THORACIC SURGERY

01

Our experience of video-assisted thoracoscopic surgery (vats): analysis of 628 cases

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As a result of the development of endoscopic equipment and experience; VATS has been an important choice for the diagnosis and treatment of thoracic diseases. In this study, we evaluated retrospectively the indications, morbidity and mortality of VATS on 628 patients and also discussed the reasons of convertion to thoracotomy among them.

Between November 1993 and December 2002, VATS was performed in 628 patients including 426(67.8%) men, 202(32.2%) women with a median age 43.9 years (ranging from 8 to 84 years). The indications of VATS were following; undiagnosed pleural effusion: 310 (49.4%), pulmonary nodule or mass: 84(13.4%), empyema: 72(11.5%), staging of lung cancer: 63(10%), mediastinal mass or cysts: 22(3.5%), diffuse interstitial lung disease: 21(3.3%), hydatid cyst: 19(3%), bullous lung disease : 18(2.9%) and others (recurrent or persistant pneumothorax, organized hemothorax, pericardial effusion and foreign body): 19(3%). VATS was converted to thoracotomy because of strict adhesions in 61(9.7%) cases, the aim of decortication in 58(9.2%) and hemorrhage as a complication in 2(0.3%). There was no mortality. The morbidity rate was 4.8%(30/628) and prolonged air leak was the most common complication.

VATS can be easily performed with minimal morbidity for the diagnostic and also therapeutic purpose of thoracic diseases. However, it shouldn't be forgetten that the right indication and selection of suitable cases are very important to obtain succesful results for VATS. The ratio of convertion to thoracotomy, depends on not only difficulty to apply this procedure because of adhesions undetected previously on radyographic studies but also experience about VATS.

02

Novel technique for division of pulmonary vessels

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Objective: LigaSure (Valleylab, Tyco Healthcare, Boulder, CO) is a novel instrument with widespread use in general surgery for vessel sealing. It achieves permanent vessel wall fusion by denaturing collagen and elastin. We investigated the efficacy and safety of LigaSure in pulmonary vessels.

Methods: Seven sheep were anesthetized and endotracheally intubated. A right upper lobectomy was performed (5 open, 2 thoracoscopic). Diameters of vessels were measured intraoperatively. In six, the vessels to the right

upper lobe were divided with Liga Sure and in one with silk sutures (open). The artery and vein stumps in the lobectomy specimen were sampled following lung resection (early samples). The animals were euthanized at 7 days and mediastinal stumps were sampled (late samples). Conventional histology was performed.

Results: Median diameter of pulmonary arteries (n=9) divided was 6 mm (3-7) and of veins (n=11) was 4 mm (2-6). No early (during surgery) or late (7 days) disruption was seen in any of the artery or vein stumps divided with LigaSure. Histology of early samples showed thermal injury. Late samples showed necrosis, thrombus formation without inflammation or granulation tissue. There was transition to normal vascular tissue within 5 mm from the Liga Sure divided stumps. The silk-tied vessels showed inflammation and granulation tissue formation at 7 days.

Conclusion: LigaSure achieves perfect sealing in pulmonary vessels less than 7 mm in diameter in sheep, in the early and late postoperative period. Lack of inflammation or granulation tissue is a significant advantage.

04

Thoracoscopy as an alternative approach to pediatric intrathoracic infections

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Aim: Complicated lung infections require surgical intervention, with a relative high risk of postoperative morbidity in children. Thoracoscopic surgery allows excellent visibility in children with potentially less morbidity and approximates the exposure during an open procedure. Our study discusses thoracoscopic treatment of infectious thoracic diseases with illustrative case reports.

Methods: We have treated 15 cases (9 empyemas, 3 postpneumonic abscess, 2 hydatid disease and 1 mediastinal mass) using thoracoscopic approach, during November 2001 – May 2003. There were 10 males and 5 females of age 5 mo – 12 years (average 5.5 y). All patients were evaluated preoperatively by ultrasound and\or CT. All procedures were performed under bilateral lung ventilation and the thorax cavity was routinely insufflated using 5 mmHg CO2. Surgical access was accomplished using two or three reusable 2.8 - 5 mm ports or the 5 mm StepTM trocar assembly. Four cases were treated through a single port.

Results: Simple detachment of the abscess debris and aspiration was all that was needed followed by tube drainage. The chest tubes were removed on an average four days (2-10 d) and the patients were discharged in an average five days. Conversion to open thoracotomy was needed in one case. An additional chest tube had to be placed in another with subcutaneous emphysema. In all cases, chest radiographs except for one with minimal persistent air entrapment, returned to normal.

Conclusion: Thoracoscopic surgery is highly beneficial in the pediatric practice and has the advantage of decreased perioperative pain, less postoperative pulmonary compromise, and comparable or lower cost when compared with open thoracotomy. Hospital stay and duration of chest tube drainage are shorter for thoracoscopic procedures.

05

Video-thoracoscopic approach to primary mediastinal pathologies

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This study was performed to investigate the validity of video-thoracoscopic surgery for the diagnosis and also treatment of primary mediastinal diseases.

From 1994 to 2002, videothoracoscopy was performed in 628 patients of which 22 was regarded as primary mediastinal pathology with radiographic examinations. There were 10 (%45) women and 12 (%55) men with mean age of 44.6 (from 5 to 75 years).

VATS was performed as diagnostic procedure in 15 (%68) cases while for therapeutic complete resection in 7 (%32) cases. Diagnostic videothoracoscopy yielded adequate diagnosis in all of 15 patients. Among them, 5 underwent thoracotomy because of enlarged tumor size, tumor invasion of nearby structures, esophageal diverticule or morgagni hernia. Complete video-thoracoscopic resection was succeeded in 7 patients including 5 various cystic lesions (2 simple pleuropericardial cysts, 1 hydatid cyst, 1 cystic lymphangioma, 1 mature cystic teratoma) and 2 mediastinal tumors (non-invasive thymoma and benign neurogenic tumor). The postoperative drainage period was meanly 1.7 days (ranging from 1 to 4 days) for therapeutic group and 3.1 days (ranging from 1 to 7 days) for diagnostic group. There was no mortality in both of two groups. The postoperative complications occurred in only diagnostic group including 2 prolonged air leaks (%13).

In conclusion, VATS is a safe and effective procedure for the diagnosis of primary mediastinal diseases and the complete resection of encapsulated and noninvasive tumors or cystic lesions. Because it has shorter postoperative period, lies postoperative pain, better cosmetic appearance and lower morbidity and no mortality.

06

Vats in indeterminate pleural effusion

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Objective: VATS is widely used for diagnosis of indeterminate pleural effusions. In this study, we analyzed the diagnostic yield of VATS relevant to the clinical diagnosis.

Methods: Fifty patients underwent VATS due to indeterminate pleural effusion during 2000-2003. Procedure was performed under general anesthesia in 49 and local in 1. Bilateral exploration was done in 2 and unilateral in 48 (right 22, left 26). Age, gender, amount of effusion, suspected clinical diagnosis and histologic diagnosis were analyzed.

Results: The patients were grouped into clinically benign (n=19, 14 male, 5 female) and malignant pleural effusions (n=31, 13 male, 18 female). Median ages were 49 (14-77) and 65 (35-84) respectively. The average amounts of effusions were 500 ± 440 ml and 1350 ± 1025 respectively (p=0.0014). In 23 (%74) of 31 clinically malignant pleural effusion, there was a known primary malignancy elsewhere. In 7 patients mesothelioma was clinically suspected whereas in 1 there was no known primary tumor. Following VATS, the histologic diagnosis was the same as clinical diagnosis in 25 (%81) of 31 patients. In clinically benign effusions, the histologic diagnosis was the same as clinical diagnosis in 16 (%84) patients, with chronic fibrinous pleuritis (n=13) being the most common result. Overall rate of conformity between clinical and histologic diagnosis was 82% (41/50).

Conclusions: The histologic diagnosis obtained using VATS overlaps clinical diagnosis in over 80% of the patients in this series. In patients with known primaries elsewhere, histologic confirmation may be omitted as it does not change the final management.

