health problem because they may be a precursor to gallbladder cancer. This study states our criteria for operative treatment of PLG in the era of laparoscopic cholecystectomy (LC). **Methods:** From 1997 to 2003 at Surgical Clinic, Clinical Center Nis, out of 953 patients who underwent LC, 31 (3.25%) had been diagnosed with PLG. Diagnosis has been established using ultrasonography. We analyzed prospectively collected data of these 31 patients. **Results:** The median age of patients was 47.25 (25-69). Seventeen patients were women (54.83), and 14 were men (45.16%). Postoperative pathological findings confirmed polypoid lesions in 28 cases. Six patients had PLG conjoined with cholecystolithiasis. Among 28 cases pathological findings verified: 14 (50%) cholesterol polyps, 8 (28.57%) multiple polyposis, 4 adenomas (14.28%), 1 (3.57%) inflammatory polyp and 1 (3.57%) gallbladder cancer. The diameters of 59% of the benign polypoid lesions were less then 10 mm. The patient with carcinoma was woman (67 years) with 13 mm-size lesion. **Conclusion:** Based on scientific data and our experience, we are using criteria for LC regarding PLG as follows: (1) Symptomatic lesions regardless of size. (2) Polyposis of gallbladder. (3) Polypoid lesions larger then 10 mm in diameter. (4) Polypoid lesions showing rapid increase in size during 6 months follow-up. Because of the very low morbidity after LC we recommend this method for golden Standard in treatment of PLG, when indicated.

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FURTHER SUPPORT FOR ROUTINE OPERATIVE CHOLANGIOGRAPHY IN LAPAROSCOPIC CHOLECYSTECTOMY
Gul YA, Jabar MF, Kumar S. Department of Surgery, University Putra Malaysia, Serdang, Malaysia.

Purpose: The place of cholangiography in laparoscopic cholecystectomy (LC) remains debatable with wide variation in practice between surgical intitutions and individual surgeons. The aim of this study was to evaluate the outcome of performing routine *versus* selective operative cholangiograms in patients undergoing elective LC. **Methods:** The data of 503 patients undergoing LC were compiled and analyzed. The results of routine operative cholangiograms performed in 324 patients undergoing elective LC from October 1996 to September 1998 were compared with the results of selective operative cholangiograms in 179 patients undergoing LC from Jan 2000 to July 2003. Selective use of operative cholangiogram was enforced during the latter period due the use of an alternative peripheral operating facility while the main theatre complex was undergoing renovations. **Results:** Laparoscopic operative cholangiogram was successful in 320 cases when performed routinely. Biliary ductual stones were evident in 12 patients (3.8%) none of who were referred for preoperative endoscopic retrograde cholangiopancreatography (ERCP). Laparoscopic bile duct exploration was performed in 8 of the patients and open ductal exploration was performed in the remaining 4 patients. In the selective operative cholangiogram group, laparoscopic operative cholangiogram was performed in 14 of the 179 patients (7.8%). Two patients (1.2%) who did not have an operative cholangiogram developed symptomatic residual biliary ductal stones on follow-up. There were no cases of bile duct injuries attributable to routine laparoscopic operative cholangiogram in contradistinction to 2 cases (1.1%) in the selective group. In one of the later cases, an operative cholangiogram was only performed when a bile duct injury was suspected. **Conclusions:** Even though performing routine laparoscopic operative cholangiogram can be considered as being time consuming and costly, it would seem to play an important role in reducing the possible morbidity that may arise from residual bile duct stones and more importantly, in preventing iatrogenic bile duct injuries.

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LAPAROSCOPIC CHOLECYSTOSTOMY IN ACUTE CHOLECYSTITIS IN ELDERLY PATIENTS

Agca B, Evruke H, Hizli F, Can D, Sari K.

Description: Introduction: Acute Cholecystitis, is a disease of chemical or microbial inflammation of the gallbladder which has a high mortality and can cause acute peritonitis by the delay in the treatment. Cystic duct obstruction, ischemia and infection are the preceding factors which have a role in etiopathogenesis. Early laparoscopic intervention is becoming a preferred approach in the treatment. **Materials and methods:** Seven cases over 65 years old were included to our study which were subjected to operation between January 1999-July 2003 in our clinic. All the cases were admitted to the operation room to perform laparoscopic cholecystectomy. Operation Technique: Abdominal cavity was explorated by the insertion of the trocars in optimal positions. Findings which suggest acute cholecystitis were the swelling of gallbladder, gallbladder bed, porta hepatic and Callot Triangle; thickening of gallbladder wall and hydropic gallbladder were present in all cases. We decided to perform laparoscopic cholecystostomy to the patients in which cholecystectomy was considered impossible neither laparoscopically nor conventionally. Gallbladder was discharged with an insertion of a Veres needle. A Foley catheter of 16F was inserted from a trocar entrance into the cross-like incision on the fundus of the gallbladder and it is balloon was inflated with 10 cc of saline solution. **Results:** Three of the cases (%42.8) were men and the rest 4 (%57.2) were women and the mean age was 66.5 years old. The catheter used for cholecystostomy was kept inside for 2 months. Two months later, 5 cases (%71) underwent laparoscopic and 2 (%29) underwent conventional cholecystectomy. Mean hospital stay was 6 days and there was no morbidity or mortality. **Conclusion:** Operative mortality and morbidity rates in cholecystectomy in the elderly are high. In respect to mortality and postoperative complications in the treatment of acute cholecystitis, there was no significant difference between early and delayed surgical intervention. Currently early laparoscopic surgical treatment is the most popular approach. When cholecystectomy is technically impossible, laparoscopic cholecystostomy is a choice for surgical treatment. Cholecystostomy decision must be given before the dissection is further progressed. Laparoscopic cholecystostomy is a minimal invasive procedure and provides a possibility of subsequent laparoscopic cholecystectomy.

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CHOLECYSTECTOMY LAPAROSCOPIC TRADITIONAL *VERSUS* MODIFIED

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Introduction: The cholecystectomy laparoscopic (CL) is to gold standard for the handling of the benign pathology of the gallbladder. Nevertheless, at the moment they have been developed technical by means of which the invasion every time is smaller. **Objective:** To compare the traditional CL with a technique modified with two ports. **Methods:** It was made in the South Central Hospital of High Specialty of PEMEX from November of the 2001 to May of a 2002 study; longitudinal, prospective, comparative, observational in two groups of patients, each one of 11 patients, selected randomized. The group A, for the CL traditional which was made by means of the introduction of trocar trans-navel of 10/11 mm, one right subxifoideo of 10/11 mm, and two sub-rib of 5 mm. The group B, CL by means of single access with two ports (one trans-navel of 10/12 mm and the other subxifoideo of 5 mm) attended by means of a system of manufactured transderms needles for the surgical handling of the gallbladder. It was made adults (greater of 18 years), of both sex, with based diagnosis of benign pathology of the gallbladder; reason why under general anesthesia the techniques were made that are mentioned. **Results:** predominance of female being in the group A of 73% and in group B of 91% was in both groups. As far as the ages one was that the average in the group A is of 40.45 years and in the B 38 years with T of Student of 0.55 ($p = 0.05$). The operative findings that were and that they made difficult the procedures went in the group A a patient with important fibrosis of choledoch and of the cystic conduit, a firm patient with a lito nailed in the cystic conduit and patient with pyocholecysto and adhesions; in group B a patient with firm adhesions. To two patients of group B transcystic cholangiographic was made to them. In the group A the bled was in average of 33. 64 mL and 49.09 mL group B observing a T of Student of 1.09 with $P = 0.05$. The surgical time was measured in minutes, being the average for the group A of 135.45 minutes and for group B of 118.16 minutes ($p = 0.05$) the measured anesthetic time in minutes in the group A it was of 161.64 minutes and in group B of 144.55 minutes ($p = 0.05$). The postsurgical morbidity in the group A was of a case with injury of the biliary route which was solved of first intention with conversion to open surgery and hepatojejunoanastomosis, later the patient presented colangitis handled with antimicrobial, yielding the same one. In group B, a patient presented infection of the navel surgical wound that handled with treatments and continuation of the antibiotic (cefalexina) and a case of flight of the cystic conduit by relaxation of the same tie that was solved to the 10 days of the surgery with single open surgery binding the cystic conduit again. The postsurgical stay in average measured in days went in the group A of 2.90 days and in group B of 2.45 days with ashion in both of 1 ($P = 0.05$). The postsurgical pain was measured according to the analogous scale the pain and together in three groups (slight, moderate and severe), in the group A 82% presented slight pain and 18% did not presented pain; in group B 64% presented slight pain, 9% moderate pain and 27% without pain. **Conclusions:** The cholecystectomy laparoscopic with two ports is a procedure that can be reproduced and that is safe once it is controlled. The advantages found for the cholecystectomy laparoscopic with two ports are: decrease of the surgical-anesthetic time, better anesthetic results, reduction of the surgical equipment used, smaller stay in the hospital, and decrease of the cost for to utilize minor equipment and time surgical-anesthetic and minor stay in the hospital.

