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Poster No.: PP 001
[Hepato-Biliary-Pancreatic]

Role of percutaneous cholecystostomy tube in the management of acute calculus cholecystitis, in high risk patients.

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Introduction: Acute cholecystitis is one of the commonest surgical emergencies. Standard of care is an urgent laparoscopic cholecystectomy. In patients presenting with uncontrolled comorbids, a percutaneously placed cholecystostomy tube along with antibiotics can control over 90% of acute infections. Our objective was to evaluate the use of percutaneous cholecystostomy tube in patients presenting with acute calculus cholecystitis but considered unfit for immediate surgery and asses the subsequent course of treatment including interval cholecystectomy and its outcomes.

Method: This was a retrospective chart review of the adult patients who underwent percutaneous cholecystostomy tube placement from Jan 01, 2010 to Dec 31, 2014. Patients were divided into those who had interval cholecystectomy (group-I) and those who had no further treatment (group-II).

Result: Sixty-Five patients met the inclusion criteria. Mean age was 58.5 years (S.D+/-12.6) and 44 patients (67.7%) were males. More than 60% of the patients were in the category of ASA III and IV. 43 patients underwent laparoscopic interval cholecystectomy (group-I) and 22 did not (group-II). Catheter related problems occurred in 4 (19%) patients. Mean operative time was 134.9 minutes (S.D+/-57.8). Five (11.6%) patients were converted to open cholecystectomy, 2 (4.6%) had CBD injury and 7 (16.2%) developed surgical site infection. In group-II after tube removal, 3 (14.2%) patients developed recurrence of symptoms and 18 (85.8%) remained symptom free. Our mean follow up was 19 months (S.D +/– 8).

Conclusion: Percutaneous cholecystostomy is an effective procedure for patients unfit to undergo immediate surgery due to underlying co-morbidity. Laparoscopic cholecystectomy after tube placement becomes technically more challenging as is seen by the increased rates of conversion, bile duct injury and infection. Our results also suggests that the recurrence of symptoms after tube removal are in a low range, therefore percutaneous tube placement can be offered as definitive management to high risk patients.

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Poster No.: PP 002
[Hepato-Biliary-Pancreatic]

PANCREATICOGASTROSTOMY – AN ALTERNATE FOR DEALING WITH PANCREATIC REMNANT AFTER PANCREATICODUODENECTOMY – EXPERIENCE FROM A TERTIARY CARE CENTER OF PAKISTAN

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Introduction: Whipple's pancreaticoduodenectomy (PD) has been refined over the years to be a safe operation with a reported mortality rate of less than 3% in most of the recent series though the morbidity rate still remains high (30-50%). Pancreatic fistula is the single most important cause of mortality following pancreaticoduodenectomy. To manage the pancreatic remnant and prevent these complications, surgeons have used two main anastomotic techniques: pancreaticojejunostomy (PJ) and pancreaticogastrostomy (PG).
Results of recent studies have shown significant differences in the incidence of pancreatic fistulas between these two methods, it has been found that PG is associated with fewer overall complications than PJ. Objective was to asses our experience of PG in Whipple's procedure and its outcomes, performed at Aga Khan University Hospital, Karachi.

Method: Retrospective review of charts was done for the adult patients who underwent Whipple's pancreaticoduodenectomy at Aga Khan University Hospital and had pancreaticogastrostomy as a preferred anastomosis for pancreatic stump, during July 2008 till March 2016.

Result: 42 patients met the inclusion criteria. 27 patients were male. Mean duration of surgery and time to establish oral feeding was 7.14 hours and 7 days, respectively. No patient developed post-operative pancreatic fistula in this series. 13 (31 %) patients developed postoperative morbidity including delayed gastric emptying (4 patients), wound infection (3 patients), haemorrhage from pancreatic stump (5 patients) and choledocho-jejunostomy leak (1 patient). Our mortality rate is reported to be 11.9 %. Ampulla was the most common site of carcinoma (36.4%), followed by pancreatic-head (25%) and distal-CBD (18.2%). Excpet for 1 borderline tumor, all resected specimens had tumor free margins.

Conclusion: Pancreaticogastrostomy seems to be an easier anastomosis to perform and is considered to be safer because of its better profile in reducing post-operative complications especially pancreatic fistula.

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Poster No.: PP 003
[Hepato-Biliary-Pancreatic]

Trends in surgical management for Acute Cholecystitis - 14 yeasr experience from a tertiary care hospital of a developing country

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Introduction: Surgical management of patients suffering from acute cholecysitis includes early cholecystectomy. Compared to elective surgery, laparoscopic-cholecystectomy is much more challenging in acute cholecystitis due to adhesions, inflammation & distortion of the anatomy, with increased risk of bile duct injuries (up to 5.5 %). However, with experience & exposure of laparoscopic surgery, risk of iatrogenic injuries has reduced. Our aim was to asses and compare the trends in surgical management for acute cholecystitis at Aga Khan University Hospital over a period of 14 years.

Method: A retrospective study is performed by reviewing the medical records of all adult patients who underwent Cholecystectomy for acute cholecystitis, at the Department of Surgery of Aga Khan University Hospital, Karachi from January 2001 to December 2014. Patients were divided in to, group-I (2001-2007) and group-II (2008-2014).

Result: A total of 1153 patients met inclusion criteria. Mean age was 49.3 years and 45% of patients were male. Patients were classified into Grade I (60.7%), Grade II (32.3%) and Grade III (7%) according to Tokyo guidelines.
Early cholecystectomy was performed significantly more frequently in Group II (Group-I=63.1% vs. Group-II=84.4% *p*=0.00), with lesser conversion rates conversion rate (Group-I=22.3% vs. Group-II=12.3% *p*=0.000), and significantly reduced duration of laparoscopic surgery (Group-I=111.0 minutes vs. Group-II=91.0 minutes, *p*=0.00). A significant drop was noticed in the use of percutaneous cholecystostomy tube placement (Group-I=8.4% vs. Group-II=5.9% *p*=0.00). However on comparing severe acute cholecystitis only, no difference was observed in ASA-levels, type or time of surgery, postoperative-morbidity or hospital stay.

Conclusion: This is the largest series from Pakistan specifically addressing the experience of acute cholecystitis. It is evident from the figures that our experience in laparoscopic cholecystectomies for acute cholecystitis has increased tremendously in last decade, which has resulted in significantly improved outcomes. However outcomes in severe acute cholecystitis are not dependent merely on surgical skills and experience.

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Poster No.: PP 004
[Hepato-Biliary-Pancreatic]

Still Favoring Minimally Invasive Central Pancreatectomy for Benign or Borderline Malignant Tumor near the Neck of the Pancreas?

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Introduction: The higher morbidity and technical challenges associated with CP are the reasons that surgeons are reluctant to practice it. In contrast, spleen-preserving distal pancreatectomy is easier to perform with better outcomes and is equivalent to CP in that it conserves both splenic vessels and spleen.
To compare the outcomes of patients who underwent Minimally invasive – Central Pancreatectomy (MI-CP) and Minimally invasive–Spleen Preserving–Subtotal Distal Pancreatectomy (MI-SP-STDP) for benign and borderline malignant lesions near the neck of the pancreas.

Method: From January 2007 to December 2014, all cases of MI-SP-STDP and MI-CP performed for benign and borderline malignant pancreatic tumors were included. All surgeries were either laparoscopic or robotic. Median follow-up and risk of postoperative new-onset Diabetes was estimated by using Kaplan–Meier curves.

Result: MI-SPDP was performed in 25 and MI-CP in 10 patients. No differences in terms of age, sex, weight or BMI >23, intraoperative bleeding or perioperative blood transfusion were found. A significantly longer operative time (MI-SP-STDP = 265 + 112 minutes vs. MI-CP = 437 + 65.6, $p<0.001$) more frequent grade II complications ($p=0.027$) and longer hospital stay (MI-SP-STDP, 9.4 + 5.3 days vs. MI-CP, 19.3 + 12.8, $p=0.003$) was observed in MI-CP group. A total of 11 patients developed DM postoperatively, but there were no significant differences between the two groups ($p=0.620$). In addition, no statistical differences was observed in the time-dependent risk of new onset DM (MI-CP vs. MI-SP-STDP: 43.2 months [95% CI: 22.6–63.8] vs. 65.5 months [95% CI: 47.5–83.5], $p=0.811$). MI-CP group had 3774 USD, significantly more costly postoperative course.