07

Endobronchial treatment of destructive lung TB

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597 patients with sputum-positive destructive lung tuberculosis were treated by basis antibacterial and endoscopy antibacterial therapy in our hospital. Endocavitar injections of drugs were carried out by means of micro irrigator with external diameter 1.7- 1.8 mm, controlled by electronic-optic transformer. Bronchi TB of lobar and/or segmental bronchus was diagnosed in 74.8% cases. Besides them, the nonspecific endobronchitis with various hard degree and extent were appeared in 91.1% patients. Endoscopy procedures carried out twice a week, about 12-15 procedures from the course. Endocavitar injections of antibacterial drugs were with taking into account the drug susceptibility, and were not more than 2 drugs simultaneously. The infiltrative TB was diagnosed in 71.1% cases, the disseminative TB – 28.9% cases. In 46.3% cases patients were drug resistance from 2-3 drugs. There was a control group from 100 patients with analogous lung TB, with treatment carried out without endoscopy procedures. The cavity healing in the lungs was diagnosed in 94.7% cases in the experimental group, and in 67.3% cases – in control group. The period from the cavity healing in the experimental group was about 1-1.5 months shorter than in the control group. So, the endobronchial endocavitar injections of the antibacterial drugs allowed considerably to rise the effectivity of treatment of destructive lung TB.

08

The role of vats in the treatment of malignant pleural effusions

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Objective: Video-assited thoracic surgery (VATS) which is gaining more place in the treament of malignant pleural effusions (MPE) provide both diagnosis and treatment. This study evaluated the efficiency of VATS in diagnosis and treatment of MPE.

Material and Methods: Between 1996 and 2002 years, 57 cases treated due to MPE in Yedikule Chest Surgery Center were evaluated retrospectively. Thirty-one of the cases were male, and 26 female with a mean age of 55±12 (27-83). Thirty-six cases were treated with tube thoracostomy and pleurodesis, 18 with VATS and pleurodesis, and 3 cases with VATS+pleurectomy. The most common etiology of MPE were lung cancer, malignant mesothelioma, breast cancer, and ovarian cancer.

Results: Eight out of 36 cases treated with tube thoracostomy had recurrence in 30 days. Whilst none of the 18 cases treated with VATS and pleurodesis had recurrence. The drainage time of tube thoracostomy and VATS were 7,3 and 4,5 days respectively, and the difference was statistically significant ($p<0,05$).

Conclusion: VATS enables the physician to take multiple biopsies under direct vision for diagnosis, and also provides rapid desicions about the treatment options. Besides VATS is more succesful than tube thoracoscopy, and it should be the method of choice.

09

Laparoscopic management of hydatid diseases of liver

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We successfully managed five cases of large hepatic hydatid cysts using the laparoscope, with excellent postoperative follow-up results. Two men and three women participated in this study, with patient ages ranging from 13 to 46 year. The duration of the disease ranged from 1 to 4 years All patients had undergone preoperative albendazole fherapy for more than 2 months. After establishing protection of the operative area, a. laparoscopic umbrella shaped trocar was inserted into the cyst fit the most prominent point and the cyst was aspirated with large-bore suction and filled with hypertonic saline solution. Complete evacuation of the cyst contents, including all daugther cysts and laminated membrane, along; with o subtotal excision of the extrahopatic part of the cyst wall and innortion of o drain into the cyst cavity, was accomplished without any apillage into the peritoncal cavity. There no complications during the insertion or the evacuation. In one case bile leakago was observed after 1. postoperative day and the patient underwent ERCP. No radiological recurrence was observed in an Follow-up of 25 months (range 12 to 36 months)

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Laparoscopic splenectomy: analysis of fourty consecutive cases

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Aim: The surgical management of splenic disorders has changed considerably in the past few years. The increased use of laparoscopic approach for general surgical problems has prompted surgeons to investigate feasibility of laparoscopic splenectomy (LS). The aim of this study was to analyse the results of our patients who underwent LS.

Methods: From January 1993 to June 2003, 40 patients (12 male, 28 female) with a mean age of 29.1 (14-35) years underwent LS. The patients were evaluated according to intraoperative blood loss, plateletcount, operative time, hospital stay and conversion rate.

Results: Laparoscopic splenectomy was completed succesfully in 35 patients (87.5%). In five patients (12.5%), laparoscopic surgery was converted to open splenectomy due to bleeding (4 patients) and massive splenomegaly (1 patient). Estimated avarage blood loss was 150 ml 70-400ml). The mean platelet count was 70000 mm3 (17000-194000). The mean operative time was 110 min (60-240min). The mean hospital stay was 2.7 days (2-5 days). The average spleen size and weight was 14 cm (8.5-19 cm) and 192 gr (145-450 gr), respectively. There were 30 patients (75%) with idiopathic thrombocytopenic purpura (ITP), 3 patients (7.5%) with autoimmune haemolytic anemia, 5 patients with haematologic malignancy (12.5%), one patient with Evan's Syndrome (2.5%), one patient with hydatid cyst (2.5%). There were no mortality related with the surgical procedure. No late complications of the operation were recorded.

Conclusion: Laparoscopy is a safe and cost-effective approach and should be strongly considered in patients requiring splenectomy.

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Laparoscopic splenectomy and ligasure

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Aims: Considering the advantages of laparoscopic operations, laparoscopic splenectomy (LS) is a preferrable choice especially for hematologic diseases. Intraoperative bleeding is the main complication and main cause of conversion during LS. We present the advantages of the use of Ligasure for achieving a precise hemostasis and making the LS easier.

Methods: Ligasure (Valleylab, Boulder, Co, USA) is an energy-based equipment which works applying a precise amount of bipolar energy and pressure to the tissue, achieving a permanent seal. We have performed LS using Ligasure for 10 patients (4 females, 6 males, mean age:36 years) between December 2002 and August 2003. We employed a technique with 4 trocars, right semilateral position associated with the entire dissection of the spleen and vessel sealing performed with Ligasure. All patients had ITP.

Results: There were no conversion to open surgery. Mean dimensions of spleens were 99x49 mm (range: 85x36 – 118x60). Intraoperative blood loss was no more than 100 mL in any patients (range: 20-100, mean: 60cc). 2 patients needed blood transfusion during the first postoperative day, but no relaparotomy was necessary. The avarage operative time was 93 min (range:60-155 min), including 1 patient undergoing combined cholecystectomy. There were no complications in the postoperative period. The avarage postoperative stay was 4,3 days (range: 3-7).

Conclusions: LS using Ligasure is a safe and time-sparing procedure. Besides, the intraoperative blood loss is considerably less.

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Laparoscopic splenectomy: eight-year experience

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The laparoscopic access is now considered as the most effective approach to the spleen in a wide majority of indications to splenectomy. Innumerable reports have demonstrated the feasibility of laparoscopic splenectomy even in the most difficult situations. The experience of our group, started in 1995, consists of 55 splenectomies, 8 of which performed by hand-assisted (HALS) technique. The main points of the technique are 1. patient in a lateral position 2. four or, less frequently, three trocars 3. use of harmonic scalpel for the dissection of the spleen an for the section of the vessels of the gastro-splenic ligament 4. use of ENDOGIA for the section of splenic vessels 5. spleen removal in an endocatch through fragmentation . In case of HALS technique a lap-disk is position at the level of the hepigastrium to allow the introduction of the surgeon's left hand.

The average weight of the spleens was about 450 g (range 200-4000), six accessory spleens were also removed. The average operative time was 150 minutes for standard laparoscopy and 135 minutes for HALS splenectomies.

Four patients underwent conversion to laparotomy due to 1. splenic vein injury 2. huge lymphnodes at the splenic hylum 3. gastric fistula from a splenic abscess 4. huge spleen (4 kg). In on case there was a conversion from standard laparoscopy to HALS technique due to an important bleeding in the gastro-splenic ligament. The average intra-operative blood loss was about 300 ml.

Post-operative complications consisted in two cases of bleeding: on of them required reoperation. In one case there was a portal thrombosis successfully treated by anticoagulant therapy. No post-operative mortality.