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BILE LEAK FOLLOWING LAPAROSCOPIC CHOLECYSTECTOMY. REPORT ONE CASE IN HOSPITAL "VASCO DE QUIROGA" ISSSTE MORELIA, MICHOACAN

Soto GJA, García LJA, Jaubert J.

The bile fluid accumulated in abdominal cavity, following laparoscopic cholecystectomy, is infrequently, almost, unrecognized injury of the biliary free, partial occlusion, cauterization of accessory ducts to fear of it's will be factors formation of bile leak. The restrict drainage of the gallbladder bed after surgery no permit prompt recognition and also as parameter by therapy expectant to endoscopic reconstruction. This case female patient of 41 year old, with diabetes mellitus in your parents. Had cesarean section 2 years ago, disease previous two months at surgery, with abdominal pain in one event, required hospitalization and to carry out abdominal. Ultrasound show stones in gallbladder, practice laparoscopic a cholecystectomy with surgical small risk, to pump into abdominal pressure no cholecystectomy with surgical small risk, to pump into abdominal pressure no more 12 mmHg and to put 2 ports of 10 mm and 2 of 5 mm, to find adhesion duodenum to gallbladder, realize dissection of Calotte triangle without complication, clipping and cut of arterial cystic an duct cystic, with diameter 3 mm. Not accomplish X ray study in surgery extracting gallbladder by xiphoid down port. Sucking it and corroborate haemostatic no leaving drainage cavity. Closing up the skin and aponeurosis in ports of 10 mm. The second day surgery, the patient has an abdominal pain reflex to the shoulder right. The four day she shows up to emergency service with temperature 38.5º C in more inspiration pain, she to accept at the surgery service and check up finding abdominal painful and irritable, presence peristalsis, with no swelling. Laboratory exams only relive leucocytes at 21.200, liver function normal. The liver USG (photo 1-2) presence down diaphragm right collection and abdominal TAC in right side under liver collection (photo 3-4). Pierce puncture by ultrasonic front line armpit right to insert catheter and fixing to the skin obtaining at first 150 cc bile fluid and tow days after pierce a total of 550 cc. The evolution of patient with out temperature, no pain and under controls USG every 2 days during 6 days. She gets away home free symptom and remission picture ultrasound.

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LAPAROSCOPIC CHOLECYSTECTOMY DURING PREGNANCY. A THREE CASES REPORT

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Abstract not submitted

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LAPAROSCOPIC CHOLECYSTECTOMY IN A PATIENT WITH SITUS INVERSUS TOTALIS

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Objective: To report a case of a female patient with chronic lithiasis cholecystitis and situs inversus totalis who undewent laparoscopic cholecystectomy. **Design:** Case report. **Institution:** Hospital Regional "1º de Octubre", ISSSTE, Mexico City, D.F. **Description:** Sixty-three-year-old female with arterial hypertension under medical treatment who was diagnosed with situs inversus after appendicectomy 40 years ago. Two months prior to the surgery, she presented abdominal pain in the left superior quadrant irradiated to the left shoulder, after eating rich fat meal, accompanied with nausea and vomiting. She had "left" Murphy with the palpation of the LSQ. Laboratory reports were normal (hematic cytometry, haepatic function test). Thorax X-ray with dextrocardia. Ultrasonography: gallbladder lithiasis, found in the left superior quadrant as well as the liver. Complementary studies were realized (EKG, endoscopy, esophagus gastroduodenal series, colon enema, abdominal TAC), previous informed consent signed by the patient in order to document situs inversus. A laparoscopic cholecystectomy was performed with the patient in reverse Trendelenburg position, under general anesthesia. Surgeon and camera operator placed at the right side of the patient, assistant surgeon at the left. Port sites: umbilical 10 mm, subxifoideal 5 mm, left medial clavicular line 10 mm, left anterior axilar line 5 mm. Pneumoperitoneum was insufflated at 15 mmHg by puncture technique so that the umbilical port was introduced, and we identified the cystic duct and the cystic artery, and performed a cholangiography trancystic demonstrating a normal common bile duct. Three clips were used to ligate each, first the duct and 2nd the artery. The gallbladder was resected, and extracted through umbilical port. There were 2 stones in it. A Penrose drain was used. Surgical time: 120 min. The patient was discharged home the next day. **Conclusion:** We present a laparoscopic cholecystectomy in a patient with complete situs inversus. Laparoscopic cholecystectomy has replaced open procedure, being nowadays the golden standard for the treatment of gallbladder lithiasis, including those patients with situs inversus, in whom we should be careful enough to place the ports adequately according to anatomical reference, so that the dissection should be as accurate as possible.

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MANAGEMENT FOR EXTRAHEPATIC BILE DUCT INJURY COMPLICATING WITH LAPAROSCOPIC CHOLECYSTECTOMY. –AN EXPERIENCE OF THE MAGNETIC COMPRESSION ANASTOMOSIS BETWEEN THE COMMON BILE DUCT AND THE DUODENUM.

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Introduction: Biliary tract injury during laparoscopic cholecystectomy (Lap-C) is rare complication, but one of the most severe one. Specially the management against late obstruction or stenosis of the common bile duct (CBD) is very difficult, because of intense inflammatory fibrosis surround the bile duct. Magnetic compression anastomosis is a new interventional method, reported by Yamanouchi et al. We tried choledochoduodenostomy using magnets interventionally for a case with complete obstruction of the common bile duct after the Lap-C. Results of Lap-C in our institution: It has done almost 40-50 cases of Lap-C every year and 522 cases of Lap-C since 1991 to July 2003. Intraoperative major injury of the extrahepatic bile duct happened in two cases (0.4%). In the one case, complete transection of the CBD happened, it was converted open surgery immediately, and was done choledochojejunostomy (Roux-en Y). In the another case, major injury of CBD, sutured repair was done, it was happened severe stenosis of CBD following inflammation due to bile leakage. In this case, choledochojejunostomy was done after 15 months later of first operation (Lap-C). **Case report:** A 58-year-old woman was admitted in our hospital, she complained jaundice and biliary fistula in the abdomen. She was taken Lap-C for chronic cholecystitis before 2 months of admission at the other hospital. Repair of the CBD using stapler was done at the 1st operation (Lap-C), and abdominal drainage for biliary peritonitis was done after 5 days later of the Lap-C. Bile leakage continued after the 2nd operation, and resulted in complete obstruction of the CBD following local inflammation. Percutaneous transhepatic biliary drainage (PTBD) was done after admission to our hospital, and improvement of general condition was waited. Interventional choledochoduodenostomy using magnets was done after 6 moths later of the Lap-C. A pillar magnet of 4 mm diameter and 9 mm length was delivered at the CBD through the PTBD rout that was dilated to 14 French size. And a pillar magnet of 5 mm diameter and 5 mm length was delivered at the bulbus of the duodenum using peroral endoscopy. Anastomosis between the CBD and the duodenum was formed gradually by the force of compression between the both magnets. Two weeks later, the anastomosis was formed, there is no harmful event. **Conclusion:** Magnetic compression anastomosis is very useful for the biliary complications (stenosis or obstruction) after the Lap-C.