Conclusion: Laparoscopic MI-SP-STDP showed significantly shorter operative time, lower frequency of POPF, shorter hospital stay, subsequent lower cost, and no negative long-term effects on endocrine pancreatic function or nutritional parameters. It may be a better choice for borderline malignant and benign lesions of the pancreatic body and neck

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Poster No.: PP 005
[Hepato-Biliary-Pancreatic]

SIMPLIFYING PANCREATIC RECONSTRUCTION IN LAPAROSCOPIC PANCREATICODUODENECTOMY – MODIFIED BINDING PANCREATICOGASTROSTOMY

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Introduction: Laparoscopic pancreaticoenteric anastomosis is one of the technically challenging steps of total laparoscopic pancreaticoduodenectomy (TLPD). Binding pancreaticogastrostomy (PG) using two layers of purse string sutures has been described as a safe and technically simpler alternative to pancreaticojejunal anastomosis in open pancreaticoduodenectomy. However, the feasibility of laparoscopic binding PG has not been reported.

Method: The essential steps of modified laparoscopic binding PG include mobilization of the pancreatic stump for a distance of 4cm, a posterior gastrotomy to accommodate pancreatic stump, an anterior gastrotomy of approximately 5cm and placement of single layer full thickness purse string around the posterior gastrotomy. After the pancreatic stump had been pulled into the gastric lumen, the purse string suture was tied to complete binding PG. The anterior gastrotomy was used to perform gastrojejunostomy.

Result: Fourteen patients with suspected periampullary cancer underwent TLPD with modified binding PG. The majority (8/14) had soft pancreas with an undilated pancreatic duct of diameter 3-4mm. The median (range) time taken for laparoscopic binding PG was 30 (25-50) minutes. Postoperative morbidity includes Grade A pancreatic fistula (n=2), Grade B delayed gastric emptying (n=2), Intraluminal post-pancreatectomy hemorrhage (n=3). The final histopathological diagnosis includes inflammatory bile duct stricture (n=1), lower end cholangiocarcinoma (n=7), ampullary adenocarcinoma (n=5) and Duodenal adenocarcinoma (n=1).

Conclusion: The results of this limited case series show that laparoscopic modified binding PG is a feasible technique for pancreatic reconstruction in TLPD. However, the safety and effectiveness of laparoscopic modified binding PG need to be validated in a larger prospective series.

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Poster No.: PP 006
[Hepato-Biliary-Pancreatic]

Surgical outcome of laparoscopic liver resection in developing country

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Introduction: The need of liver surgery in Mongolia is vast; subsequently Hepato Cellular Carcinoma (HCC) incidence in Mongolia is six times greater than world average and representing 44.2% of all new cancer in Mongolia. The early HCC's or small sized liver cancers are relatively rare and that influence for selection criteria of laparoscopic surgery in our center.

Method: From September 2009 to June 2014 there were malignant and benign total sixty cases of laparoscopic liver resection are performed and database of single center study is retrospectively collected and analyzed.

Result: There were 28(46.7%) male and 32(53.3%) female patients.
Laparoscopic wedge resection was n=29, laparoscopic left lateral sectionectomy was n=29, laparoscopic anatomical segmentectomy III was n=1 and laparoscopic left hepatectomy was n=1. The mean age of patients was 59 (range 29-78). There were 51 patients with hepatocellular carcinoma (HCC), among them 22 patients had liver cirrhosis (Child-Pugh A, n=18, Child-Pugh B, n=4), Hepatitis "C" virus was n=26, hepatitis "B" virus was n=16, and hepatitis B and C viral co-infection was n=5. The mean tumor size of the resected tumor was 3.5 cm (range 1–10), the 10 cm sized tumor was echinococcus hydatid cyst located in sII/III, half of the tumor was almost extra-hepatic and underwent left lateral sectionectomy. Most of the wedge-resected tumors were superficial and anterio-lateralis positioned (<1.5 cm from the liver surface). The mean operation time was 138 min (range 45-390min). The mean blood loss was 140 ml (range 30-2000ml). The mean hospital stay was 8.5 days (range 2-29 days).

Conclusion: The patients with small tumors, located in the left lateral segments or in the anterior-lateral segments of the right liver, laparoscopic resection are feasible and safe in resources limited countries such as Mongolia.

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Poster No.: PP 007
[Hepato-Biliary-Pancreatic]

Combined resection of posterosuperior liver segments: Laparoscopic vs. open approach

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Introduction: Laparoscopic resection of peripheral liver lesions is increasingly gaining acceptance. However, isolated hepatic resection of segments 1,8 and 4 A using minimally invasive techniques continues to be demanding procedures and requires more in-depth understanding of liver anatomy. The aim of this study was to share our experience with laparoscopic and open enbloc resection of posterosuperior liver segments.

Method: We analysed some eight patients who underwent open and laparoscopic parenchyma sparing hepatic resections for lesions situated in the liver segments 1,8 and 4A. We evaluated intraoperative and early postoperative outcomes.

Result: In total, five of patients underwent open hepatectomies and the remaining three laparoscopic liver resection. In two open operations the liver segment 1 was resected enbloc with segments 8 and 4A sacrifying the middle hepatic vein. In another patient, resection of the liver segment 1 was combined with partial enbloc resections of segments 8 and 4A. The remainders underwent anatomical resection of liver segments 8 and 4A of whom three were operated on laparoscopically. Three patients required intraoperative blood transfusions. One patient in the laparoscopy group developed biliary fistula which was treated using biliary stent. Excluding this patient who stayed 16 days in the ward, the length of hospital stay was 3 and 4 days for patients undergoing laparoscopic resection and ranged 6 to 11 days (median 9) in the open group. While two patients had superficial surgical site infection in the open group, no patient in the laparoscopy group experienced wound related problems.

Conclusion: Our results suggest that enbloc resection of posterosuperior liver segments is safe and feasible using both laparoscopic and open approaches and results in significant parenchymal preservation. Laparoscopic approach may help shorten the hospital stay and avoid wound complications.

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Poster No.: PP 010
[Hepato-Biliary-Pancreatic]

WAYS TO REDUCE THE NUMBER OF POSTOPERATIVE THROMBOEMBOLIC COMPLICATIONS IN PATIENTS WITH ACUTE CALCULOUS CHOLECYSTITIS HIGH RISK

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Introduction:
To maintain the reduction the number of postoperative thromboembolic complications in patients with acute calculous cholecystitis high risks.

Method: The results of treatment of 169 patients at high risk who underwent laparoscopic (n=78) and conventional (n=91) cholecystectomy for acute calculous cholecystitis in an emergency and urgency were included in the materials of the research. Age of patients ranged from 60 to 82 years. Men were 60 (35.5%), women - 109 (64.5%). Clinical, laboratory and instrumental methods of research were done in patients for diagnosis and methods surgical treatment.
For the diagnosis and choice of surgical treatment methods patients underwent

Result: The correction of the hemostatic system was carried out according to the functional capability of the blood agregant system and the somatic status of the patients, that was one of the important fact to reduce the number of postoperative thromboembolic complications in high-risk patients. Hypercoagulable syndrome, identified in the overwhelming number of patients (n=154), required destination of adequate antiplatelet therapy (stugeron, aspirin, trental) from the moment of admission, before discharge, with a gradual reduction in the dose of drugs because of the risk of withdrawal symptoms. It was also effectively applied to moderate hemodilution low molecular weight dextrans (reopoligljukin, reomakrodeks). To correct the coagulant factor of plasma hemostasis lipotropic therapy was carried out. In 69 (40.8%) patients with comorbidities taking into account the part of the cardiovascular system and the risk of the early stages of DIC - syndrome, antiplatelet therapy is conducted in conjunction with heparin and hemodilution, as well as the introduction of native or fresh frozen plasma (n=19).

Conclusion: Correction of hemostasis state in the complex preoperative and postoperative administration in patients with acute calculous cholecystitis high risk, to reduce its hypercoagulable direction and thereby reduce the risk of postoperative thromboembolic complications.

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Poster No.: PP 011
[Hepato-Biliary-Pancreatic]

MINIMALLY INVASIVE SURGERY IN COMPLEX TREATMENT OF COMPLICATED BILIARY PANCREATITIS

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Introduction: Studying the effectiveness of minimally invasive surgery in complicated biliary pancreatitis.

Method: The research was performed in the clinic of surgical diseases №1 Avicenna Tajik State Medical University, City Clinical Hospital ambulance Dushanbe, department of surgical diseases №1 for the period of 2006 to 2016.