The average post-operative hospital stay was 4 days (range 2-11). Laparoscopic splenectomy appears to be the "gold standard" technique in the treatment of various splenic affections such as essential thrombocytopenia or lymphomas. The limits of this procedure appear to be essentially the spleen dimensions or local situations such as adhesions to other organs or big lymphnodes. The application of HALS technique can increase the indications and feasibility, compared to standard laparoscopy.

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Surgical audit of first 25 laparoscopic splenectomies

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Aim: To assess the safety and clinical outcome of laparoscopic splenectomy.

Method: All consecutive patients referred for laparoscopic splenectomy to a tertiary centre were included in the audit. Open splenectomy was carried out on those with huge spleen. Patient were positioned at 60 degrees semi-supine. Exploration of upper abdomen was carried out routinely for presence of accessory spleen. Homeostasis of vessels performed by intracorporeal suturing routinely and in some conditions by clips. Spleen put in a bag after emptying of its blood by cutting hilar vein and removed from bag by splitting.

Results: During 18 months 25 laparoscopic splenectomies were performed; 19 ITP, 1 spherocytosis with gall-stone and 5 moderate splenomegaly with hypersplenism. Mean splenic size was 11*5*3.5cm , with the biggest spleen measured at 25 x 9 x 5 cm. Splenic vessels were tied using intra-corporeal suturing (20 cases) or clips (5 cases). There was one case of conversion to open surgery. Two cases of ITP did not respond ideally to splenectomy. In cases of moderate splenomegaly, spleen was divided into 3 parts prior to use of bag. Mean operative time was 70min; and mean length of hospital stay was 3 days. All patients discharged from hospital without any morbidity or mortality.

Conclusion: Laparoscopic splenectomy including moderate splenomegaly is safe, with good patient outcome

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Robotic surgery: one year experience

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Many procedures are today performed by minimally invasive technique (laparoscopy, thoracoscopy, etc.), improving patient quality of life and outcomes. Anyhow laparoscopic technique requires a long learning curve because of the instruments have limited number of degrees of freedom, two-dimensional vision of the operating field, discomfort, fatigue and tremor after a long period.

We started our laparoscopic experience in 1991 performing cholecystectomy and herniorraphy (TAPP technique). Up today we have performed over 6.000 laparoscopic operations (cholecystectomy, appendectomy, colon resection, gastric resection, splenectomy, fundoplication, Heller myotomy, etc.).

From September 2002 we have in our Department the "Da Vinci Surgical System", an advanced robotic device: three-dimensional imaging (3-D) with a stable camera platform, it overcomes the limitation of laparoscopic instruments by endo-wrist technology, the surgeon works in an ergonomic and comfortable operating position. By this device we have performed over 60 operations; cholecystectomy was the starting operation to test and to take confidence with the robotic machine; fundoplicatio and Heller myotomy, colectomy and splenectomy, were the following operations performed.

Robotic surgery is a laparoscopic surgery; the surgeon and trocars dispositions are different, the installation time was initially longer but the median operative time after a few cases was lower and the surgeon operate easier with a comfortable position and optimal view. We think that some technological developments will be able to improve such device. We illustrate our starting experience.

GENERAL SURGERY II - Foregut

15

Prospective clinical assessment of 20 laparoscopic hand sewn upper gastrointestinal anastomosis carried out by a single surgeon

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Aim: To assess the safety and clinical outcome of first 20 cases of upper gastrointestinal (GI) laparoscopic hand sewn anastomosis carried out by a single surgeon.

Methods: Consecutive consenting patients requiring palliative gastrojejunostomy (GJ) and/ or cholecystojejunostomy (CJ) were included in the study. Single layer continuous extra-mucosal anastomosis were carried out using 2-0 Vicryle. Unedited video tapes of the procedures were analysed for surgical errors using human reliability assessment techniques, at a separate laparoscopic centre. Barium meal and abdominal ultrasound were obtained in all patients on 5th postoperative days to check anastomotic integrity and intra-abdominal collections.

Results: Twelve GJs and 8 CJs in 14 patients were carried out. Each operation took on average 66.2 (s.e.m 6.3) minutes (active time). Overall, the total errors (consequential and non-consequential) declined as more cases were performed. Consequential errors requiring corrective action to repair tissue were uncommon (0.5/ case for the series). There were no leaks or collections demonstrated on postoperative tests. All patients were discharged home. The average hospital stay was 7.9 ± 0.9 (s.e.m.) days. One patient died at home on 7th postoperative day due to cardiopulmonary arrest.

Conclusion: Laparoscopic hand sewn upper GI anastomosis is safe and provides good patient outcome.

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Thoracoscopic enucleation of a giant leiomyoma of the esophagus

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Since the introduction of thoracoscopy in the surgical field, many thoracic interventions have been considered feasible via thoracoscopic route. The authors reported a case of thoracoscopic enucleation of a giant esophageal leiomyoma (8.5 cm in diameter) situated along the left side of the midesophagus.

A 46-year-old man who had submitted with the symptoms of dysphagia had undergone thoracoscopy. After opening the pleura, the esophagus was elevated and gently rotated in anti-clockwise direction to reach the left-sided tumor. Esophageal myotomy was extended to the proximal and the distal margin of the tumor for enucleation. The tumor was then bluntly enucleated. Postoperative period was uneventful and the patient was discharged on the eighth postoperative day.

Given the well-known advantages of minimally invasive surgery, we assume that the esophageal leiomyomas can be removed by thoracoscopic approach, even if the tumor is of a big size.

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Laparoscopic resection of gastric lipoma presenting as acute gastrointestinal hemorrhage: a case report

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Gastrointestinal lipomas are rare, benign and slowly growing tumors of the gastrointestinal system that can lead to obstruction, invagination and serious acute upper gastrointestinal bleeding. Here we present a case applied to the emergency unit in our hospital with acute upper gastrointestinal bleeding. We performed laparoscopic tumor excision.

A 71 year old male applied to the emergency room in our hospital with complaints of hematemesis and melena. The physical examination revealed neither abdominal tenderness nor palpable mass, but melena on digital examination. Blood pressure was 110/70 mmHg. Heart beat per minute was 100 and hematocrite value was 27 %. Upper gastrointestinal system revealed a 4x1 cm mass with superficial ulceration in the posterior wall of the stomach. The histopathological examination of the endoscopic punch biopsy showed that it was benign. Abdominal CT revealed a lesion of lipid density that was 3,5-4 cm in size. The patient was operated in elective conditions. Laparoscopic lipoma excision through an anterior gastrotomy was done. Gastrotomy with a 5 cm incision in the antrum of the stomach was done and the mass was exposed. The mass was excised with endoGIA 30 and 60 (Tyco, Autosuture USSC, Connecticut) with clear tissue margins. Anterior gastrotomy was closed with one layer intra-extracorporeal sutures. Methylene blue was given through the nasogastric tube to check any possible leakage. The patient was discharged on the 6th postoperative day without any complications. The histopathological examination of the specimen revealed that it was an intramural lipoma.

Although there is a debate on the management these rarely seen tumors, laparoscopic excision of the gastric lipomas is a safe and effective method.

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Our experience in laparoscopic nissen fundoplication for the treatment of gastroesophageal reflux disease

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Aim: Gastroesophageal reflux disease (GERD) is the most common disease of the esophagus which can be treated either medically or surgically. The aim of the surgical operations performed in this disease is to obtain a new barrier at the lower esophageal sphincter. In this study we wanted to investigate the effectivity of laparoscopic Nissen fundoplication (LNF) in the treatment of gastroesophageal reflux disease (GERD).

Methods: 80 patients who underwent LNF in our department between March 1992 and July 2003 were reviewed retrospectively. There were 46 female (57.5%) and 34 male (42.5%) patients with a mean age of 43 (18-71). Preoperative endoscopy and biopsy was performed to all patients. 24 hours ambulatory esophageal manometry and pH testing was performed in 56 patients (70.0%), and esophagea roentgenographs with barrium was seen in 22 patient (28 %). There were GERD in 76 patients and paraesophageal hernia was seen in four (5%) patients with GERD. All the patients underwent control endoscopy in the third month postoperatively. Also postoperative manometrical examination was done in 20 patients (25%) who also had preoperative manometrical exams.