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NEEDLESCOPIC CHOLECYSTECTOMY IN A PATIENT WITH SITUS INVERSUS TOTALIS: A CASE REPORT

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Needlescopic surgery is less-invasive and cosmetic surgery. In our hospital, needlescopic cholecystolithiasis is routine method for cholecyslolithiasis with less inflammation cases. *Situs inversus totalis* is a rare congenital defect that can present difficulties during laparoscopic surgery due to the mirror image. We report a case of needlescopic cholecystectomy in a patient with situs inversus totalis. Fifty two years-old male presenting with symptomatic cholecystolithiasis was known to have situs inversus totalis. At surgery, the surgeon and the camera assistant were standing on the right side of the patient an the first assistant was on the left. The camera was introduced through an umbilical incision, and the situs inversus was conformed. Three 2 mm trocars were placed in the midline left of the falciform ligament, left subcostal midclavicular line and anterior axillary line. Disecting of the Calot's triangle was carried out in the usual fashion. Clipping of the cystic duct and cystic artery were carried out with 10 mm instruments through an umbilical port under the sight of the 2 mm camera through the midline 2 mm port. Needlescopic cholecystectomy was carried out without complication. The patient was discharged uneventfully. This is the first report of needlescopic cholecystectomy for the patient with *situs inversus totalis* in the world. Needlescopic cholecystectomy in the patient with situs inversus totalis is a feasible and safe procedure.

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LAPAROSCOPIC CHOLECYSTECTOMY, ONE AFFORDABLE ALTERNATIVE

Blas R, López F, Trejo D, Salmerón J, González F, Leal G.

Background: Endoscopic surgery oriented to gallbladder pathology has become a technique which replaced the traditional approach, since it gives the patient the opportunity of a quick recovery, decreasing, besides the overall hospitalization time as well as post-surgery affections. This technique also gives the chance of a quick reintegration to daily activities and good aesthetic results. Normally, patients can be dismissed within one day. Nevertheless, due to the high cost that the technology and disposable equipment it requires, it is not affordable for everyone to enjoy it's benefits. **Materials and methods:** The technique consists in the use of standard videoscopic equipment, veress neddle, two reusable ports (5 and 10 mm), trocars and reusable material; and it is necessary to make extracorporeal knots 2-0 vascular polypropilene to hold the cystic duct and artery. This technique will decrease the use of: Veress neddle, trocars, instruments, irrigation-suction system (it's replaced by ½ cottom gases pads), and disposable staplers, promoting a short post-surgery time. **Results:** This technique demonstrates that constant training from the surgeons, benefits the patient decreasing the costs of one of the most frequent surgeries in our environment. **Conclusion:** In public mexican institutions where resources must be efficiently administered, this alternative is highly recommended, because money is saved and it brings the same benefits to the patient, eliminating the expensiveness of disposable equipment.

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IATROGENIC INJURIES OF BILIARY TRACT AT 23 YEARS SURGICAL RESULT

Palacio VF, Castro MA, Vargas AL, Pineda AE.

Objective: To report our results with surgical procedures for treatment of iatrogenic injuries of bile duct. **Setting:** Tertiary level health care hospital. **Design:** Retrospective, observational and descriptive study. **Material and method:** We studied all patients operated on due to iatrogenic of injuries of the bile duct over the last 23 year (1980-2003). We analyzed the following variables: age; gender; previous bile duct surgical procedure; auxiliary diagnosis; type of bile duct injury according to Bismuth's classification; surgical procedure used; related mortality, and postoperative morbimortality. **Results:** Fifty six patients were operated on (48 female, 8 male) ranging from 19 to 71 years of age; 40 were sent to the hospital, and 16 were injured at our hospital in 8,012 gallbladder and bile duct procedures (0.2%), 80.4% in open cholecystectomy, and 19.6% in laparoscopic cholecystectomy. In 83.9% cases, diagnosis was made bypercutaneous cholangiography and injury types (Bismuth's) were: I = 12.5%, II = 26.8%, III = 50%, IV = 8.9% and V = 1.8%. Roux en Y intrahepaticjejunostomy was the most common procedure (46.7%) followed by hepaticojejunostomy (36.6%). Of total surgical patients, six died on long term (23 years) due to situations unrelated to the bile duct illness, and they were cared for more than one year without complications; 48 patients (85.7%), did not show strictures, three patients (5.4%) were reoperated because of strictures, all without recurrent strictures for more than one year of care, with a total of good results in 91.1%. Mortality: 4 patients (7.2%), and complications after procedure: 10.7%. Strictures were developed during the first year after surgical procedure. Survive without complications 80.4% of all patients. **Conclusion:** Our results are similar to other found in researches from Mexico and other countries; we recommend long term vigilance of patients.

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OUTPATIENT LAPAROSCOPIC CHOLECYSTECTOMY (OLC)

Justo JJM, Prado OE, Theurel VG, De La Rosa PR, Lozano EA

Introduction: Actual treatment of cholelithiasis is laparoscopic cholecystectomy. Advance in experience has dimished the length of stay until now that it is an ambulatory procedure. Since first report (1990), many centers report an annual increment obtaining success between 60-87% of the programmed OLC. **Objective:** To report the experience of a 84 beds General Teaching Hospital to open population with OLC in a 10 years period. **Methods:** Elective patients in which OLC were programmed. Fails, complications and evolution was recorded. Patients ASA I, II and III, with a vehicle, living in town, access to phone, admitted before 7:00, surgery performed before 14:00 and discharged before 20:00 with good oral intake and the surgical-anesthetic evaluation. **Results:** 10 years, 1,025 cholecystectomies, 565 (55.12%) laparoscopic, 415 (71.7%) programmed as outpatient, 306 (75.5%) were successfully performed, 83% were women, mean age 40.5 (14-85), surgical time was 25-155 mins., diagnostics were: lithiasis in 302 and polyposis in 4; mean recovery time was 6 hrs. (3-9). In 99 patients discharge was postpone: convertion (26), pain (19), vomiting (18), administrative (17), far from hospital (15) and patient's preference (14). Mortality was 0% and morbidity 10.1%. **Conclusions:** Main fail factor was convertion, do not contribute the physiological status, obesity, concomitant diseases or length of the surgery; OLC program in a general hospital of open population is feasible and safe.

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THROMBOSIS PROPHYLAXIS IN LAPAROSCOPIC CHOLECYSTECTOMY IN SWEDEN

Linderg F, Björck M, Rasmussen I, Bergqvist D.

Purpose: Study the use of thromboembolism (TE) prophylaxis in patients undergoing laparoscopic cholecystectomy (LC) in Sweden. **Methods:** Mail questionnaire to all Surgical Departments (SDs) in Sweden. **Results:** A response rate of 78 out of 80 SDs was reached after one reminder to non-respondents. Eight SDs did not perform LC. Of the 70 performing LC, 25 (36%) used TE prophylaxis in all patients, 12 (17%) in most, 6 (9%) in half of their patients and 27 (39%) only rarely. Most (46 SDs) reported using LMWH, 9 used graduated compression stockings, 6 used dextran and 5 used unfractionated heparin. Seven respondents used a combination of methods (stockings and LMWH or heparin), whereas eleven used TE prophylaxis so rarely, that they did not report any preferred method. Prophylaxis after discharge from hospital was reported in all patients in 6 SDs and in all that received prophylaxis in another 4, whereas this was reversed in 27 SDs. **Conclusion:** The use of TE prophylaxis is highly variable, even in a small and fairly homogeneous country as Sweden, probably reflecting the fact that no generally accepted consensus about the need for TE prophylaxis in laparoscopic surgery exists. Further studies are warranted.