The study is based on the analysis of the results of research and surgical treatment of 31 patients with complicated biliary pancreatitis undergoing various stages of implementation of minimally invasive medical interventions disease. Therapeutic puncture-draining interventions were performed in 19 (61.3%) patients. Among patients, undergoing minimally invasive procedures in 12 patients (38.7%) had a secondary biliary pancreatitis, and 19 - the primary. There were performed 63 minimally invasive procedures in 31 patients with complicated recurrent biliary pancreatitis. Along with minimally invasive procedures, 23 of 31 patients were observed to laparotomy operations. In 16 patients open surgery was performed after minimally invasive procedures, and 15-laparotomy operation, on the contrary, preceded by gentle interventions.

Result: Tactics and technique of percutaneous therapeutic intervention in 23 (74.2%) patients had significant differences depending on the stage of recurrent pancreatitis. These "benign" interference normally planned as percutaneous drainage of pseudocysts were met at unformed liquid clusters (n=6), limited (n=9) and unlimited parapancreatic abscess (n=1), acute festering pseudocysts (n=7). Another category were patients 8 (25.8%) with the chronic phase of pancreatitis, have been subjected to the planned catheter drainage of pancreatic pseudocysts, as an alternative to laparotomic operation. After minimally invasive interventions 2 (6.4%) patients have died, and postoperative complications were observed in 3 (9.7%).

Conclusion: Minimally invasive therapeutic interventions have significant advantages in patients with complicated biliary pancreatitis combined with biliary tract lesions, obstructive jaundice and cholangitis.

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Poster No.: PP 012
[Hepato-Biliary-Pancreatic]

THE EFFICIENCY ENDOSCOPIC PROCEDURES IN PATOLOGY OF HEPATOPANCREATOBILIARY REGION

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Avicenna Tajik State Medical University, Tajikistan

Introduction: Studying the effectiveness of endoscopic interventions in benign pathology of hepatopancreatobiliary region.

Method: This work was performed in the clinic of surgical diseases №1 Avicenna Tajik State Medical University, City Clinical Hospital ambulance Dushanbe, department of surgical diseases №1 and the department of general surgery at the Clinical Hospital №5 Dushanbe, Khujand for the period 1990 to 2015. The study is based on the study of endoscopic examination of modern methods of complex results and treatment of 179 patients with pathology of hepatopancreatobiliary region: choledocholithiasis (n=57), papillostenosis (n=34), choledocholithiasis combined with papillostenosis y (n=82), and adenoma, large duodenal papilla (n=6). Mechanical jaundice, occurred in 112 (62.6%) patients, 44 of them were older than 60 years.
In 34 (19.6%) patients with holetsistoholedoholitiasis complicated by obstructive jaundice and cholangitis with nazobiliary papillosphincterotomies endoscopic drainage was performed as the first stage of surgery on the biliary tract in the period from 3 weeks to 2 years.

Result: The acute biliary pancreatitis caused by an obstacle in the area of the large duodenal papilla was an indication for urgent endoscopic papillosphincterotomy in 9 patients. In 33 (18.4%) cases endoscopic papillosphincterotomy was made at the height of jaundice. In 19 (10.6%) patients with of cholangitis, and was completed nazobiliary drainage by the method developed in our clinic. In 31 (17.3%) patients during surgery after the establishment of cicatricial stenosis of major duodenal papilla and terminal part of the common bile duct was performed intraoperative antegrade endoscopic papillosphincterotomy with the endoprosthesis according to the method developed in the clinic. Complications after endoscopic papillosphincterotomy was observed in 12 (6.7%) patients. The efficacy of endoscopic papillosphincterotomy corrective papillostenosis was - 97.2%, choledocholithiasis - 94.2%, and the phenomen of cholangitis - 95.6%.

Conclusion: Endoscopic interventions are the most effective and less traumatic intervention in pathologies hepatopancreatobiliary region.

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Poster No.: PP 013
[Hepato-Biliary-Pancreatic]

Salvage living donor liver transplantation for recurrent hepatocellular carcinoma after prior laparoscopic hepatectomy in a single institute

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Introduction: A salvage living donor liver transplantation (LDLT) for recurrent hepatocellular carcinoma (HCC) strategy that has been shown to be comparable to primary liver transplantation (LT). A previous hepatectomy may increase surgical difficulty by creating intra-abdominal adhesions. Laparoscopic hepatectomy (LH) reduce such technical consequences, but its effect on subsequent LDLT has not been reported. We study the operative results of salvage LDLT after laparoscopic and open hepatectomy (OH).

Method: From January 2010 to December 2014, 43 salvage LDLT using right liver graft for recurrent HCC were performed, 9 following prior LH and 34 following prior OH. Indication for the salvage LDLT was recurrent HCC in all cases. In addition, to select a control group, propensity score matching (PSM) was used at 1:1 ratio with variables of patients characteristics.

Result: Mean durations of the time from skin incision to total hepatectomy were 426 ± 24.6 and 482 ± 58.2 mins in the LH and OH groups, respectively ($p < 0.05$). Median packed RBC transfusions during salvage LDLT were 0 (0 - 18) and 6 (0 - 32) U in the LH and OH groups, respectively ($p < 0.05$). This results were much same as that in PSM study. Mean post-operative length of stay was 19 ± 3.9 and 21 ± 14.7 days in the LH and OH groups, respectively ($p > 0.05$). In-hospital mortality was 2.9% (n=1) only in OH group.

Conclusion: Salvage LDLT after LH for recurrent HCC is advantageous to OH in terms of operative time, blood loss and transfusion requirements. And our study also show comparable outcomes in LH of oncologic results, morbidity and mortality to the OH group. We recommend the use of LH for primary HCC whenever it could be possible prior to LDLT.

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Poster No.: PP 014
[Hepato-Biliary-Pancreatic]

Surgical-outcome analysis of pure laparoscopic resection vs. open liver resection for centrally located tumor : propensity score matching method

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Introduction:

Since the first laparoscopic hepatectomy is reported in the early 1990s, increasing the number of laparoscopic hepatectomy is being performed worldwide.

However, centrally located tumor that means liver segment 4,5,8 is still hesitated to apply the laparoscopic hepatectomy because of technical problem.

The aim of this study was to analyze the surgical outcome of laparoscopic liver resection versus open liver resection for centrally located tumor.

Method: Between May 2013 and February 2015, 10 patients underwent pure laparoscopic liver resection (7 cases of Lap-Right anterior sectionectomy , 3 cases of Lap-Centralbisectionectomy). Case-matched control patients(n=10) who received open liver resection were included for comparison. Patients were matched in terms of original disease , cancer stage , tumor size , location of tumor, and magnitude of resection.
Surgical outcome were compared between groups.

Result: With the laparoscopic group compared with the open resection group, operation time was 330.10 minutes versus 220.45 minutes(p=0.001) ,blood loss was 351ml versus 255ml(p=0.055), hospital stay was 10.51 days versus 13.95 days(p=0.013) , time to diet was 2.31 days versus 3.15 days(p=0.001)

Conclusion: Laparoscopic liver resection is associated with shorter hospital stay and time to diet And has similar results to open resection in terms of blood loss , resection margin
So in this study, we found that laparoscopic liver resection for centrally located tumor can be performed safely with selected patients despite the longer operation time than open surgery

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Poster No.: PP 015
[Hepato-Biliary-Pancreatic]

MINIMALY INVASIVE CORRECTION OF ACUTE BILIARY PANCREATITIS

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Introduction: Determination of the effectiveness of minimally invasive treatment of acute biliary pancreatitis as an integrated approach aimed at improving the results of treatment.

Method: The study materials were the results of treatment of 89 patients with acute biliary pancreatitis. All patients were hospitalized in the surgical department City Clinical Hospital ambulance Dushanbe during the period from 2006 to 2016. Men were 32 (35.9%), women - 57 (64.1%). Edematous form of pancreatitis occurred in 51 (57.3%) patients with pancreatic necrosis in 38 (42.7%). Chronic cholecystitis occurred in 5 (5.6%) patients, acute cholecystitis - in 26 (29.2%) suffered early cholecystectomy - 29 (32.6%), choledocholithiasis occurred in 25 (28.1%) cases, and in 4 (4.5%) patients noted mikroholedoholitiasis who are diagnosed with endoscopic retrograde cholangiopancreatography. Endoscopic papillosphincterotomy performed in 49 (55.0%) cases, holedoholitotraktsies - in 29 (32.6%) patients. For the diagnosis and choice of surgical treatment methods patients underwent clinical, laboratory and instrumental methods of research. All transpapillary intervention culminated by nazobiliaries drainage. Laparoscopic cholecystectomy with decompression of extrahepatic bile ducts (n=23), and debridement and drainage holes Winslow, lesser omentum and abdominal sloping seats made 36 (40.4%) patients, with the presence of inflammatory changes in the gallbladder wall and free fluid in the abdominal cavity.