Results: Esophagitis was seen in all the patients with preoperative endoscopy. The mean lower esophageal sphincter pressure was 9.5+/-3mmHg in 56 patients who were performed manometry preoperatively. LNF was completed successfully in 78 patients (97.5%). Conversion to open surgery was seen in 2 (2.5%) patients because of paraesophageal hernias and bleeding. There were no mortality. Complications were seen in 6 (7.5%) patients. The mean operation time was 125 minutes (80-205 min). The mean hospital stay was 2 days (1-10 days). Follow-up could be performed in 70 (87.5%) patients. The mean follow-up time was 48 months (16-110 months). There were no necessarity for a second operation. Postoperative mean lower esophageal sphincter pressure was 15+/-3mmHg and it was significantly higher.

Conclusions: LNF in the treatment of GERD is a safe procedure with low morbidity and mortality rates and can be performed alternatively to a long term medical treatment.

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Laparoscopic treatment of mesenteric cysts

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Aim: Mesenteric cysts are rare intraabdominal tumors. The aim of this study is to describe laparoscopic treatment options for mesenteric cysts.

Methods: We review the diagnosis, laparoscopic management, patients outcome and follow-up in four cases of mesenteric cyst that presented to Istanbul Medical Faculty from 1999 to 2003.

Results: We made four laparoscopic operations for the treatment of mesenteric cysts, during the last four years. All of the patients presented non-specific abdominal symptoms such as constipation, abdominal discomfort and anorexia. Preoperative evaluation to differantiate from malignancy is made by abdominal ultrasound and computed tomography. The procedure was completed laparoscopically using three trocars in 4 patients. In one patient retroperitoneal resection was performed. There were no intraoperative or postoperative complications. Operative time was between 50 to 60 minutes. Follow-up ranged from 6 to 36 months, there were no recurrences.

Conclusion: The surgical treatment of mesenteric cysts should be done by laparoscopy nowadays, which offers significant advantages in respect of reduced morbidity and hospital stay. In appropriate cases which cyst arises from mesenterium of the colon, laparoscopy should be applied via retroperitoneal approach.

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Six years experience in pediatric minimal invasive surgical practice

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Aim: Videoendoscopic surgery is now the increasingly preferred operative technique for innumerous disorders in children. The development of wide array of instruments available, of various diameters and lengths, have enabled minimally invasive surgical practice suitable for use in a child of any size. Our clinical experience concerning diagnostic, video-endoscopic and video-assisted surgery will be discussed in the present paper.

Methods: A total of 316 minimally invasive procedures were accomplished among 288 cases (193 male, 95 female) with an average age of 3.7 y (5 days – 16 y) between June 1997 and September 2003. Approximately 85% of the operations were performed during the last two years.

Results: Diagnostic procedures concerning acute abdomen, contralateral exploration in inguinal hernias, and search for nonpalpable testis consisted the bulk of our procedures in 212 cases. Laparoscopic intervention was eventually performed in the indicated cases from this group. We performed a total of 105 video-endoscopic procedures, of which 18 were thoracoscopic. Video-assisted surgery (thoracoscopic 1) was the choice of approach in an additional eight cases. Conversion to open surgery, including two thoracotomies (intestinal perforation 1, bleeding 1, respiratory 1 and technical difficulties 4) was indicated in seven

cases.

Conclusion: The annual rate of our minimal invasive practice has slightly reached beyond 35% since October 2001, when we received our pediatric endoscopic instruments. Minimal invasive surgery in the pediatric practice is no doubt a promising innovation. It is helpful in minimizing access trauma when compared to the conventional technique, permitting a variety of operative procedures to be performed safely in children.

GENERAL SURGERY III - Gallbladder

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A population-based study on the adverse effects of laparoscopic cholecystectomy and management of common bile duct stones in Qatar the first five years

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Objective: To conduct a population-based study on the incidence of advArse events following Laparoscopic Cholecystectomy and the procedures necessary to manage calculi in the common bile duct. The first five years' experience.

Methods: A retrospective study on all patients posted for Laparoscopic cholecystectomy in the only Acute General Hospital in the State of Qatar.

Results: 2429 patients were posted for Laparoscopic cholecystectomy between 1993 and 1997. Fifty patients (0.2%) had adverse events. The most serious were Trocar injury of the external iliac artery in one patient (0.04%} and the transaction of the common bile duct in 2 patients (0.08%). Other unique adverse events included trocar site abdominal wall bleeding. Bile leakage from the cystic duct and trocar site hernia. Conversion to an Open cholecystectomy was required in 5.4 patients (2.2%).

The commonest methods in managing calculi in the common bile duct were preoperative endoscopic sphincterotomy with stone clearance (50%), cholangiography and flushing of stones with saline (18%) and postoperative endoscopic choledochotomy waS attempted in 5 patients and calculi were removed successfully in one patient. Conversion to open choledochotomy to remove calculi from the CBD was performed ~n 7 patients (14%).

Conclusions: Although Laparoscopic cholecystectomy is associated with some unique adverse events, yet they are rare have not dampened enthusiasm by both surgeons to perform the procedure and patients to undergo it. Endoscopic sphincterotomy with stone clearance has become the most common method in the management of calculi in the common bile duct.

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Reasons for conversion from laparoscopic to open cholecystectomy

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Aims: Laparoscopic cholecystectomy (LC) offers many advantages, despite the fact that a number of patients require conversion to an open procedure. This study states our experiences in LC regarding conversion and the reasons for its performing.

Methods: All 1469 patients undergoing LC between January 1999 and August 2003 were prospectively collected in a database. Operations were performed at Surgical Clinic, Clinical Center Nis (863 patients) and Surgical Department Health Center Zajecar (606 patients). We analysed the rate of conversion and reasons that led from laparoscopic to open cholecystectomy (OC).

Results: The median age of patients was 49 (18-82). Intraoperative conversion into laparatomy occurred in 60 patients (4,08%). Reasons for conversion were as follows: acute cholecystitis in 26 patients (43,33%), chronic cholecystitis (alone or associated with pericholecystitis) in 24

(40 %), iatrogenic injuries in 6 (10%), holedocholithiasis in 2 (3,33%) and "other" indications (3,33%). LC was performed on 316 men, 26 (8,22%) of whom underwent conversion to open procedure. 34 (2,94%) of 1153 women underwent conversion to OC. The conversion rate hasn't changed significantly during the above mentioned time period.

Conclusion: The overall conversion rate of 4,08% seems reasonable and acceptable in comparison to the initial results published by some experienced surgeons from developed countries.

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CBD injury after lap.chole in smc - bah

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With more than 5000 major cases going for surgery every year, laparoscopic surgery was introduced in april 1992 with laparoscopic cholecystectomy. Since then until january 2003, about 1958 laparoscopic cholecystectomy have been done. this is a review of the most serious complications of this procedure which we call it "the surgeon's nightmare". Out of 687 in first five years procedures, we had 6-cases of cbd injury, (0.87%). We categorize them in 5-grades - " i" ilia, 111b, iv. in second 5-years, out of 1271 case,

We had onl y one case of cbd injury. They underwent different management according to the grade of injury. our rate is more or less similar to the other centers. we conclude:

1. using of 30 camera in difficul t case-
2. per-operative cholangiogram to be done if any doubt about duct injury.
3. ercp -the best post -op investiga tion for suspicious duct injury
4. the rate of cbd injury is decreasing in bahrain.

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Morbidity and mortality in laparoscopic cholecystectomy

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From 1994 to 2003,1950 laparoscopic cholecystectomies have been done in our surgical department. Per operative controlled incidents occurred in 104 cases(haemorrhage 50 cases, galblader perforation: 50 cases and total cystic channel section : 4 cases) The rate of conversion is 8%. Adhesions (26),haemorrhage (22 cases and common bile duct injury (4 cases) represent the principal causes of the conversions Our morbidity is 3 %.umbilical sepsis (28%), peritonitis (3 cases), sub phrenic abscess(3 cases). Our mortality is 0.2% (3 cases)

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Laparoscopic cholecystectomy in a patient with situs inversus totalis and previous laparoscopy

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Aim: Situs inversus totalis is a rare congenital defect that can present difficulties during laparoscopic surgery due to the mirror image anatomy. Here in we report a patient with situs inversus totalis and previous laparoscopy and symptomatic cholelithiasis to show the feasibility and safetty of laparoscopic surgery.