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LAP-CHOLECYSTECTOMY: IVC AND PRE-OP. ASSESSMENT OF CBD PATHOLOGY-UPDATE

Stojanovic Z, Veselinovic Z, Lukic S, Veselinovic J.

Purpose: This paper is aimed to measure the value of IVC (intravenous cholangiography) in pre-op assessment of CBD pathology and is based on retrospective study of 1,006 cases operated for GB stones. **Methods:** During the operations we routinely performed intraoperative Ro-cholangioscopy and choloangiography (IOC). IOC revealed CBD stones in 77 cases, or in 7.6%. In pre-op assessment of this group, we routinely did LAB test of liver functions and US. There were 41.3% pathological findings and 62.1% US images suggestive of CBD stones in the group of 77, with proven CBD stones. IVC has been done in all of 77 patients, revealing 59 patients with CBD stones, thus having the accuracy of 76.6%. ERCP gave the 71 positive findings, having the accuracy of 92.2%. **Results:** IOC was taken as referral method (100% of accuracy) and all additional methods were compared to it. Most accurate and reliable was ERCP imaging (92.2%), then IVC (76.6%); LAB testing and US had 41 and 62 percents of accuracy. **Conclusion:** In the age of lap-cholecystectomies the pre-op assessment of CBD pathology is of utmost importance. ERCP is the most reliable method, however, unacceptable for its high morbidity (mortality ?) rate and costs. We think that an old method, IVC, should have its place in pre-op assessment in selected patients. It is safe, easy to perform, cheap and it gives a certain anatomic details of HPB region. We had no false-positive results. Furthermore, battery of tests LAB + US + IVC prior to laparoscopy should rise the accuracy of CBD diagnosis well above 90%.

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ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) PREVIOUS TO CHOLECYSTECTOMY BY ENDOSCOPIC SURGERY. WHICH IS THE BEST TIME CHOLECYSTECTOMY BY ENDOSCOPIC SURGERY AFTER (ERCP)?

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Endoscopic retrograde cholangiopancreatography is a very important tool in the diagnosis of obstructive jaundice disease which in the last decade has taken such importance not just in the diagnosis but as a therapy. Nevertheless it's a surgical, procedure which implies risks and complications. One of this risks and complications is the damage of the gallbladder and of the biliar tree. This study tries to determine the relationship between the ERCP and transoperatory changes in the gallbladder and of the biliar tree like edema and inflammatory tissue within the endoscopic surgery. In this study 40 patients were selected in a period of 3 years (2000-2003), this patients were submitted to the ERCP by obstructive jaundice, and to laparoscopic or open surgery, of this patients 19 were women and 21 men, with an average age of 48.5 years old. In them were compared the transoperatory changes with interval spaces of 10, 15, 30, 45, 60 and 90 day after the ERCP, the exclusion criteria in this study were the patients who wasn't submitted to surgery in this hospital, patients with a clinical history of acute cholecystitis, or acute pancreatitis previous to the ERCP, the patients who kept feeling pain no related to the ERCP between the realization of the investigation and the surgery, by the same way were excluded the patients who had no clinical file, or the transoperatory process wasn't well explained this parameters, which permitted us to identify the relationship between time and the surgical findings, being to the most common the inflammatory process in the first week and the minor with the pass of time being equal after a month, nevertheless in the statistic validation by the mommies reason and the invariable analysis for the prevalence didn't show us to have statistic significance. This is consequence of the size of the sample and it has prevalence, by the same way to a plan a future prospective studies with a bigger number of patients and with a major of the variables.

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COLANGIOGRAPHY PERCUTANEOUS VIDEOASSITED IN BILIARY ATRESIA

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Purpose: Colangiography percutaneous videoassisted in newborn with cholestasis syndrome. **Methods:** Male newborn, delivery at 32th week of gestation by premature rupture of the amnios. He was diagnosed with early sepsis so antibiotic therapy continue. Al 5 days old began TPN (parenteral total nutrition). At 25 years old he began enteral nutrition; he had jaundice persists, hepatomegaly, clay colored stools, malnutrition. Later test results were TB: 22.56. DB: 16.78. TPN was finished, but serum bile acid levels increase to TB: 33.02, DB: 17.49. Biliary atresia was suspected *versus* hepatitis. TORCH was negative. Laparoscopic diagnostic was performed at 47th days old. Intraoperative colangiography percutaneous videoassisted showed normal biliary system. We made hepatic biopsy, ten days later examinations results decrease: TB: 14.4, DB: 9.13. ALP: 462. The biopsy results was hepatitis of giants cells of the newborn. Later the patient went home. The examinations for diagnosis have not show a sensibility and specificity discharges for this diagnosis, and they can be economic as the ultrasound, but not decisive, or expensive like the gammagrama whose sensibility goes from the 97 to 100% and specificity from 82 to 94% but that it lowers considerably if certain type of damage hepatocellular exists, for that neither it can discard obstructive pathology and the correlation is to bogger damage hepatocellular smaller elimination of the technetium labeled agents. The magnetic resonance that although it is the study of more sensibility and specificity, the cost it is higher and needs sedation to guarantee a good image study, but spite of it, it is not possible to discard hypoplasia of the biliar tree whose handling is not surgical, in such a way that the diagnosis of this I finish it is histopatology. In case like this we have found the laparoscopic approach as a very useful diagnostic tool, with less morbidity, mortality, minimally invasive. The surgical technique allows us to assess the biliary tract, as well as the liver and to sample to tissues as differential diagnosis, offering the patient the possibility of a much less painful surgery, so we encourage this practice in order to make differential diagnosis in this particular pathology.

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LAPAROSCOPIC CHOLECYSTECTOMY. CYSTIC DUCT AND ARTERY LIGATURE WITH HARMONIC SCALPEL

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Background: Since its development, the laparoscopic cholecystectomy has become the preferred and standard method to treat cholelithiasis and other diseases of the gallbladder except cancer. This has been specially encouraged by the important decrease in postoperative pain seen with this technique along with the shorter hospital stay and the faster return to physical activities when compared with the open procedure. **Purpose:** Our objective was to assess the efficacy and safety of the cystic duct and cystic artery ligature with the harmonic scalpel, without the use of clips. **Method:** A retrospective study was conducted in 32 patients, (24 females and 8 males) with an average age of 46 years old (18-79 and range) with gallbladder disease treated with laparoscopic cholecystectomy from April of 2002 to October of 2003 at our institution. All patients were preoperatively evaluated with USG and some with cholangiogammagram. **Results:** In 7 patients the cholangiogammagram showed a markedly decrease in gallbladder emptying capacity (< 30%) which was clinically correlated with frequent episodes of postprandial epigastric pain and mild abdominal distention. From the remaining 24 patients, 12 patients had acute cholecystitis and 12 patients presented with chronic cholecystitis, in all patients the diagnosis was confirmed by histopathological examination. The average time of the surgical procedure was 30 minutes ranging from 20 to 120 minutes, the average hospital stay was 2.7 days ranging from 1 to 12 days. One 64 year old patient presented with acute cholecystitis, low albumin levels and sepsis, and had mild abdominal pain in the postoperative period, a biliary leak was suspected, it was managed as a controlled biliary fistula, the fistula finally close the drain was removed and the patient was discharged completely asymptomatic. The remaining patients had no biliary leaks or any other complications after surgery. **Conclusions:** The laparoscopic ligature of the cystic duct and cystic artery with the harmonic scalpel is a safe and feasible procedure that can decrease the operative time and cost that would represent the laparoscopic use of staplers.