Result: Applied diagnostic and treatment algorithm is allowed to achieve positive results within 4-5 days after surgery. In 3 (3.4%) cases marked by bleeding from papillotomies wounds papillary and 4 (4.5%) cases had complications of the cardiovascular and respiratory system, which did not require further intervention. Patients who failed to perform minimally invasive intervention (n=9) underwent open surgery. Among them, 2 died (22.2%) patients, and postoperative complications were observed in 3 (33.3%).

Conclusion: Minimally invasive intervention can eliminate etiopathogenic factor of acute biliary pancreatitis with fewer postoperative complications and mortality.

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Poster No.: PP 016
[Hepato-Biliary-Pancreatic]

FEATURES OF HEMOSTASIS AND ITS CORRECTION IN PATIENTS WITH ACUTE CALCULOUS CHOLECYSTITIS HIGH RISK

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Introduction: Explore features of the hemostatic system and conduct its correction in patients with acute calculous cholecystitis high risks.

Method: The study materials were the results of treatment of 169 patients at high risk who underwent laparoscopic (n=78) and conventional (n=91) cholecystectomy for acute calculous cholecystitis in an emergency and urgency. Age of patients ranged from 60 to 82 years. Men were 60 (35.5%), women - 109 (64.5%). For the diagnosis and choice of surgical treatment methods patients underwent clinical, laboratory and instrumental methods of research.

Result: Mainly observed hypercoagulable syndrome and violation of plasma coagulant factor hemostasis. Correction of hemostasis in patients at high risk carried out taking into account the features of regulation aggregations state of the blood system, as well as the physical status of the patients. Hypercoagulable syndrome, identified in the overwhelming number of patients (n=112), required destination of adequate antiplatelet therapy (stugeron, aspirin, trental) from the moment of admission, before discharge, with a gradual reduction in the dose of drugs because of the risk of withdrawal symptoms. Holding moderate hemodilution low molecular weight dextrans (reopoligljukin, reomakrodeks) was also used effectively. Correction factor coagulant plasma hemostasis carried lipotropic therapy. In 35 observations, taking into account comorbidities on the part of the cardiovascular system and the risk of the early stages of the syndrome of disseminated intravascular coagulation, antiplatelet therapy is conducted in conjunction with heparin and hemodilution, as well as the introduction of native or fresh frozen plasma (n=14).

Conclusion: Identify features and correction of haemostasis in a complex preoperative and postoperative administration of the system, in patients with acute calculous cholecystitis high risk, to reduce its hypercoagulable direction and thereby reduce the risk of postoperative thromboembolic complications.

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Poster No.: PP 017
[Hepato-Biliary-Pancreatic]

THE STUDY OF THE STATE OF HEMOSTASIS IN PATIENTS WITH ACUTE CALCULOUS CHOLECYSTITIS HIGH RISK

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Introduction: To study the state of homeostasis in patients with acute calculous cholecystitis high risk.

Method: The study is based on results of clinical survey of 169 high-risk patients who underwent laparoscopic (n=78) and conventional (n=91) cholecystectomy for acute calculous cholecystitis in an emergency and urgency. Age of patients ranged from 60 to 82 years. Men were 60 (35.5%), women - 109 (64.5%). All patients were previously performed the general clinical tests that are necessary for the surgery.

Result: Based on the research of hemostasis at various stages of treatment revealed that in patients with acute calculous cholecystitis, which is shown holding laparoscopic cholecystectomy, initially there are changes that can be described as hypercoagulable syndrome. Indicators of coagulation (prothrombin time, Activated partial thromboplastin time, thrombin time) patients did not differ significantly from that of the comparison group. At the same time, the 112 (66.3%) patients with concomitant pathologies showed significant prolongation of time XIIa - dependent fibrinolysis to 17 minutes, which is indicative of depletion of the fibrinolytic system on a background severity of the underlying disease and age. In 77 (45.6%) cases of plasminogen deficiency in the blood (up 59.4%) were identified. Moreover, it is shown that the lower the level of plasminogen, the more time XIIa - dependent fibrinolysis. Besides, there was a significant increase in the degradation products of fibrinogen in patients with hypofibrinolysis. In some cases (n=51) showed a decrease of protein C below 0.8 but, combined with inhibition of fibrinolysis and deficiency of antithrombini III.

Conclusion: Hemostatic system in patients with acute calculous cholecystitis high risk, which shows the laparoscopic cholecystectomy, is characterized by signs of a hypercoagulable syndrome, probably caused by deficiency of natural anticoagulants, primarily - protein C, and inhibition of the fibrinolytic system.

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Poster No.: PP 018
[Hepato-Biliary-Pancreatic]

Robotic-Assisted liver resection (RALR) yields good short-term outcomes for major liver resection in hepatocellular cancer (HCC) patients

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Introduction: The minor laparoscopic liver resection (LLR) is currently deemed to be a standard practice, whereas the major LLR is still in an exploration. In this study, we investigated the safety and feasibility to perform RALR for the major liver resection among HCC patients.

Method: A total of 65 patients (51+10 yo) diagnosed with HCC underwent RALR between 2015 Jan 1st to 2016 Dec 1st in Tongji hospital, Wuhan, China. Preoperative images include abdominal ultrasound and CT. The five-trocar approach was applied. 57 patients (87.7%) underwent minor liver resection (2 or fewer Couinaud segments), while 8 (12.3%) underwent major liver resection (3 or more Couinaud segments), among which 4 underwent right hepatectomy.

Result: All 65 RALR patients tolerated the procedure well. The median OR time was 252 + 111 min for the minor liver resection vs 347 min + 113 min for the major liver resection. The median ICU stay was 1+0.6 days vs. 2+1.6 days, and the hospital stay was 7+5 days vs 13+14 days for the minor and major liver resection patients, respectively. Postoperative complications include 1 postoperative wound infection (1.5%), 1 bile leak (1.5%), and 1 postoperative intraabdominal bleeding (1.5%), which all occurred in patients who underwent the minor liver resection. The development of pulmonary infection, pleural effusion and blood transfusion requirement are comparable between the minor and major liver resection. All complications were managed conservatively. Final biopsy shows clear margin for all patients. No short-term readmission or mortality was observed.

Conclusion:

Compared with current literature and our own data, RALA is safe and feasible for patients who undergo major liver resection for HCC.

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Poster No.: PP 019
[Hepato-Biliary-Pancreatic]

Totally laparoscopic living donor left hepatectomy for liver transplantation in a child

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Introduction: Minimally invasive surgery has been validated to be a new standard in living donor hepatectomy for adult-to-pediatric transplantation with less morbidity[1]. Laparoscopic donor hepatectomy can reduce the major concerns about pain and morbidity associated with open surgery and a slow return to daily activities of donors[2]. Herein we present one case of totally laparoscopic living donor left hepatectomy including the middle hepatic vein (MHV).

Method: Minimally invasive surgery has been validated to be a new standard in living donor hepatectomy for adult-to-pediatric transplantation with less morbidity[1]. Laparoscopic donor hepatectomy can reduce the major concerns about pain and morbidity associated with open surgery and a slow return to daily activities of donors[2]. Herein we present one case of totally laparoscopic living donor left hepatectomy including the middle hepatic vein (MHV).

Result: Totally laparoscopic living donor left hepatectomy was performed successfully without intraoperative complications and transfusion. The operation time was 300 min, the estimated blood loss was less than 125ml and Graft weight was 314g. Oral intake was resumed on the first postoperative day (POD). On POD 4, CT scan showed no pathological findings. The patient was discharged on POD 8 without complications.

Conclusion: The authors conclude that the laparoscopic living donor left hepatectomy is a safe and feasible procedure, but should it be performed in selected patients with a favorable anatomy.