Methods-Results: A 42 year old woman with known situs in versus totalis and previous laparoscopy for infertility , presented with left sited abdominal pain and symptoms consistent with biliary colic and cholelithiasis. Abdominal ultrasonography and computerized tomography confirmed the diagnosis of gall stones as well as situs inversus. At surgery, the surgeon and tv camera assistant were standing on the right hand site of the patient and first assistant was on the left. The camera was introduced thorough an old-umbilical incision with open technique. The other 10 mm trocar was placed in the midline left of falcifarum ligament and two 5 mm trocar placed in the left subcostal midclavicular and anterior axillary line respectively. Laparoscopic cholecystectomy was performed successfully except forbeing the mirror image of that done with gallbladder in the normal location. Patient recovered uneventfully.

Conclusion: Laparoscopic surgery is safe and feasible procedure in patients with situs inversus, by surgeon who takes time in clearly demonstrating the surgical anatomy of the patient with its right to left shift.

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Conversion rate in laparoscopic cholecystectomy

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Laparoscpic cholecystectomy (LC) has become the treatment of choice for symptomatic gallstones.But conversion to open cholecystectomy (OC) remains a possibility.

Aim: We aimed in this study to evaluate the conversion rate, reasons for conversion and how to prevent conversions.

Methods: We evaluated the data of 980 patients underwent laparoscopic cholecystectomy at our clinic between May 1993 and June 2003. The data were assessed for indication of the operation, converting rate, reason for converting, complications and mortality rate.

Results: The operation indications were chronic cholecystitis in 923, and acute cholecystitis in 51 of all patients.The other 6 had gallbladder polyps that need surgical treatment.The patients were selected under patients that had no proven contrindications for LC. The laparoscopic procedure converted to open in 24 patients (2.4%). Causes for conversion were most commonly inability to identify the anatomy and suspected bile duct injury. In one case was duodenal perforation the reason. There were no other reasons such as intraperitoneal bleeding, suspected choledocolithiasis or reasons depending on pneumoperitoneum. The unclear anatomy was mostly caused by inflamation due to repeated attacks of cholecystitis.There were no mortalities and the complication rate was low (2%).

Conclusion: Based on our experience we suggest limiting LC in patients with proven contrindications will decrease the conversion rate.

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Factors influencing per coelioscopic main bile duct injury

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Aims: We try to identify factors influencing factors responsible of per coelioscopic main bile duct injury.

Material: During the last ten years, nine per coelioscopic injuries of main bile duct were treated in our department. Tow were of second hand and the others of first hand.(7/1150 coelioscopies = 06%) All were female. the average age was. Five were diagnosed per operatively and treated after conversion (two hepatico jejunostomies with external bile drainage (EBD), two hepatico choledocol anastomosis with EBD, and one T tube external bile drainage). Four were diagnosed post operatively (one jaundice and 03 peritonitis), and treated by laparotomy (tow hepaticojejunostomies and one double hepatico jejunostomies . all five with additional EBD. Two EBD). Lesion was partial in one case. Main bile duct (MBD) was interrupted by clips in tow cases. Total section of the MBD was found in five cases with loss of more than 3cm of the MBD in tow cases. Per operative cholangiografy have not been performed in any of these cases.

Conclusions: Systematic identification of the junction between cystic channel and MBD ovoid confusion between these tow elements and so ovoid lesion of the MBD. Systematic per operative cholangiografy ovoid transformation of partial lesion when doing POC to totl one with or without loss of MBD substance, identify dangerous anatomic varieties of the bile duct tree, diagnose stenos is of the MBD by clips and make possible treatment of lesions in th same time.

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The effects of low and high pneumoperitoneum pressures on blood gases, respiratory and venous system during laparoscopic cholecystectomy

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Aim: Although there are many experimental studies performed on animal models the influence of different pneumoperitoneum pressures on patients blood gases, respiratory, and venous system during laparoscopy is not clear.

Method: Twenty patients were assigned in two groups anesthetised and insufflated with 7 or 14 mmHg CO2 insufflation during laparoscopic cholecystectomy. Respiratory mechanics were continuously monitored, arterial blood gases were analyzed via radial artery catheter, and duplex scanning of left common femoral vein was performed preinsufflation, during pneumoperitoneum, and after desufflation.

Results: CO2 insufflation caused a decrease in blood pH at both 7 mmHg p>0.05) and 14 mmHg pneumoperitoneum (p<0.05). Peak inspiratory pressure increased from 14.2±1.1 to 17.4±1.3 during 14 mmHg (p<0.05) and 11.4±0.6 to 12.6±0.8 during 7 mmHg (p>0.05) pneumoperitoneum both changes were reversible after desufflation (p>0.05). Duplex scan of left femoral vein revealed an increase on diameter 12.3±2.1 millimeters to 13.3±2.2 millimeters (p<0.05), and a decrease in peak blood velocity 14.3±3.4 to 17.9±6.3 centimeters per second (p<0.05) at 14 mmHg (p<0.05). And also an increase in diameter 11.9±2.4 millimeters to 12.3±1.5 millimeters (p<0.05), and a decrease in peak blood velocity 12.8±2.6 to 15.4±5.1 centimeters per second (p<0.05) at 7 mmHg(p<0.05) was revealed; however no statistically significant changes were determined following the desufflation in both groups (p>0.05). Dynamic compliance significantly decreased at both 7 and 14 mmHg (p<0.05).

Conclusion: Respiratory acidosis may occur due to decreased compliance and pneumoperitoneum causes reversible venous stasis especially during high pressures

GENERAL SURGERY IV - Hernia & Miscellaneous

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Laparoscopic inguinal hernia repair

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Inguinal hernia repair is the most frequently performed operation in general surgery. The standard method for inguinal repair had changed little over a hundred years until the introduction of synthetic mesh, This mesh can bo placed by either using an open approach or by using a minimal accese laparoscopic technique, 52 laparoscopic hernia repair operations was rewiewed retrospectively which performed between June 2000-June 2003 at SSK Istanbul Training Hospital) 43 male and 9 female, mean age was 32 (21-58). Totally extraperitoneal prosthetic (TEPP) repair operations was performed to 43 patients and transabdominal preperitoneal (TAW) repair was performed to 9 patients. Mean Operation time was 68 minutes (30-125 min) for TEFP operations and 82 minutes (40-140 rain) for TAPP operations. There were no conversions to open preccdure. Length of stay was 2 clays (1-3 days), At a mean follow-up ot 21 months there were no recurrence. We perform these two operation types safety and with the classic benefits of laparoscopic surgery.

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Recent results of laparoscopic ventral hernia management

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OBJECTİVE: After the first laparoscopic cholecystectomy in 1987, laparoscopic investments improved very fast and began to be used in ventral hernia is well. Ventral hernia patients treated with laparoscopic surgery were examined prospectively in this study.

MATERIAL-METHOD: A prospective study took place in Istanbul Medical School General Surgery Department between November 2002 - August 2003. 7 women patients diagnosed ventral hernia and treated with intraperitoneal onlay method.

(IPON) laparoscopy. Sepra mesh placed as a greft in 1 patient, polipropylen greft was placed to 1 patient , ePTFE (dual mesh) was placed to 5 patients. Grefts were prepared at least 3 cm. larger than the defect area. Body mass index (BMI), operation time, length of the hospital stay, greft diameter, postoperative pain and morbidity of patients were examined.

DATA: Mean age of patients was 48 (33-54), BMI of all patients were over 25% and in 57% of the patients it was over 30%. Operation mean time was 105 (90-120) min. Defects area's mean diameter was 6 (4-8) cm. Average time of the hospital stay was 9 (2-34) days. Patiens were scored of postoperative pain from 0 to 10 with visual pain scale. Mean score of pain was detected as 3 (0-10). Postoperative morbidity consists of seroma in 1 patient, subcutaneus hematoma in 1 patient using Warfarin, and brid ileus in 1 patient. The patient with seroma was observed conservatively. Percutaneus drainage was made to the patient with subcutaneus hematoma , and bridotomy was made to the patient with brid ileus.