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EXPERIENCE OF LAPAROSCOPIC COMMON BILE DUCT EXPLORATION

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Background: Minimal invasive surgery has changed the surgical standards of our times, it seem logic to perform every time more laparoscopic procedures. The first open common bile duct exploration (OCBDE) was performed by Ludwig Courvosier 1889. Bakes in 1891 was able to look inside of the common bile duct (CBD) with an instrument of his creation. McLever in 1941 describes the optic choledochoscope. Jacobs was one of the first surgeons to describe laparoscopic choledochotomy. Actual data reports that 15% of patients with gallbladder stones have bile duct stones, for which reason the laparoscopic procedure is a therapeutic and diagnostic option, without the disadvantages of the open procedure. The reported mortality of the laparoscopic CBD exploration (LCBDE) shifts from 0 to 1% and morbility from 1 to 12% depending on the surgical approach (transcystic *vs* laparoscopic choledochotomy). Another treatment for CBD stones are endoscopic retrograde colangiography (ERCP) with a risk of complications such as bleeding (3%), pancreatitis (2%), duodenal perforation (1%), and late papillotomy estenosis (10-33%), and OCBDE that increases 3 times the morbility and has the inconvenience of doing the exploration by hand. LCBDE has a reported complication rate of 7% with less surgical trauma and hospital stay. **Purpose:** The purpose of this study is to present the experience of a third level hospital at PEMEX, Mexico city. **Methods:** We reviewed 8 cases of randomized patients programmed for elective surgery in a period of 6 months from November 2002 to may 2003, 6 of which were women and 2 were men, with ages that range from 46 to 76 years with a median age of 67. All had a preoperative ultrasound with gallbladder stones, 7 with suspected CBD stones and 3 had a previous history of pancreatitis. All patients were operated for laparoscopic cholecystectomy (LC) and exploration with a choledochoscope was performed: 3 transcystic, 3 with choledochotomy, and 2 were performed with both. **Results:** Of 8 patients analyzed 5 have had choledochoscopic confirmation of CBD stones, 4 patients had successful extraction of the stones (80% of successful clearance), only patient that did not had successful extraction of the CBD stone required of conversion to OCBDE because of the size of the stone and adherence to the CBD wall. The average operative time was 160 min, the postoperative length of stay ranged from 1 to 15 days (one patient had a 15 day stay because of a cause non-related to the procedure chronic renal failure-) with an average length of stay of 4.5 days, none of the patients presented hyperamylasemia or pancreatitis in the postoperative period, the laparoscopic choledochotomy group have had a T-tube inserted without evidence of bile leak and a successful extraction of the T-tube at the 4th week of the postoperative period, none of the patients had been bile duct injury. The postoperative pain was minimum (visual analog scale 3/10) that responded to ketorolac dose of 30 mg 3 times a day for 2 days, feeding was started at 12 h postoperatively with good tolerance in all patients. Minor late complications consisted in seroma of the umbilical port in an obese patient and atelectasis that was resolved by respiratory therapy. In the CBD stone group with successful extraction none presented retained stones verified by a postoperative cholangiogram. **Conclusions:** These data shows that LCBDE decreases the postoperative rate of retained stones. In our study we had been 100% of visualization of the proximal and distal CBD and an 80% success rate for CBD stone extraction. There was no surgical-related morbidity and 0% mortality. No patient was reoperated. The transcystic access decrease the length of stay (one patient was released at the 24 h of the postoperative period). Our study also shows that the diagnostic accuracy of ultrasound is less compared with LCBDE with a choledoscope. The choledochotomy requires more experience and surgical skills in advanced laparoscopic techniques. We conclude that LCBDE is a reliable, secure and feasible option in experienced hand and with an adequate equipment.

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PRIMER COLECISTECTOMÍA LAPAROSCÓPICA EN PACIENTE EMBARAZADA DEL HOSPITAL REGIONAL "GRAL. IGNACIO ZARAGOZA", ISSSTE

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Antecedentes: La cirugía laparoscópica ha tenido un gran desarrollo en las últimas décadas, progresando al grado de abatir casi todas sus contraindicaciones. El embarazo reviste especial atención debido al riesgo de morbimortalidad maternofetal, siendo a la actualidad reportados ya casos de colecistectomías y apendicectomías en pacientes embarazadas con mínima morbimortalidad. **Métodos:** Presentamos la experiencia del equipo de trabajo de nuestra unidad en el primer caso de colecistectomía laparoscópica en paciente embarazada. **Presentación de caso:** Femenino de 31 años, casada, originaria y residente del D.F., enfermera, católica y sin toxicomanías. AHF: negados. APP: 2 cesáreas por DCP (1994, 1995). AGO: menarca 12ª, ritmo 28/8, IVSA 19ª, G 5, P 1, C 2, A 1. FUM 09-08-02. PA: acude por dolor abdominal de 7 días de evolución tipo cólico, intenso, en HD, secundario a la ingesta de colecistoquinéticos, acompañado de náusea y vómito gastrobiliar (3 por día). EF: buen estado general, campos pulmonares sin alteraciones, Rs Cs normales, abdomen con FU 22 cm, PUVI, FCF 144x', PC, DD, SL; peristalsis normal, blando y depresible con dolor intenso en HD, Murphy positivo, Von Blummer negativo, MS IS normales. Ingresada por diagnósticos de colecistitis aguda y embarazo de 22 sdg con tratamiento a base de ayuno, SNG, soluciones parenterales y vigilancia estricta meterno-fetal. Se toma USG que reporta PUVI con movimientos activos, 25 sdg. Por fetometría, placenta normoinserta grado 0, hígado, páncreas, colédoco y vena porta normales; vesícula biliar con paredes edematosas y engrosadas (13 mm), con múltiples litos pequeños y tabique longitudinal en cuello. Presentando poca mejoría a las 72 h, persistiendo con dolor en HD y Murphy positivo, se decide intervención quirúrgica de colecistectomía laparoscópica. **Cirugía:** Se realiza bajo anestesia general endovenosa (Propofol y fentanilo) colecistectomía laparoscópica anterógrada, con 3 puertos (2 de 10 mm, 1 de 5 mm), neumoperitoneo a baja presión (10 mmHg), duración de 40 min. Sangrado mínimo y sin complicaciones. *Hallazgos:* Útero gestante, salpinges, ovarios, hígado, colédoco, estómago e intestino de características normales; vesícula biliar de 9 x 4 x 4 cm. Aprox., con paredes engrosadas y edematosas, colesterolosis, múltiples litos pequeños en VB y conducto cístico. En el PO se aplica antibiótico profiláctico, analgésico e indometacina (100 mg VR cada 12 h por 3 días) y monitorización estricta materno-fetal, tolerando la vía oral a las 6 h y egresándose al 3er día en buenas condiciones y sin datos de actividad uterina ni complicación fetal. **Conclusión:** Algunos casos de pacientes embarazadas que cursan con celecistitis litiásica aguda que no ceden a tratamiento pueden ser operadas de colecistectomía por vía laparoscópica, brindando todos los beneficios de la cirugía de mínima invasión con buenos resultados.

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TRATAMIENTO ENDOSCÓPICO DE COLEDOCOLITIASIS RESIDUAL

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La coledocolitiasis residual (CR) después de colecistectomía se calcula entre el 5 al 12%, sin embargo la exploración quirúrgica de la vía biliar no garantiza la limpieza completa de los conductos biliares; por lo que la resolución endoscópica (CPRE) se presenta como una opción de tratamiento. **Objetivo:** Presentar la experiencia de CPRE en el tratamiento de coledocolitiasis residual (CR) en un hospital de referencia en un periodo de 7 años. **Material y métodos:** Estudio retrospectivo, observacional y descriptivo de marzo de 1996 a septiembre de 2003 de los pacientes que se presentaron al servicio de endoscopia del Hospital General "Dr.