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Poster No.: PP 020
[Hepato-Biliary-Pancreatic]

Pure laparoscopic right hepatectomy for giant hemangioma using anterior approach

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Introduction: Laparoscopic major hepatectomy remains a challenging procedure. In the case of giant tumors in the right liver, conventional approach (complete mobilization of the right liver before parenchymal transection) could be dangerous during mobilization because of large volume and weight. We present the case of a pure laparoscopic right hepatectomy for a giant hemangioma using an anterior approach.

Method: We achieved the informed consent with this patient and approved by the Ethics Committee of the Asan Medical Center. Giant hemangioma (13 x 11 x 14 cm) was located in right liver. After glissonean approach, Pringle maneuver was performed during the hepatic parenchymal transection. For the transection, the Cavitron Ultrasonic Surgical Aspirator was used. Small hepatic vein branches along the middle hepatic vein and small glissonean pedicles were sealed and divided with a THUNDERBEATTM (Olympus), which is the device with integration of both bipolar and ultrasonic energies delivered simultaneously. iDriveTM Ultra Powered Stapling device (Medtronic) was used for division of right glissonean pedicle and large hepatic veins. Hemangioma was removed through the lower abdominal transverse incision using the endo-bag. This technique has the advantage of avoiding excessive bleeding caused by avulsion of the hepatic vein and caval branches, iatrogenic tumor rupture

Result: By means of the anterior approach, pure laparoscopic right hepatectomy was performed successfully without intraoperative complications and transfusions. The operation time was 202 min, and the estimated blood loss was less than 150 ml. On postoperative day 3, computed tomographic scan showed no pathological findings. The patient was discharged on postoperative day 5 without complications. Laparoscopic approach has good results
because of the view with magnification enabling meticulous hemostasis and the small wounds that give patients less pain

Conclusion: The authors recommend that the laparoscopic anterior approach is safe and feasible for right hepatectomy, even for giant tumors.

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Poster No.: PP 021
[Hepato-Biliary-Pancreatic]

Pure laparoscopic right anterior sectionectomy for hepatocellular carcinoma with great vascular exposure

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Introduction: Laparoscopic hepatectomy is a common procedure that has been reported frequently . However, laparoscopic liver resection of tumors which was located in segments 5 and/or 8 remains a technically difficult procedure because it required two transection planes. And also there were a number of branches of the hepatic vein and small glissonean pedicles compared to other hepatectomies. Here, we present the case of a pure laparoscopic right anterior sectionectomy (RAS) for hepatocellular carcinoma (HCC).

Method: HCC (3 cm × 4 cm) was in segment V. After performing cholecystectomy, anterior glissonean pedicle was isolated by using with Golden-finger™ (Ethicon). Pringle maneuver was done during the hepatic parenchymal transection. For the transection of the hepatic tissue, the Cavitron Ultrasonic Surgical Aspirator (CUSA) was used. Small hepatic vein branches along the middle and right hepatic vein and small glissonean pedicles were sealed and divided with a ENSEAL™ (Ethicon). iDrive™ Ultra Powered Stapling device (Medtronic) was used for division of right anterior and posterior glissonean pedicle separately. Hanging maneuver was performed for transection of remnant the liver parenchyme after complete dividing the graft from both hepatic veins. Anterior section of liver graft was removed through the lower abdominal transverse incision using the endo-bag.

Result:

Totally laparoscopic right anterior hepatectomy for HCC was performed successfully without intraoperative complications and transfusions. The operation time was 300 mins, and the estimated blood loss was less than 200 ml. On postoperative day 5, computed tomographic scan showed no pathological findings. The patient was discharged on postoperative day 7 without any complications.

Conclusion:

Totally laparoscopic RAS was feasible operative procedures in patients with anteriorly located tumor of the liver.

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Poster No.: PP 022
[Hepato-Biliary-Pancreatic]

A PROSPECTIVE EVALUATION OF LAPAROSCOPIC CHOLECYSTECTOMY AS DAY-CASE SURGERY (DCLC) IN QUEEN ELIZABETH HOSPITAL SABAH – A FEASIBILITY STUDY

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Introduction: Malaysia has no published data from any local hospitals offering day-case LC despite the results achieved elsewhere. This study aimed to examine the feasibility of introducing Laparoscopic Cholecystectomy as daycase surgery in our centre.

Method: A prospective observational cohort study was conducted over a period of 12 months. All elective cases of LC that fulfils the inclusion criteria were recruited. Feasibility of DCLC was determined by analysis with Pearson chi-square test of successful completion of LC as daycase, conversion rate and readmission rate. Pearson chi-square test was also employ to analyse factors leading to overnight admission rate (i.e bleeding, bile leak, pain, nausea/vomiting), social-economic and technical factor (number of ports) which may lead to overnight admission. PSQ-18 was used to survey patients satisfaction and later linear regression model was applied to predict patient satisfaction of the technical quality.

Result: 30 patients who met the inclusion criteria were recruited. Female accounted for 63% of the patient and median age was 40 years old. 18 of patient were from within Kota Kinabalu while the remaining from district. Of the 30 patients, 90% had secondary or lower education level. Symptomatic cholelithiasis make up 76% of the patients. Conversion rate was reported to be 10%. The mean operating time for all patients was only 52.3 minutes (SD ±22.71) meanwhile the operating time for successful LC surgery only was 48.3 minutes (SD ±14.57). There were no readmissions for complications nor operative complications during entire course of study. Total of 12 patients had pain & vomiting post-operatively and 1 patient had acute urinary retention. There were no post-operative complications such as bleeding, bile leak or SSI. 83% of the patient was successfully discharge on the same day.

Conclusion: DCLC is a safe, highly successful surgery and it is feasible to be performed in our instituition in Sabah state.

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Poster No.: PP 023
[Hepato-Biliary-Pancreatic]

Single-incision laparoscopic cholecystectomy comparison with conventional laparoscopic cholecystectomy : single center experience

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Introduction:

A single-incision laparoscopic cholecystectomy (SILC) was developed to improve outcomes compared to that of conventional laparoscopic cholecystectomy(CLC). A few potential benefits associated with SILC have been reported by previous studies. The aim of this study was to describe the single center experience with SILC compared to CLC.

Method: Data were gathered from 187 consecutive patients who received SILC between April 2014 and November 2016.
Inclusion criteria in SILC were low BMI(<26 kg/m^2), no previous abdominal surgery and no biliary drainage procedures such as ERCP, PTGBD. Patient clinical characteristics such as body mass index(BMI), age, operative time, postoperative complication, hospital stay etc. were collected.
The SILC group was compared to a group of 400 patients who underwent CLC in the same period.

Result: There was a significant difference between the two groups in comparison of factors such as age (39.4±10.5 years vs 54.3±12.9 years; $p<0.05$) and BMI (23.2±3.4 kg/m^2 vs 25.4±3.6 kg/m^2; $p<0.05$).
For those patients undergoing SILC the median operating time was 45.6 minutes (vs 33.5 minutes ;$p<0.05$). Postoperative complications were found to have no significant differences in the single-port group compared to the conventional group (5 vs 24; $P = 0.06$). No statistically significant differences were found between both groups in length of hospital stay, readmissions and morbidity.

Conclusion: Under the condition that proper patient selection for the procedure has been arranged, SILC has the potential to be a safe technique with a low complication rate compared to CLC.
Further prospective studies are needed to prove the feasibility of SILC.

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Poster No.: PP 024
[Hepato-Biliary-Pancreatic]

Laparoscopic Treatment of Cyst in the Liver : A single center experience and retrospective analysis

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Introduction:

Operation management is still the main modality in the treatment of hepatic cystic disease with symptoms and in differential diagnosis of malignancy. The aim of this retrospective study was to evaluate the reliability and feasibility of the laparoscopic approach in simple hepatic cyst.

Method: Data were collected from 31 patients who received laparoscopic unroofing for hepatic cyst between September 2007 and November 2016 at the Chonbuk National University Hospital. Patient clinical characteristics such as age, gender, cystic size, number of port, postoperative complication, etc. were collected.

Result: The numbers of female and male patients were 26 (83.9%), 5(16.1%), respectively.
The mean age was 58.7 years (range, 43 to 82). The mean length of hospital stay was 8 days (range, 4 to 23).
Preoperative radiologic findings had shown that the maximal size of hepatic cyst was 10.6cm (range, 3 to 20).
The mean number of port incision was 2.7 (range,1 to 4). Three cases (9.6%) were converted to open laparotomy due to intraoperative bleeding in the vessel branch of the cyst. Surgical site infection as a postoperative complication was observed only in 2 cases (6.4%). Recurrence was not seen in any patient.