RESULTS: Patient who underwent laparoscopic surgery have less pain, cosmetic advantage, get back to physical activity earlier, and don't consists of complications due to large incision.These superiorities are developing popularity of laparoscopy, but the need of more expensive tools and equipments than classical methods are limiting the use of laparoscopy. Large clinical controlled series are mandatory to compare laparoscopy with conventional surgery in ventral hernia treatment.

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Laparoscopic repair of a recurrent ventral hernia after unsuccessful laparoscopic repair

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Laparoscopic hernia repair has become a widely accepted technique for ventral and incisional hernias. Learning curve, intraperitoneal onlay mesh fixation method and, the discordance between the prepared mesh and the defect (small mesh and big defect) are the causes of the recurrence.

We herein report the case of a 38-year-old woman who presented with extremely large hernia after unsuccessful laparoscopic repair 2 years ago. Blunt laparoscopic access was performed including two additional ports. Adhesions to the mesh and tacks were gently and sharply dissected. The abdominal wall defect was repaired with Gore-Tex mesh (Dual Mesh, W.L. Gore & Associates, Flagstaff, AZ, USA). Postoperative period was uneventful.

Laparoscopic approach allows for good visualization of distorted tissues associated with gathered peritoneal mesh. Laparoscopic repair of recurrent ventral hernia appears to be safe and is proving to be effective as it decreases pain, complications and hospital stay.

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Laparoscopic repair of giant and complicated ventral hernias: experience from turkish training hospital

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AIM: Ventral hernia is a major problem in general surgical practice. Despite of this fact there are no guidelines on the best surgical management. According to advancement in laparoscopic surgery, laparoscopic approach to ventral hernias has been used increasingly with acceptable results. Aim of this video presentation is to show adhesiolysis and ventral hernia repair by laparoscopic approach and Sepramesh application.

MATERIAL AND METHODS: In 2003, five laparoscopic ventral hernia repairs were performed in our clinic. In one patient additionally laparoscopic cholecystectomy was performed. In all cases intraperitoneal Sepramesh application was done.

RESULTS: All patient were female, median age was 59.4 years (39-74 years), median body mass index was 31.24 kg/m2 (24.2-46.8 kg/m2), median hernia size was 73 cm2 (20-195 cm2), median mesh size 154 cm2 (45-380 cm2), median hospital stay time was 3.6 days (3-4 days) and median operation time was 133 min. (110-180 min.). One patient died due to pul monary emboli under prophylaxis in early ollow up.

DISCUSSION: More recently, laparoscopic technique is the choice in many surgical situations involving individuals who are obese. Laparoscopy allows better visualization and avert large incisions so risk of wound infection and dehiscence decrease. These affects decrease hospital stay time and recovery time. Laparoscopic ventral hernia repair has been proved safe and effective, with reduced hospital stay and recovery time. Also compared to open surgery, laparoscopic ventral hernia repair has decrease complication rates. As a conclusion, laparoscopic ventral hernia repair can be performed safely and also for obese patients under prophylaxis.

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Laparoscopic inguinal hernia repair in girls

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Aim: Laparoscopic hernia repair in girls is a reciprocal modification of the open technique and there is no need for repair of the preperitoneal structures, unlike the adult cases. The procedure, however, deserves

comparative follow-up with regards to different types of repair. We have evaluated the long-term fate of the bulk of inverted hernia sac at the internal inguinal ring by the help of sonographic screening.

Methods: 39 female patients of age 35 days to 7 years (average 3 years) were included in this study. An umbilical 5 mm 0° scope and two 2.8 mm working ports lateral to the rectus muscles at umbilical level were utilized. The laparoscopic procedure involved inversion and suturing of the hernia sac using a single absorbable purse suture, which resulted in a nodule that plugged the internal inguinal ring and resembled a "rosebud". Any unexpected contralateral opening was repaired in the same fashion. The "rosebud" was examined postoperatively at intervals by ultrasound.

Results: Four patients presented with bilateral hernias. A contralateral opening accompanied the presenting unilateral hernia in 13 cases. A total of 56 open internal inguinal rings were repaired. The procedure lasted 40 min in bilateral cases. The dimensions of "rosebud" gradually diminished and disappeared in almost each case by the end of six months. There were three recurrences.

Conclusion: Laparoscopic ligation of the inverted hernia sac is a simple, safe, cheap, and effective method in female inguinal hernia repair. It is an effective method in minimalising the access trauma experienced in the conventional technique.

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Results of laparoscopic colectomy: a 2 years experience

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AIMS: Laparoscopic colectomy has been accepted slowly despite potential advantages because of the perceptions of a steep learning curve and increased operative times and costs. The purpose of this article is to review the outcome of a standardization of all the intraoperative and postoperative processes used in our department for the performance of laparoscopic sigmoid colectomy.

METHODS: A consecutive series of patients requiring laparoscopic sigmoid colectomy from March 1999 through December 2001 at the Istanbul University, Istanbul Medical Faculty, Department of Surgery, was analyzed. Patients requiring sigmoid or rectosigmoid resection for all colonic pathologies were included. Criteria for exclusion from an attempted laparoscopic sigmoid colectomy were body mass index >35 and prior major abdominal surgeries (exclusive of hysterectomy, cholecystectomy, or appendectomy). Data collected included age, gender, indication for surgery, body mass index, operative duration, length of hospital stay, complications, and mortality. Instrumentation for the procedure was standardized. Conversion was performed when a sequential step could not be completed in a reasonable time frame. A standard perioperative care plan was used.

RESULTS: From March 1999 through December 2001, we performed 18 laparoscopic sigmoid colectomies and 2 (10% percent) conversions. Indications for the laparoscopic sigmoid colectomies were diverticular disease (6 patients) and colonic neoplasia (14 patients). The male/female ratio was 14:6, and the mean body mass index was 27.3 +/- 5.6. Mean operative time was 119 +/- 35 minutes. Mean length of stay was 3.9 +/- 1.2 days for completed cases and 6.4 +/- 1.4 days for converted cases. No anastomotic leaks and operative mortality occurred. The overall complication rate was 6.6 percent.

CONCLUSION: The results indicate that a structured approach to laparoscopic sigmoid colectomy provides the surgeon with objective measures of operative progress that limit unduly long operations without increasing conversion rates and that control resource utilization. This approach provides a potential guideline for teaching and mastering laparoscopic sigmoid colectomy, reducing the learning curve, and optimizing results.

GENERAL SURGERY V - Obesity & Endocrine

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Complications of laparoscopic adjustable gastric banding

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Background: Over the past 48 months we have conducted 500 laparoscopic adjustable gastric banding (LASGB) operations. The primary aim of this study was to determine the rate and nature of complications associated with this procedure that necessitated reoperation.Another aim was to evaluate the temporal association between the complications and the learning curve for the operation.

Methods: **A retrospective review of patient's charts of the** first 500 cases of Lagb with a focus on postoperative complications that necessitated reoperation.

Results: Late postoperative complications were band slippage in 18 cases (3.6%), tube disconnection in 11cases(2.2%), band erosion into the stomach in five cases (1%), port site infection in five cases (1%) and aneurysmatic dilatation of the balloon in three cases (0.6%).

All 42 cases (8.5%) required reoperation.Band slippage, tube disconnection and bad erosion were associated with the learning curve,but aneurysmatic dilatation of the balloon and port site infection were not.

Conclusions: Band slippage, tube disconnection and band erosion are preventable LASGB complications. We describe methods to prevent and/or treat those complications.

Keywords: Laparoscopic adjusted gastric banding, complications.