Gea González" con: a) ictericia posoperatoria, b) ictericia dentro de los primeros dos años de cirugía de vesícula y vía biliar y c) colangiografía por sonda T y defecto de llenado. Se analizaron las características demográficas, abordaje endoscópico, número de litos residuales, instrumentación de la vía biliar, éxito del procedimiento, opciones terapéuticas en litos gigantes y complicaciones. Se utilizó videoduodenoscopio Pentax de 11 mm con canal de trabajo de 3.2 mm, esfinterotomo guiado, aguja de precorte, canastilla de Dormia, sonda de balón, litotriptor mecánico Soehendra, litotripsia electrohidráulica (LEH), endoprótesis biliares Soehendra 7 Fr y 10 Fr. Los resultados obtenidos fueron analizados para definir en qué pacientes el tratamiento endoscópico pudo ser exitoso y cuándo será necesario colocar una endoprótesis biliar y reprogramar el estudio. **Resultados:** De marzo de 1996 a septiembre de 2003 se incluyeron 319 PX con CR. Predominó el sexo femenino 81.5% (n = 260), edad promedio 42 años (18-72ª). En 35% (n = 111) se les realizó exploración quirúrgica de la vía biliar y colocación de sonda en T y continuaban con coledocolitiasis. Se realizó abordaje mixto 26% (n = 84), canulación guiada 69% (n = 220), precorte 4% (n = 13) y canulación fallida 0.6% (n = 2). Se realizó esfinterotomía guiada 94.6% (n = 302) y al 4.7% (n = 15), se amplió la esfinterotomía previa. La extracción de litos fue exitosa en 98.4% (n = 314) con excitación de lito único 122 px (38%), litos múltiples 103 px (32.3%), microlitiasis 37 px (11.6%), lito en hepático izquierdo 5 px (1.5) y paso espontáneo de lito 31 px (9.7%). En 19 px (6%) se colocó endoprótesis biliar Soehendra 7 ó 10 Fr, 2 por lito impactado en hepático izquierdo y 17 por lito gigante, quienes fueron reprogramados para nueva CPRE en un promedio de 4 a 6 meses y tratamiento con ácido ursodesoxicólico logrando extraer el lito en 16 px, 6 con litotripsia mecánica y 3 con LEH. Se requirió tratamiento quirúrgico en 5 px (1.5%). Morbilidad del 2.5% (n = 8), que incluyó pancreatitis leve 4 px y hemorragia 4 px. **Conclusión:** El tratamiento endoscópico de CR presenta buenos resultados y baja morbilidad. Cuando no es posible extraer el lito, el colocar endroprótesis biliar junto con otras opciones terapéuticas aumenta el porcentaje de éxito.

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BILOMA SECUNDARIO A COLECISTECTOMÍA LAPAROSCÓPICA. REPORTE DE UN CASO EN EL HOSPITAL "VASCO DE QUIROGA", ISSSTE MORELIA.

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El acúmulo de bilis en la cavidad abdominal, posterior a cirugía laparoscópica, no es frecuente, sin embargo, la lesión inadvertida de la vía biliar, la oclusión parcial o cauterización de conductos accesorios o arrancamiento posterior a tracción de los mismos, se consideran potencialmente factores causales del biloma. El uso restringido de drenajes en el lecho hepático posterior al procedimiento quirúrgico, no permite identificar tempranamente la fuga, siendo a la vez parámetro para decidir manejo conservador expectante o endoscópico. Este caso, paciente femenino de 41ª. Postoperada de colecistectomía laparoscópica, que presentó sintomatología y diagnóstico de biloma 4 días posteriores a la cirugía, secundario a fuga biliar por conducto accesorio de la vía biliar. **Caso clínico:** Fem. de 41 años con antecedente de padres diabéticos, cesárea hace 2 años. Cursa padecimiento dos meses previos a la cirugía, con cólico vesicular en una ocasión que ameritó internamiento y diagnóstico ultrasonográfico de CCL, manejado médicamente remitiendo el cuadro agudo y programado para cirugía laparoscópica. No cuadros de ictericia previa, valoración preoperatoria con riesgo bajo. Lab. con HB de 11.6, HT 36.2, glucosa 154 g/dL. Se realiza colecistectomía con técnica cerrada para neumoperitoneo, manejando presión intraabdominal no mayor de 12 mmHg y colocando 2 puertos de 10 mm y 2 de 5 mm en líneas convencionales para colecistectomía. Se encontraron múltiples adherencias de epiplón a vesícula realizando disección del triángulo de Calott sin complicaciones, disección y engrapado de cístico y arteria cística, corte de los mismos con diámetro del primero de 3 mm. No se realizó colangiografía transoperatoria, se extrae vesícula por puerto subxifoideo. No se dejan drenajes a cavidad, se aspira y corrobora hemostasia del lecho. Se cierra piel y aponeurosis de puertos de 10 mm. Al segundo día del posoperatorio, la paciente refiere dolor en epigastrio, irradiado a hombro der. y al cuarto día se presenta al servicio de Urgencias del Hospital donde refiere hipertermia de 38.5ºC y mayor dolor a la inspiración, se ingresa y se explora encontrando datos de irritación peritoneal localizados a cuadrante superior der. de abdomen, no masas palpables, peristalsis presente, no náusea, ni vómito. Exámenes de laboratorio únicamente con leucocitosis de 21,200, PFH normal. Se toma USG con presencia de colección subdiafragmática der. TAC abdominal con colección subdiafragmática der. TAC abdominal con colección subhepática del lado der. Se punciona percutáneo dirigido por USG, en línea axilar anterior der., con trócar rígido fijándose a piel y obteniendo al inicio 150 cc de líquido biliar y dos días posterior a la punción un total de 550 cc de líquido biliar. La paciente cursa afebril, sin dolor y con controles USG cada 2 días durante 6 días. Se egresa asintomático a su domicilio y con remisión de imágenes USG.

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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 postoperatorio 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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LAPAROSCOPIC CHOLECYSTECTOMY DURING PREGNANCY. A THREE CASES REPORT.

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Abstract not submitted

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TRATAMIENTO QUIRÚRGICO LAPAROSCÓPICO DEL PIOCOLECISTO

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El piocolecisto es la inflamación severa de la vesícula biliar, con colección abundante de pus en su cavidad, que en ocasiones se acompaña de gangrena, dando un cuadro clínico grave, con fiebre alta y escalofríos, ataque al estado general, dolor abdominal en epigastrio e hipocondrio derecho, plastrón palpable, e ictericia, deshidratación, hipotensión y choque. Con frecuencia se presenta en pacientes ancianos o debilitados y diabéticos. El hallazgo de laboratorio es leucocitosis y en la ultrasonografía frecuentemente se ob-