Conclusion: The laparoscopic management is an easy-to-apply, safe, and effective method to treat hepatic cystic disease and has no recurrence rate in our study.

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Poster No.: PP 025
[Hepato-Biliary-Pancreatic]

Totally Laparoscopic Anatomical Liver Resection for Centrally Located Tumors – A Single Center Experience

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Introduction: Laparoscopic major hepatectomy is a common procedure that has been reported frequently; however, laparoscopic resection of centrally located tumors involving segments 4, 5, and 8 remains a technically difficult procedure because it requires two transection planes and dissection of numerous branches of the hepatic vein and glissonean capsule compared to hemi-hepatectomy. Here, we present seven cases of totally laparoscopic right anterior sectionectomy(Lap-RAS) and three cases of totally laparoscopic central bisectionectomy (Lap-CBS).

Method: Between May 2013 and January 2015, ten totally laparoscopic anatomical resections of centrally located tumors were performed in our institution. The median age of the patients was 54.2(38-72) years and the median ICG-R15 was 10.4 (3.9-17.4). There were eight patients with hepatocellular carcinoma(HCC) and two with metastatic colorectal cancer. All the HCC patients has the liver function impairment on the degree of Child-Pugh score A..

Result: The mean operation time was 330±92.7 min with an estimated blood loss of 325±234.5 mL. Only one patient required transfusion during surgery. Mean post-operative hospital stay was 9.5±3.4day and post-op complication was reported only 1 case that has the fluid collection at the resection margin of the liver. Mean resection margin was 8.5±6.1 mm and tumor size was 2.9±1.9 cm

Conclusion: Totally lap-RAS and lap-CBS are feasible operative procedures in patients with centrally located tumor of the liver and particularly in patients with limited liver function such as those with cirrhosis.

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Poster No.: PP 026
[Hepato-Biliary-Pancreatic]

Long-term outcomes of pediatric living donor liver transplantation using pure laparoscopic donor hepatectomy

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Introduction: There were some papers about the CO2 gas which using it during laparoscopic surgery has adverse effect on survival of graft. Then we want to evaluate the effect of laparoscopic circumstance on the aspect of transplantation surgery.

Method: Between May 2008 and June 2014, there were 27 children age ≤ 17 years who received a liver transplant.
Demographic characteristics , patient survival , rejection episodes , and complications were recorded.
Statistical methods included simple descriptive analysis and Kaplan-Meier method. Statistical significance was defined by $P \leq 0.05$

Result: The mean patient age was 1.6 ± 1.61 and was 11 male (39.3%) and 16 female (57.1%). Mean total bilirubin was 13.8 ± 9.5 and mean INR was 1.44 ± 0.57. Biliary atresia was the most common cause of end-state liver disease and mean PELD score was 14.5 ± 7.3. 24 patients were performed Laparoscopic Left lateral sectionectomy and 3 patients were performed Laparoscopic Left hepatectomy. The most common cause of complication was acute cellular rejection (25.9%). Mean follow-up period was 59.2 months (range 4.2 – 93.1)
There were not reported on In-hospital mortality and all patients were survived until end of follow-up date. (Dec. 2015).

Conclusion: Laparoscopic donor hepatectomy was feasible and safe tool for living-liver transplantation and may provide excellent graft outcomes in children.
The circumstance of laparoscopic surgery has not adverse effect on recipient of living donor liver transplantation.

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Poster No.: PP 027
[Hepato-Biliary-Pancreatic]

Long term outcome and surgical result of Laparoscopic liver resection for HCC(<7cm) compared to open liver resection

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Introduction: Liver resection is potentially curative therapy for Hepatocellular carcinoma(HCC). Laparoscopic liver resection(LLR) is developing and known as safe technique. It is associated with shorter hospital stay, less pain, cosmetic effect and same rates of complication as open surgery. But, limited data about long-term outcomes were published. This study aimed to evaluate the oncologic outcomes and effectiveness of patients underwent LLR comparing with open surgery.

Method: 709 patients underwent liver resection for hepatocellular carcinoma(<7cm) during the period between July 2007 and August 2015 in Asan medical center. The clinical data and follow-up results in both group patients were retrospectively analyzed.

Result: LLR group had 249 patients, and open liver resection(OLR) group had 460 patients. There were no significant difference regarding patient background characteristics, comorbidities or tumor related factors between the both groups. LLR group had shorter hospital stay (7.55 vs 14.38 days, $p<0.01$) and lower postoperative complication. (7.1% vs 23.4%, $p=0.02$)
Overall and disease-free survival rates during the 5 years were also not significantly different between the two groups. The 1-, 3-, and 5-year overall survival rates for the OLR and LLR groups were 95.2, 87.2, and 78.5 % and 98.3, 84.8, and 78.4%, respectively ($P = 0.479$). The 1-, 3- and 5-year disease-free survival rates for the OLR and LLR groups were 79.5, 58.1, and 44.7% and 75.7, 59.3, and 46.5 %, respectively ($P = 0.987$).

Conclusion: Laparoscopic Liver Resection for hepatocellular carcinoma is a safe, feasible and oncologically accepted treatment option with mini-invasive benefits. LLR is worth consideration of standard operative treatment for hepatocellular carcinoma.

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Poster No.: PP 028
[Hepato-Biliary-Pancreatic]

Postoperative Pain Reduction After Additional Intraperitoneal Suction Following Laparoscopic Cholecystectomy : A Prospective Randomized Controlled Study

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Introduction: Postoperative LC pain is an unwanted condition where the relationship between residual intraperitoneal CO2 and pain level has not been clearly proved. There is an explanation about inflammation caused by CO2 leading to pain stimulation, but not much research has been done to study about this. Moreover, pain score given by the patients is used for pain measurement in most studies, which is not quite accurate due to variable individual pain thresholds.

Method: Eligible patients with an indication for LC were randomly assigned preoperatively either to have the conventional CO2 releasing method or an additional 60 seconds of suction after LC. Collected data including demographic data, indication for LC, postoperative pain by visual analog scale at 6,12 and 24 hours, residual intraperitoneal pressure, operative time, intraoperative morphine amount, morphine PCA amount in 24 hours, and postoperative complications. Pain evaluation by PCA amount was designed to get more accurate primary outcomes.

Result: The patients were similarly distributed. The most frequent diagnosis is symptomatic gallstones. The residual intraperitoneal pressure was 4.1±2.1 and 5.7±3.5 mmHg with statistically significant difference. Morphine PCA amount in the suction group was 0.085±0.016mg/kg and in the non-suction group 0.104±0.019 mg/kg, which were not significantly different in both groups. Postoperative pain level at 6, 12 and 24 hours as secondary outcomes showed that suction group seemed to have slightly higher pain score at 6 and 12 hours but at 24 hours postoperative LC, pain in the suction group tended to be a bit lower than in the non-suction group with p-value 0.093 which was not significantly different.

Conclusion: Additional CO2 suction from this study does not reduce postoperative pain. However, with a larger study population, it might help us to consider results in the intervention group better.

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Poster No.: PP 029
[Hepato-Biliary-Pancreatic]

LAPAROSCOPIC VERSUS OPEN LIVER RESECTION FOR SOLITARY HEPATOCELLULAR CARCINOMA LESS THAN 5 CM IN CHILD A CIRRHOTIC PATIENTS: A PROSPECTIVE RANDOMIZED STUDY

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Introduction: Current literature is lacking level 1 evidence for surgical and oncologic outcomes of HCC undergoing laparoscopic versus open hepatectomy. Aim was to compare feasibility, safety, surgical and oncologic efficiency of laparoscopic versus open liver resection in management of solitary small (< 5cm) peripheral HCC in Child A cirrhotic patients.

Method: Patients were randomly assigned to either open liver resection group (OLR: 25 patients) or laparoscopic liver resection group (LRR: 25 patients). All were treated with curative intent aiming at achieving R0 resection using radiofrequency-assisted technique.

Result: LLR group had significantly less operative time (120.32± 21.58 vs 146.80 ± 16.59 min, p < 0.001), significantly shorter duration of hospital stay (2.40 ± 0.58 vs 4.28 ± 0.79 days p< 0.001), but similar overall complications (25 vs 28%, p=0.02). LLR had comparative resection time (66.56±23.80 vs 59.56 ±14.74 min, p=0.218), amount of blood loss (250 vs 230 ml, p = 0.915), transfusion rate (p=1.00), R0 resection rate when compared with OLR. After median follow-up of 34.43 (31.67-38.60) months, LLR achieved same adequate oncological outcome of OLR, no local recurrence and no significant difference in early recurrence and number of de novo lesions (p=00.49). 1-year and 3-year DFS rates 88 % and 59 %, in the LLR comparable to corresponding rates of 84 % and 54 % in OLR (p=00.9).