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Laparoscopic bioenteric adjustable gastric banding system in treatment of morbid obesity

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Abstract: The problem of excess weight and morbid obesity in going to change to one the main health problem in industrial societies. There is a strong relation between this excess weight and development of life impairing co morbidities such as hypertension, diabetes type II, atherosclerosis, sleep apnea, osteoarthritis and this is a good reason for need to weight loss therapy over the years. Numerous medical and surgical treatments have been suggested. Although surgery should be considered the last resort to treat morbid obesity, it is also the only treatment. That really works for this condition in the era of minimally invasive surgery; the laparoscopic adjustable banding and the laparoscopic Roux-en-Y gastric bypass appear to offer the next logical evolutionary advance in the field of bariatric surgery. Laparoscopic banding in particular has wide appeal since it demands less time and relative skill compared to the laparoscopic Roux-en-Y gastric bypass.

Outside the united states Lap Band surgery is the most commonly performed operation for severe obesity. Based on latest studies a 40%-60% mean excess weight loss at 3 years is demonstrated by Lap Band approach, mean hospital stay less than 2 days, recovery is rapid and mortality is rare. Besides, knowledge of subtle details and expertise is required to reproduce favorable outcomes of permanent weight reduction and minimal complications. In our clinical experience we have done about 30 cases of laparoscopic BioEnteric adjustable gastric banding since 2002.We have found the procedure safe, effective, technically feasible and reliable procedure

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Laparoscopic insulinoma enucleation (case)

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Hereby, 49 year-old man with the diagnosis of pancreatic insulinoma who underwent laparoscopic enucleation, is presented. The intervention was completed successfully. Patient suffered from postoperative low-volume pancreatic fistula that was self-limited. This was the first laparoscopic enucleation of insulinoma in Turkey. The laparoscopic enucleation procedure is eligible method for superficially located corpus and tail insulinomas.

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Adenomectomie parathyroidienne par abord unilateral sous anesthesie locale. rapport de 64 cases

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Introduction:La cervicotomie exploratrice constitue le traitement classique de l'hyperparathyroidie(HPT). L'abord limité est une alternative possible donnant un taux élevé de guérison et moins de morbidité. Le but dece travail est de rapporter notre expérience dans l'adénomectomie para- thyroidienne par abord unilatréal sous anesthésie locale(A/U-A/L).

Matériel et Méthodes: Du 1/1/1996 au 31/12/2002, 54 femmes et 10 hommes d'âge moyen 55 ans ont été opérés d'adénomectomie parathyroidienne par

A/U-A/L. Les moyens de localisation pré-opératoire étaient : échographie (n=60), scintigraphie au MIBI(n=16) et scintigraphie au Thallium-Technetium Tl -Tc(n=1).Le suivi des malades allait de 1 à 55 mois et comprenait un dosage de la calcémie et de la parathormone.

Résultats: 60 des 64 patients(93,75%) opérés par A/U-A/L étaient guéris. Le temps opératoire variait de 10 à 20mn. Il n'a pas été noté de paralysie récurrentielle ni d'hypoparathyroidie. Tous ces patients avaient un adénome dont la taille et le poids variaient de 0.7 cm à 3.4 cm et de 200mg à 5300mg respectivement. Tous les patients ont quitté le lendemain de l'intervention. 4 patients ont nécessité une réintervention sous anesthésie générale à cause de la persistance d'un taux élevé de Ca et de PTH. Un deuxième adénome controlatéral(n=1) ou une hyperplasie(n=3) non localisés en préopératoire ont ete la cause. Ces 4 patients étaient guéris en postopératoire.

Conclusion: En cas d'HPT, et en respectant les contre-indications, un nodule découvert en préopératoire et qui a les caractéristiques d'un adénome parathyroidien est une indication de choix à l'adénomectomie par A/U-A/L.

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Laparoscopic adrenalectomy in an achondroplasic patient

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AIM: After laparoscopic adrenalectomy (LA) was first described in 1992, with rapid improvements in technology and better surgical skills, LA has become a common procedure for most benign functioning and nonfunctioning adrenal masses. LA is safe and minimally invasive procedure. Aim of this video presentation is to show laparoscopic adrenalectomy in an achondroplasic patient which is the first case as far as we know from the literature.

METHOD: 39 years old, achondroplasic female patient who is 130 cm. height and 58 kg. weight referred to our clinic for complaint of weight gaining. Two years ago she had segmental small intestine resection and took medication nine months for abdominal tuberculosis. Physical examination showed truncal obesity, facial plethora, hypertension and abdominal striae. Laboratory findings revealed that hyperglycemia and hypercortisolism. Diagnosis of hypercortisolism was based on basal serum levels of cortisol, urinary-free cortisol excretion, and the low-dose dexamethasone suppression test. Differential diagnosis between pituitary and adrenal hypercortisolism was established by serum ACTH. Abdominal CT revealed that 3 cm. adrenal mass at right. The final diagnosis is Cushing syndrome. Transabdominal adrenalectomy was performed by the help of ligasure.

RESULTS: Operation time was 213 min. The patient was discharged at the fourth postoperative day. There was no morbidity at early postoperative period.

CONCLUSION: Patients with Cushing syndrome have higher rates of surgical morbidity and mortality because of decreased wound healing and increased risk of postoperative infections. So LA must be the choice of the operation for Chushing syndrome. LA can be difficult for an achondroplasic patient due to decrease operation field but our case showed that there was no difference.

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Laparoscopic adrenalectomy operations

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Since 1992, it has been demonstrated that laparoscopy can used successfully for adrenalectomy, providing certain advantages, over Conventional open surgery. A retrospective review was done of the Cases performed at SSK Istanbul Training Hospital from June i to June 2003 laparoscopic retroperitoneal flank approaches were proposed in patients with a unilateral 0 cm or less, non-malignanti tumors of the adrenal gland. Laparoscopic adrenalectomy (LA) was performed in 10 patients (7 right and 3 left). A retroperitoneal approac in a lateral position was used. Gushing adenomas was present in two patients and non- functioning solitary adenoma was present four patients and Conn's syndrome, with a solitary functioning adenoma, was the diagnosis In four. Operative time for LA was 162 +/- 29 min and was associated with a short length of stay (20 +/-1 days) and minimal intraoperative blood loss (82 +!- 30 ml). There were no conversions to laparotomy and no complication was noted. At a mean follow-up of 18 months, all patients were cured. LA is a sate and operation for patients requiring adrenalectomy.

GENERAL SURGERY VI - Emergency

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Our experience of video-assisted thoracoscopic surgery (vats): analysis of 628 cases

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As a result of the development of endoscopic equipment and experience; VATS has been an important choice for the diagnosis and treatment of thoracic diseases. In this study, we evaluated retrospectively the indications, morbidity and mortality of VATS on 628 patients and also discussed the reasons of convertion to thoracotomy among them.

Between November 1993 and December 2002, VATS was performed in 628 patients including 426(67.8%) men, 202(32.2%) women with a median age 43.9 years (ranging from 8 to 84 years). The indications of VATS were following; undiagnosed pleural effusion: 310 (49.4%), pulmonary nodule or mass: 84(13.4%), empyema: 72(11.5%), staging of lung cancer: 63(10%), mediastinal mass or cysts: 22(3.5%), diffuse interstitial lung disease: 21(3.3%), hydatid cyst: 19(3%), bullous lung disease : 18(2.9%) and others (recurrent or persistant pneumothorax, organized hemothorax, pericardial effusion and foreign body): 19(3%). VATS was converted to thoracotomy because of strict adhesions in 61(9.7%) cases, the aim of decortication in 58(9.2%) and hemorrhage as a complication in 2(0.3%). There was no mortality. The morbidity rate was 4.8%(30/628) and prolonged air leak was the most common complication.

VATS can be easily performed with minimal morbidity for the diagnostic and also therapeutic purpose of thoracic diseases. However, it shouldn't be forgetten that the right indication and selection of suitable cases are very

important to obtain succesful results for VATS. The ratio of convertion to thoracotomy, depends on not only difficulty to apply this procedure because of adhesions undetected previously on radyographic studies but also experience about VATS.

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The role of diagnostic laparoscopy in the evaluation of penetrating left thoracoabdominal trauma

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Aims: It's extremely difficult to determine with physical examination and conventional diagnostic tests whether there is a diaphragmatic injury in the penetrating left thoracoabdominal trauma or not. The aim of this prospective study to determine the incidence and treatment of diaphragmatic injury with laparoscopy in the penetrating left thoracoabdominal trauma.