serva la vesícula gigante. y con datos ecosonográficos sugestivos de piocolecisto. El tratamiento es quirúrgico, es urgente y los resultados habituales son a la mejoría una vez que se quita el foco séptico cuando el paciente no ha progresado a fallas orgánicas. El tratamiento habitual ha sido hasta la fecha, en la mayoría de publicaciones de series grandes de hospitales, quirúrgico abierto y sólo en forma anecdótica comentan el tratamiento por laparoscopia. Se presenta aquí una serie de 7 casos con piocolecisto, operados en un hospital privado en un período de 3 años. En todos los casos se practicó colecistectomía laparoscópica. Hay un predominio de pacientes en la octava y novena década de la vida. Llama la atención el predominio del piocolecisto en el sexo masculino en cinco casos. Dos de los pacientes eran diabéticos. Uno tenía cirrosis hepática. Dos con ictericia. Uno cursó con pancreatitis grave con cuatro criterios de Ranson. Tenían una evolución de cuatro a catorce días, algunos había acudido a atención médica pero no fueron diagnosticados inicialmente, hasta que empeoraron en su cuadro clínico. Todos fueron operados de urgencia, excepto el paciente con pancreatitis que se operó 72 horas después de hospitalizado. En los hallazgos transoperatorios dos tenían adherencias por cirugías previas, todos tenían adherencias inherentes al piocolecisto. Uno tenía hidropiocolecisto, uno con gangrena de la pared, todos con abundante pus y con paredes de la vesícula difíciles de disecar. Todos se operaron con técnica de cuatro trócares, se les aspiró la pus por punción, la arteria cística y el conducto cístico fueron ligados con prolene del 0 con nudos extracorpóreos, la disección del lecho vesicular y su hemostasia fue con coagulación monopolar, a todos se les dejó drenaje cerrado a succión, los tubos de drenaje fueron extraídos por los sitios de trócares subxifoideo y de flanco derecho, se dejó abierta la piel del orificio de trabajo subxifoideo por donde se había extraído la vesícula. El tiempo quirúrgico varió de dos a cinco horas. Todos se trataron con antibióticos. En todos se notó una mejoría objetiva y subjetiva inmediata, iniciaron dieta oral líquida a las 24 a 36 horas, fueron dados de alta al cuarto y quinto día postoperatorio. La ictericia desapareció en pocos días. Ninguno presentó infección de heridas quirúrgica ni celulitis. Los drenajes se dejaron de 3 a 4 semanas y media. Una de las pacientes fue descuidada en su tratamiento y a los 21 días se le salió la sonda de drenaje, acudió a los 33 días del postoperatorio con malestar general, hiporexia, distensión abdominal y febrícula, un ultrasonido que reveló absceso subhepático residual y no aceptaron tratamiento quirúrgico, evolucionando mal. Todos los demás pacientes fueron dados de alta por curación definitiva con un alto grado de satisfacción. Se dan recomendaciones para enfrentar este padecimiento, por abordaje laparoscópico con éxito. Se requieren destrezas de cirugía laparoscópica avanzada. La evolución y resultados son iguales o mejores que con la cirugía abierta.

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EARLY *VERSUS* DELAYED LAPAROSCOPIC CHOLECYSTECTOMY FOR ACUTE CHOLECYSTITIS: A PROSPECTIVE RANDOMIZED TRIAL

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Purpose: The role of laparoscopic cholecystectomy for acute cholecystitis is not yet clearly established. The aim of this prospective randomized study was to evaluate the safety and feasibility of laparoscopic cholecystectomy for acute cholecystitis and to compare the results with delayed cholecystectomy. **Methods:** Between January 2001 and November 2002, 40 patients with a diagnosis of acute cholecystitis were randomly assigned to early laparoscopic cholecystectomy with in 24 hours of admission (early group, n = 20) or initial conservative treatment followed by delayed laparoscopic cholecystectomy, 6-12 weeks later (delayed group, n = 20). **Results:** There was no significant difference in the conversion rate (early 25% *versus* delayed 25%), operating time (early 104 minutes *versus* delayed 93 minutes), postoperative analgesia requirement (5.3 days *versus* 4.8 days) and postoperative complications (15% *versus* 20%). However, early group had significantly more blood loss (228 mL *versus* 114 mL) and shorter hospital stay (4.1 days *versus* 10.1 days). **Conclusion:** Early laparoscopic cholecystectomy for acute cholecystitis is safe and feasible with additional benefit of shorter hospital stay. It should be offered to patients of acute cholecystitis, provided the surgery is done within 72-96 hours of the onset of symptoms.

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CLIPESS *VS* CONVENTIONAL LAPAROSCOPIC CHOLECYSTECTOMY

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The metal clips have played an important role to simplify the closure of the cystic duct and the cystic arteries in LC. However, they also have some disadvantages; high price and possible complications caused by clips (e.g. stone formation). The purpose of this study was to describe our operative procedure of clipess LC and to make a retrospective comparison with conventional LC using the metal clips. Clipess LC was performed for 88 consecutive patients of gallbladder stone between July 2001 and August 2003. The cystic arteries and veins were divided by reusable ultrasonic coagulation cutting device (Sonosurg, Olympus). The cystic duct was ligated by 2-0 silk, using extracorporeal ligature method. The results were compared with those of conventional LC performed for 88 patients between September 1999 and June 2001. In both groups, intraoperative cholangiography was routinely performed. In 88 patients of clipess LC, seven patients needed to use clips (conversion rate; 8%), for controlling bleeding from the cystic artery and/or for closing the cystic duct. The average operation time was 109 min and the average postoperative hospital stay was 4.8 days. Although eight patients had minor complications, including wound infection, residual bile duct stone and pneumothorax (morbidity rate; 9%), no patient had postoperative bile leakage or bleeding. These results were statistically not different from those of 88 patients of conventional LC, except that the operating time was 10 min longer in clipess LC. While the material cost for the procedure was 25,100 yen (220 US$) lower in clipess LC than in conventional LC. In conclusion, clipess LC using reusable ultrasonic coagulation cutting device could be recommended as a new standard procedure of LC.

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COLEDOCOLITIASIS Y CIRUGÍA LAPAROSCÓPICA

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Introducción: La aceptación generalizada de la colecistectomía laparoscópica en el tratamiento de la colelitiasis, no se ha acompañado de un consenso similar en el abordaje y manejo de la coledocolitiasis. Las alternativas “mínimamente invasivas” incluyen la esfinterotomía retrógrada endoscópica (CPRE) pre y posoperatoria y la exploración laparoscópica de la vía biliar principal como tratamiento definitivo de la coledocolitiasis en un solo tiempo (TLVBP). **Material y métodos:** Mil doscientas treinta y ocho mil colecistectomías laparoscópicas consecutivas se han realizado en el periodo 1991-2002, análisis en los resultados de las alternativas terapéuticas (CPRE pre o *vs* TLVBP) en los casos de diagnóstico preoperatorio y el mismo análisis en los casos diagnosticados per o postoperatoriamente. Se presentaron 80 casos de coledocolitiasis en nuestra serie (6.02% del total). Se realizó colangiografía preoperatoria en 146 pacientes (11.3%) a través de un escore predictivo compuesto de variables: antecedentes, clínica, analítica y hallazgos ecográficos. El diagnóstico preoperatorio se realizó (escore + ecografía + colangio RNM) en 49 casos, en 6 el diagnóstico fue intraoperatorio y en 13 en el posoperatorio. El tratamiento preoperatorio en dos tiempo (CPRE) y colecistectomía laparoscópica, se extrajeron los cálculos en dieciocho pacientes, siendo negativa en dos ocasiones y no pudiendo realizarse en otros dos, la coledocolitiasis postcolecistectomía se resolvió en la mitad de los casos con CPRE. En los casos con diagnóstico preoperatorio se realizó la cirugía laparoscópica en un solo tiempo en 47 pacientes, siendo la técnica mayoritariamente realizada la coledocotomía, con extracción de cálculos y Kher en 43 casos, sólo hubo un cierre primario de colédoco, dos derivaciones biliodigestivas y una extracción trasncística del cálculo. El

tiempo medio quirúrgico se prolongó hasta los 168.04 minutos en los casos de TLVBP (frente a los 60 min del resto de las colecistectomías). Se realizaron dos conversiones y una reintervención por biloma por salida del tubo de Kher. La estancia media posoperatoria en los casos de TLVBP fue de 8 días (significativamente mayor que el tratamiento en dos tiempos). Sin embargo, la recuperación de la deambulación y el tiempo de ileo posoperatorio, fue equiparable a la colecistectomía una vez realizada la CPRE (estancia a expensas del control radiológico del drenaje biliar). **Conclusiones:** La colangiografía selectiva según escore perioperatorio, ha demostrado ser eficaz en la predicción de coledocolitiasis. El TLVBP es técnicamente difícil aun en manos expertas. Los resultados obtenidos orientan hacia el tratamiento definitivo en un solo tiempo de la coledocolitiasis.