Conclusion: LLR for solitary small HCC in cirrhotic is superior to the OLR in terms of its shorter operative time and duration of hospital stay and does not compromise the oncological outcomes.

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Poster No.: PP 030
[Hepato-Biliary-Pancreatic]

Approach of hepatectomy priority for radical resection of Bismuth Ⅳ hilar cholangiocarcinoma

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Introduction: Bismuth Ⅳ hilar cholangiocarcinoma is aggressive malignant tumor that difficult to achieve R_0 resection and associated with poor prognosis. This study is to investigate role and advantage of hepatectomy as the preferred approach for radical resection of Bismuth Ⅳhilar cholangiocarcinoma(HCCA).

Method: 11 cases with Bismuth Ⅳ hilar cholangiocarcinoma underwent hepatectomy priority radical resection. (a case study of left hepatectomy) (1) IQQA Surgery simulation system and ICG determine liver function, remnant liver volume and bile duct isolation limit points on both sides; (2) Separate right hepatic artery and portal vein (combined with vascular resection and reconstruction if tumor infiltration), while ligate the left vasculars; (3) Disconnect the liver parenchyma to the front wall of inferior vena cava along the ischemic line and cut left hepatic vein; (4) cut off more than two bile duct in the right liver parenchyma (0.5cm from tumor), remove the left liver, hepatic caudate lobe and the contents of the hepatoduodenal ligament (except for right hepatic artery and portal vein) from top to bottom; both bile duct edges have frozen patholgy; (5) Unite bile duct branches and have anastomosis with jejunum.

Result: All 11 cases had Hepatectomy priority radical resection successfully and no postoperative mortality. One patient had a transient anastomotic leakage, another developed small liver syndrome. Two patients died after 6 months and 19 months of extensive metastasis and intrahepatic metastasis respectively. The remaining are alive by a mean followup of 11.9 months.

Conclusion: (1) assessing the resectability by detecting liver function, remnant liver volume and bile duct isolation limit points preoperation; (2) ensuring the principle of tumor no-touch, reduced tumor implantation metastasis; (3) without excessive separation of tissue surrounding the tumor, resection of whole contents of the hepatoduodenal ligament, reduced difficulty, shortened the time of operation, improve radical resection rate and survival.

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Poster No.: PP 032
[Hepato-Biliary-Pancreatic]

Pure laparoscopic versus open right hepatectomy for hepatocellular carcinoma in patients with cirrhosis: A propensity-score matched analysis

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Introduction: We aimed to describe our experience with pure laparoscopic right hepatectomy (LRH) and to compare it with open right hepatectomy (ORH) among hepatocellular carcinoma (HCC) patients with liver cirrhosis. Laparoscopic liver resection has been reported as a safe and effective approach for the management of liver cancer; however, it has not been evaluated in a large number of HCC patients with liver cirrhosis.

Method: We retrospectively reviewed the medical records of 152 patients who underwent pure LRH (n=37) or ORH (n=115) between June 2008 and July 2015 at Asan Medical Center. We performed 1:1 propensity score (PS) matching between the 2 groups. Subsequently, 33 patients were included in each group.

Result: There were no statistically significant differences in intraoperative blood loss ($p = 0.612$) between both groups. The operative time was longer (median, 297 vs. 176 min; $p < 0.0001$) and the length of postoperative hospital stay was shorter (median, 9.97 vs. 13.94 days; $p \leq 0.0001$) in the laparoscopic group. There were no significant differences in the complications rate, 2-year disease-free survival rate, or 2-year overall survival rate between both groups ($p = 0.05$, $p = 0.645$, and $p = 0.873$, respectively).

Conclusion:

Even in patients with cirrhosis, complication rate was comparable and the length of hospital stay was shorter with pure LRH than with the traditional open approach. The oncological outcomes of HCC were comparable in both groups. Pure LRH for HCC performed in selected patients appears to represent a viable alternative to ORH.

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Poster No.: PP 033
[Hepato-Biliary-Pancreatic]

Totally laparoscopic pancreaticoduodenectomy with intraoperative radiotherapy: new opportunities in minimally invasive surgery.

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Introduction: In recent years, laparoscopic pancreaticoduodenectomy (LPD) has been introduced as an alternative to open pancreaticoduodenectomy. For several years intraoperative radiotherapy (IORT) is an option for traditional open surgery in pancreatic ductal adenocarcinoma (PDAC) combine treatment. We present a new combination of LPD and IORT.

Method: Records 107 patients with PDAC treated in Botkin Hospital between 2013-2016 were reviewed. In 37 cases was used combine treatment with IORT. IORT was performed using Carl Zeiss Intrabeam PRS 500 system. After resection stage, a single dose of 20 Gy IORT boost was delivered using 50-kV x-rays to a depth of 1 mm from the applicator surface. Then was made histological study and electron microscopy of irradiated resection margin.

Result: All of 37 patients with PDAC underwent gross total resection (R0) with lymphadenectomy D2 and IORT. Among them 3 patients underwent LPD with IORT. The median dose of IORT was 20 Gy. At the time of the analysis no one patient had local reccurence. The estimated median survival was 18,7 months for OPD and 19.5 months for LPD. Long-term survival was similar for 1-, 2-, 3-year survival for OPD (87, 44, 28%) and for LPD (100, 67, 33 %), respectively.

Conclusion: Excellent local control for resected PDAC was achieved by using IORT. Effective influence by IORT on pancreatic head bed was confirmed by electron microscopy. New combination of modern PDAC treatment method requires further investigation.

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Poster No.: PP 034
[Hepato-Biliary-Pancreatic]

Laparoscopic-approach radiofrequency ablation with laparoscopic liver resection for hepatocellular carcinoma

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Introduction: Hepatocellular carcinoma (HCC) is the fifth most common solid tumor in the world. A liver resection remains the gold standard for curative treatment of HCC, but perioperative mortality rate of HCC following resection is up to 3%. In recent years, radiofrequency ablation (RFA) has been used to treat small HCC due to the improved overall and disease-free survival. For the treatment of early stage HCC (solitary small HCC of ≤ 2cm), RFA is equivalent to hepatic resection in terms of overall survival.

Method: We reviewed the patient who underwent laparoscopic RFA and liver resection concomitantly.

Result: This 76-year-old female patient was admitted due to bi-lobar liver mass. She was hepatitis B carrier. Liver MRI revealed two liver mass in the segment III (2.3cm in size) and segment VI (1.9cm in size). We underwent laparoscopic liver resection and laparoscopic RFA ablation during operation. After 7 months operation, she has good condition without HCC recurrence.

Conclusion:

In multi-located HCC, we can do liver resection and RFA concomitantly in laparoscopic operation. Laparoscopic approach RFA and liver resection would be necessary if the tumor was situated at the multiple and difficult locations.

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Poster No.: PP 035
[Hepato-Biliary-Pancreatic]

Characteristics and factors associated with adverse events after laparoscopic cholecystectomy in Taiwan: a nationwide study in 2008-2013

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Introduction:

Laparoscopic cholecystectomy was considered as a standard procedure for the treatment of symptomatic gallstones. However, the adverse events after laparoscopic cholecystectomy should not be ignored. The purpose of this study is to report factors associated with adverse events after laparoscopic cholecystectomy.

Method:

Using Taiwan's National Health Insurance Research Database, we identified 104628 adults aged 20 and older who received laparoscopic cholecystectomy in 2008-2013. Prolonged length of hospital stay, increased medical expenditure, and mortality after laparoscopic cholecystectomy were considered as adverse events. We used multivariate logistic regression to calculate adjusted odds ratios and 95% confidence intervals of adverse events after laparoscopic cholecystectomy associated with sociodemographics and medical conditions.