Methods: Over a 28-month period, 29 patients with left penetrating thoracoabdominal trauma admitted to Taksim Training and Research Hospital. Hemodinamically stable 19 patients without any indication for immediate surgery were included to study. All of the patients were men with average age of 26.7 years (range17-48). Stab wounds were responsible for all of the patients. Five patients (%26.3) had left hemo and/or pneomothorax. Within first 24 hours, all of the patients underwent diagnostic laparoscopy to determine the presence and treatment of diaphragmatic

injury.

Results: Seven patients (%36.8) were found to have a diaphragmatic injury and 6 of them (%85.7) underwent successful laparoscopic repair. The procedure failed in one (%14.2) patients because of loss of pneumoperitoneum through the intercostal drain. Three of 5 patients (%60) with hemopneumothorax were found to have diaphragmatic injury while 4 of 14 patients (%28.5) without hemopneumothorax were found to have diafragmatic injury. One patient (%14.2) had additional grade 1 injury of spleen. There were no deaths or postoperative complications. All patients were discharged uneventfully.

Conclusion: In hemodynamically stable patients with penetrating left thoracoabdominal trauma, laparoscopy can be used as a safe, minimally invasive, and extremely useful technique to facilitate the diagnosis and repair of diaphragmatic injuries.

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Laparoscopic evaluation of abdomen after penetrating stab wound in patient with selective management protocol

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Aim: The current modern management of penetrating abdominal trauma were decreased unneccessary laparotomy by using selective nonoperative management protocols. The necessity of mandatory laparotomy as a standard procedure in the management of abdominal stab wounds is controversial. Diagnostic laparoscopy (DL) may have a potential role in case of lowering of unneccessary laparotomies and detect the missed injuries.

Methods: Data were collected prospectively in 129 patients with penetrating stab wound from January 2000 to April 2003. Main indications for DL were; hemodynamically stable patients with left thoracoabdominal stab wounds, uncertain findings of peritonitis in patients with anterior stab wounds and in the presence of the omental or bowel herniation in selected patients.

Results: DL was performed in thirty eight of the patients (32%). Twenty four of them had thoracoabdominal injuries with 20 patients left and four patients right-sided injuries respectively. The patients with right-sided injuries also were had multipl anterior abdominal stab wounds. Of the remaining 14 patients; five had anterior abdominal injuries and nine had omental herniations with signs of uncertain peritonitis. Because of detecting bile in two patients and injuries of both stomach and diaphragm in one early laparotomies were performed. After exposing stopped omental bleeding, one patient kept on managing selectively. After DL avoiding laparotomy rate was 34 (84.2%).

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Safety of laparoscopic approach for acute cholecystitis

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Aim: Laparoscopic cholecystectomy (LC) has placed open cholecystectomy for the treatment of gallbladder disease. Despite the well-accepted success of LC in chronic cholecystitis (CC), the efficacy of this technique has been subject to some debate in acute cholecystitis (AC) (Group I). This study was designed to evaluate our institution's experience comparing AC and CC (Group II), according to the complications and convertion rates to open surgery.

Methods: From September 1991 to August 2003, records of 1300 patients with LC were analysed. The parameters of age, gender, early and late complication rates, and conversion rates from LC to open cholecystectomy were compared in patients with acute and chronic cholecystitis.

Results: During the study period, laparoscopic cholcystectomy was performed in 1300 patients, and 180 patients (14.07 %) had acute (Group I) and 1120 patients (86.9%) had chronic (Group II) symptomatic cholecystitis. The conversion rate was 4.4% (8/180) in Group I, 3.03% (34/1120) in Group II, respectively. The complication rates were not significantly different in both groups (5.6 % in Group I, 5.1 % in Group II). Difficulty in dissection around the Callot Triangle and obscure anatomy were the main reason for the conversion to conventional surgery. Mortality rate was 1.2% and 0.01% in group I and II, respectively.

Conclusion: LC appears to be a reliable, safe and effective treatment modality for acute and chronic symptomatic cholecystitis. The surgical approach should be performed carefully because of the spectrum of potential hazards of laparoscopic procedure. Conversion and complication rates were similar in both acute and chronic cholecytitis groups and improved as surgeons gained experience.

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Laparoscopic treatment of acute appendicitis

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Aim: Appendectomy is one of the most frequently performed surgical procedure in general surgery. Laparoscopic surgery has been proposed to have diagnostic and therapeutic advantages over conventional surgery. We designed this study to evaulate the our results of laparoscopic appendectomy (LA) operations.

Methods: From August 2002 to July 2003 LA was performed on 90 consecutive patients at our institution. In a retrospective study the charts of 90 patients were reviewed in terms of the operative time, length of hospital stay, intraoperative findings and postoperative complications.

Results: There were 54 male (60%) and 36 female patients (40%) with the mean age of 32 (ranges 16-68) in the study group. All the procedures were performed with three ports under 10 or 14 mmHg pressure. The mean operative time for LA was 45 min. (25-90 min). The mean hospital stay was 14 hours (6h-3 days). Totally four

(4.4%) complications occured; in one patient as mechanical obstruction, in two patients as appendiceal stump abscesses, and in one patient as subhepatic abscess. Suction drainage was applied in 3 patients(3.3%). The rate of negative laparoscopic exploration was 11,1%. Only two (2.2%) conversion to an open procedure was practiced; nonvisualization because of regional inflamation 1(1.1%) and regionalinflamation 1(1.1%).

Conclusion: The laparoscopic treatment of acute apendicitis an a safe method, which can be used in suited patients with low morbidity and mortality

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Laparoscopic management of complication of meckel's diverticulum

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Abstract: The laparoscopic approach became recently valid for many surgical emergencies such peritonitis and bowel obstruction from many reasons. We describe our experience with two patients which explorative laparoscopyled to the diagnosis and treatment of complicated Meckel's diverticulum. One of them with intestinal obstruction and the second with massive gastrointestinal bleeding. Although 99mTc pertechnetate scintigraphy is a sensitive and specific test for Meckel's diverticulum, in adults, the scan contributes little to surgical decision making and often did not change the need for surgical intervention. We think explorative laparoscopy is safe and efficient tool for diagnosis and treatment of complicated Meckel' sdiverticulum and the practice of this procedure should be recommended.

POSTER ABSTRACTS

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The relation between histological finding of the gallbladder and surgical difficulty in Mirizzi's syndrome

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BACKGROUND: Mirizzi Syndrome is a rare biliary pathology caused by compression of the stone in the cystic duct or neck of the gallbladder. It is characterized by narrowing of the common hepatic duct due to mechanical compression or inflammation. This study aimed to assess the degree of histological inflammation of the resected gallbladder in patients with Mirizzi's Syndrom and its effect on surgical difficulties.

METHODS: Between January 1992 and December 2002, a total of 11(8 females and 3 males) patients with Mirizzi's Syndrom who were treated at the 1st Department of Surgery of SSK Vakif Gureba Training Hospital, were retrospectively evaluated. Histological evaluation was classified as acute and chronic findings. Each histological finding was further classified into four stages by degree of inflammation(none, slight, moderate, severe). The difficulties related to the surgical procedure were graded in 5 categories.(the time required for the dissection of adhesion, anatomical variation, gallbladder wall thickness etc.)

RESULTS: The mean age was 57.7 years. In 5 of the patients laparoscopic cholecystectomy was attempted (2 of them completed laparoscopically), while open cholecsytectomy was performed in 6. Where as Mirizzi type II was diagnosed in 7 of the cases, 4 of them had Mirizzi type I. Histological evaluation revealed acute inflammation in 3 cases, chronic inflammation in 2 cases and both acute and chronic inflamatory finding in 6 cases. Degree of inflammation were mild in 1, moderate in 5 and severe in 3 cases. While Mirizzi type I cases exhibited acute inflammation predominantly, the Mirizzi type II cases revealed chronic inflammation predominantly. Chronic inflammation was more related to the difficulties during the procedure.