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LAPAROSCOPIC MANAGEMENT OS ACUTE CHOLECYSTITIS

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Background: Laparoscopic surgery has been shown to be the "gold standard" for the symptomatic cholelithiasis. Nevertheless, the use for the acute cholecystitis is still controversial. So, we analyze the outcomes of laparoscopic emergency surgery for acute cholecystitis. **Material and methods:** We treated 100 patients for acute cholecystitis (53 women and 47 men). The average age was 63 years. Inclusion criteria were: acute upper abdominal pain with tenderness; fever > 37.5º C, leukocytosis > 10,000 and ultrasonographic evidence (thickened or edematous gallbladder wall, distended gallbladder, pericholecystic fluid collection, presence of gallstones and ultrasonographic positive Murphy). The surgical technique was the same as the one for elective cholecystectomy. Nearly 86% of the procedures were undertaken during the first 48 h of hospital admission. In 74 patients the cholecystitis was flemonous or gangrenous, and in the remaining 16 (16%) there were abscess and gallbladder perforation. We placed a drain in 74 cases. **Results:** The mean operating time was 85.54 m (range 35-180) and postoperative hospital stay was 7 days. The conversion rate was 10% mainly due to dense adhesive bands and difficult dissection of Calot's triangle. The morbidity rate was 6% (6 cases): 2 postoperative cases of choledocholithiasis, 2 subhepatic abscess and 2 cases that required second laparotomy due to biliary peritonitis and hemoperitoneum. The mortality rate was 0%. **Conclusions:** We consider the laparoscopic cholecystectomy for acute cholecystitis during the first 72 hours as a safe and effective technique. This minimal invasive surgery provides therapeutic capabilities, reduces postoperative pain and hospitalization and promises to play a significant role in emergency abdominal situations.

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PROPHYLACTIC ORAL ANTIBIOTIC THERAPY FOR THORACOSCOPIC SURGERY: A RANDOMIZED PROSPECTIVE STUDY

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Purpose: To evaluate the efficacy of oral antibiotics for prophylaxis during thoracoscopic surgery. Comparison was made with intravenous (iv) administration in a prospective randomized study. **Patients and methods:** The surgical procedure was thoracoscopic partial resection of the lung or resection of benign mediastinal tumors. The oral group was given 400 mg/day of LVFX orally and the iv group was given 2,000 mg/day of CMZ intravenously from the day of surgery to postoperative day 4. **Results:** Thirty-two patients were initially enrolled, but 6 dropped out after conversion to conventional open surgery or for other reasons. Background factors such as sex, age, operating time, and blood loss were the same for the oral group (n = 14) and the iv group (n = 12). After thoracoscopic surgery, there was no infection (including wound and respiratory infection) and no side effects induced by the antibiotics in either group. In the iv group, LVFX concentration of both serum and pleural effusion measured by HPLC method was over the therapeutic threshold. The postoperative body temperature, leukocyte count, and c-reactive protein level were the same in both groups. Postoperative hospital stay was shorter in the oral group than in iv group (4.7 ± 1.0 *vs* 6.6 ± 3.2 days). The cost of hospital treatment was lower in the oral group than in the iv group. **Conclusion:** Prophylactic oral administration of antibiotics for thoracoscopic surgery is a safe and reasonable method that also has economic advantages.

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LAPAROSCOPIC APPROACH IN RECTAL CANCER PATIENTS. LESSONS LEARNED FROM MORE THAN TWO HUNDRED PATIENTS

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Introduction: The applicability of laparoscopic surgery in the treatment of colorectal diseases is still controversial. Early reports on laparoscopic-assisted colectomy in patients with colon cancer suggested that it minimizes surgical trauma, decreases perioperative complications and leads to more rapid recovery. Only one paper showed that laparoscopic approach can extend cancer-related survival. No papers comparing laparoscopic *versus* approach in rectal cancer have been published. **AIM:** The aim of this paper was to assess the results of rectal cancer patients treated by laparoscopic techniques. **Methods:** From March 1998 to February 2003 all patients with an adenocarcinoma of the rectum admitted to our unit were evaluated to operate upon laparoscopic approach. Exclusion criteria were: intestinal obstruction, adjacent organ invasion, and no consent to participate in this study. **Results:** Two hundred and twenty patients (1,545 male and 75 female) were included with a mean age of 67.3 years (range: 29 to 89). Previous abdominal surgery had been done in 36% of patients. One hundred and thirty patients (59%) were treated with neoadjuvant chemo-radiotherapy. Surgical technique was: 44 anterior resections, 122 low anterior resections with total mesorectal excision (TME), 42 abdomino-perianeal and 2 palliative colostomy. Protective loop ileostomy was performed in 78 patients (47.8%). The average time of the surgical procedure was 178.54 ± 55.8 minutes (65-320). Conversion to open approach rate was 20% (44 patients) due to difficulties in dissection 59% (26 patients), adjacent organ invasion in 27.2% (12 patients), hypercarbia 7% (3 patients) and hemorrhage in 4.5% (2 patients). Ten patients had intraoperative complications (6 hemorrhages, 2 colon injuries, 1 bladder injury and one ureter lesion. Fifty eight patients (26.3%) presented postoperative complications: 12 anastomotic leakage. The distribution of tumor stage was: I 37 patients (16.8%), II 74 (33.6%), III 58 (26.4%), IV 42 (19.1%) no evidence of tumor in 9. The average of lymph nodes was 13.8 ± 2.1. Hospital stay was 6.8 ± 4.6 days and oral intake 48 ± 31 hours after surgery. If we exclude stage IV or Dukes D2 patients, the incidence of local relapse has been 5.3% with an actuarial surgical of 80% at 3-year follow up. **Conclusion:** Laparoscopic surgery in patients with adenocarcinoma of the rectum can be performed safely with quite good short term results. The recurrence and survival are similar than conventional techniques. Randomized controlled trials are needed.

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS *VS* LAPAROSCOPIC GASTRIC BANDING IN PATIENTS WITH SIMILAR DEGREE OF OBESITY

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Background: Laparoscopic Roux-en-Y gastric bypass (LRYGB) and laparoscopic gastric banding are both accepted therapeutic modalities for the treatment of morbid obesity. Although previous studies documented greater weight loss after gastric bypass surgery compared to vertical banded gastroplasty, studies comparing LRYGB to LGB are still scarce. The aim of this study was to compare the weight

loss outcomes of the two procedures in patients with similar degree of obesity. **Methods:** In January 2001 LRYGB has been introduced into the routine clinical practice at our Institution for patients with BMI higher than 45 kg/m^2. Since that time, LGB is reserved only to patients with BMI lower than 45 kg/m^2. To investigate the efficacy of LRYGB and LGB on patients with similar degree of obesity, we included in the study all the patients with a BMI between 45 and 60 who completed at least one year of postoperative follow-up after LRYGB. As we obtained 16 patients to evaluate, we compared their weight loss outcomes to those of the last 16 patients undergoing LGB with BMI in the same range of the LRYGB group. **Results:** The two groups were well matched for sample size, sex (f/m ratio = 11:4 in both groups) and mean duration of follow-up (17 ± 4 months in the LGB group *vs* 16 ± 5 in the LRYGB group; p = ns). The preoperative mean BMI was similar in the two groups (51 kg/m^2 in LGB *vs* 52 kg/m^2 in LRYGB; p = ns). Age range was also identical (22-57 years for both) although the LGB patients tended to be older on overage (43 years *vs* 35 years; $p < 0.05$). Weight loss averaged 35 ± 10 kg in the LGB group *vs* 57 ± 18 kg in the LRYGB ($p < 0.001$), with a mean excess weight loss (EWL) of 44 ± 16% and 70.4 ± 18% respectively ($p < 0.001$). A greater than 50% EWL was achieved in 15/16 of LRYGB patients and only in 4/16 patients in the LGB group. Remarkably, final mean BMI was 32 kg/m^2 (25-44) in the LRYGB, and 39 kg/m^2 (28-56) in the LAGB group ($p < 0.01$). After LGB, 7/16 patients had postoperative BMI still in the morbid obesity range as opposed to only one in the LRYGB group.