Result: The average of length of hospital stay is 4.83 (±4.50) days. Older age (OR 3.79, 95% CI 3.44-4.17), male (OR 1.31, 95% CI 1.27-1.35), low income (OR 1.58, 95% CI 1.41-1.76), diabetes (OR 1.38, 95% CI 1.32-1.44), hypertension (OR 1.13, 95% CI 1.08-1.18), heart failure (OR 1.66, 95% CI 1.50-1.83), chronic obstructive pulmonary disease (OR 1.19, 95% CI 1.12-1.27), liver cirrhosis (OR 2.43, 95% CI 2.16-2.73), renal dialysis (OR 1.94, 95% CI 1.70-2.21), and anemia (OR1.47, 95% CI 1.367-1.59) were significant factors associated with adverse events after laparoscopic cholecystectomy.

Conclusion:

Older age and liver cirrhosis were important factors associated with adverse events after laparoscopic cholecystectomy in Taiwan. Prevention of postoperative adverse events is needed in these susceptible populations.

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Poster No.: PP 036
[Hepato-Biliary-Pancreatic]

Surgical Outcomes Following Laparoscopic Major Hepatectomy for Various Liver Diseases

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Introduction: Although the number of laparoscopic liver resections has increased, expansion of laparoscopic major hepatic resection remains limited, mainly owing to the technical difficulties for the procedure as compared to open surgery. We describe our experiences with laparoscopic major hepatectomy for various liver diseases.

Method: We retrospectively reviewed the medical records of 192 patients who underwent laparoscopic major hepatectomy between October 2007 and March 2015 at Asan Medical Center, Korea.

Result: The mean age of the patients was 54 ± 11.6 years and their mean body mass index was 23.5 kg/m^2. The most common preoperative diagnosis was hepatocellular carcinoma (n=82, 42.7%) followed by intrahepatic duct stones (n=51, 26.6%). We performed 108 left hepatectomies, 55 right hepatectomies, 18 right posterior sectionectomies, 6 right anterior sectionectomies, 2 central bisectionectomies, and 3 donor right hepatectomies. The conversion rate was 1.6% (3 cases) due to bleeding, bile leakage, and uncontrolled hypercapnea during the operation. The mean operation time was 272 ± 80.2 minutes and the mean estimated blood loss was 300.4 ± 252.2 mL. The mean postoperative hospital stay was 9.8 days. All resection margins were tumor-free in cases of malignant tumors. The morbidity rate was 3.1% (n=6) and included 4case of biliary stricture. There were no deaths.

Conclusion: Laparoscopic major hepatectomy, including donor hepatectomy, is a safe and feasible option for various liver diseases when careful selection criteria are used by a surgeon experienced with the relevant surgical techniques.

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Poster No.: PP 037
[Hepato-Biliary-Pancreatic]

Experiences of Laparoscopic Liver Resection for Liver Tumors in Pediatric Patients

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Introduction: The value of laparoscopic liver resection (LLR) in children is not established. The aim of this study was to evaluate the feasibility and outcome of laparoscopic hepatectomy in pediatric patients with liver tumors.

Method: This was a retrospective study of 18 patients under the age of 18 years old who underwent LLR for liver tumors between January 2008 and July 2016.

Result: The patient group comprised 10 females and 8 males, with a median age of 26 (range 0.3-180) months and a mean body weight of 11.2 (range 3.8-50.3) kg. The diseases of patients were hepatoblastoma (n=9), recurred neuroblastoma (n=1), focal nodular hyperplasia (n=3), biliary atresia (n=1) and liver abscess (n=1). Two patients underwent a major anatomical hepatic resection (right lobectomy and left lobectomy); the others underwent minor hepatic resections (left lateral segmentectomy, subsegmentectomies, and right-sided non-anatomical resections). Two patient required conversion to open procedure because of inadequate free surgical margins for focal nodular hyperplasia and bleeding. Transfusion of p-RBC was performed for 7 patients. Median duration of operation was 230 (range 60-320) minutes and median duration of hospitalization was 7.0 (range 3-22) days. There was no postoperative complication and perioperative mortality.

Conclusion: LLR requires extensive experiences in hepatobiliary and laparoscopic surgery, and a limited number of cases provide insufficient opportunities for pediatric surgeons to master the surgical procedure in pediatric population. LLR, nevertheless, offers many advantages, as widely published. The authors performed laparoscopic hepatectomies for benign and malignant liver tumors with respectability. Laparoscopic hepatectomy, therefore, would be a safe and feasible option for liver tumors in children. Randomized studies will be required in the future to establish LLR as the standard procedure for liver tumor in pediatric patients.

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Poster No.: PP 038
[Hepato-Biliary-Pancreatic]

Minimal invasive surgery for Solid Pseudopapillary Tumor in Children

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Introduction: Solid pseudopapillary tumor (SPT) of the pancreas is rare primary neoplasm of the pancreas with low-grade malignancy. The aim of this study was to evaluate the outcome of minimal invasive surgery (MIS) for SPT in children.

Method: A retrospective review was conducted for patients under the age of 18 years old who had undergone laparoscopic pancreas surgery for pathologically confirmed SPT between January 2006 and December 2015.

Result: 24 patients underwent MIS for SPT. The patient group comprised 20 females and 4 males, with a mean age of 14.7±2.8 months. They underwent laparoscopic distal pancreatectomy [LDP (n=16)], robotic distal pancreatectomy [RDP (n=1)], laparoscopic pancreaticoduodenectomy [LPPPD (n=2)], laparoscopic central pancreatectomy [LCP (n=1)] and laparoscopic enucleation of pancreas [LEP (n=4)]. 88.2% of the LDP performed were spleen-sparing LDP (SSLDP) included 4 cases of splenic vessel sacrificing SSLDP (Warshow technique) and Single port SSLDP. Mean duration of surgery was 229.8±145.5 minutes and one patient was performed transfusion. Perioperative mortality was not developed, but 9 patients were involved postoperative complications included fluid collection (n=1), splenic infarct (n=3), pancreatic fistula (n=4), and wound seroma (n=1). Recurrence of tumor was shown in one patient who underwent LEP due to incomplete resection.

Conclusion: Lately, MIS is being used more and more extensively in pediatric population, and its scope of usage has widened to include pancreas surgery. The prognosis of MIS for SPT was good in pediatric patients. SPT is the most common pancreas tumor in children and malignancy of pancreas is extremely rare in children, therefore pancreatic MIS would be a safe and feasible option for STP in children.

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Poster No.: PP 039
[Hepato-Biliary-Pancreatic]

Laparascopic Bile Duct Cyst Excision and Roux-En-Y Hepaticojejunostomy

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Introduction: Laparascopic Bile Duct Cyst Excision and Roux-En-Y Hepaticojejunostomy is a novel approach in treating bile duct cyst. Here we share our first experience in conducting the procedure

Method: This is a case report of 51 year old lady with diagnosis of Type 1 Choledochal Cyst. She was symptomatic of recurrent right hypochondrium pain. Computed Tomographic scan confirmed Type 1 Choledochal Cyst with the size of 1.9 x 3.1 x 2.3 cm.

Laparascopic excision of bile duct cyst with Roux-En-Y Hepaticojejunostomy was performed . The surgery lasted for 230 mins. 4 ports were used , first transumbilical 12mm camera port and three 5mm ports at epigastrium with right midclavicular line and at right anterior axillary line, both at 1cm below the costal margin. Using ultrasonic dissector, gallbladder was dissected from its bed then followed by the CBD and CHD. Distal CBD was dissected till suprapancreatic region. 5mm Hemolock applied at distal CBD and cut with laparascopic scissors. The CHD was then transected. Small bowel roux loop was created at 20cm from DJ and 30cm from hepaticojejunostomy site using laparascopic stapler 60mm and stapler hole was sutured with absorbable 4-0 suture. Hepaticojejunostomy was performed using absorbable 4-0 sutures, posterior wall was interrupted and anterior wall was continuous technique. Specimen extracted via endobag thru the 12mm transumbilical port. Incision closed with non-absorbable 3-0 sutures.

Result:

Patient was allowed clear fluids immediate post surgery and orally the morning after.Mean pain score was 2 on Day 1 then was 1 from Day 2. She was on single NSAID and was ambulant the next morning. We kept her till Day 5 as this was our first experience and patient staying 450km away.

Conclusion:

Laparascopic Excision of Bile Duct Cyst and Roux-En-Y Hepaticojejunostomy is a novel approach in treating bile duct cyst and satisfying to both patient and surgeon.

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Poster No.: PP 040
[Hepato-Biliary-Pancreatic]

Laparoscopic distal pancreatectomy for invasive ductal carcinoma of the pancreatic body and tail

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Introduction: We have standardized laparoscopic distal pancreatectomy (LDP) with lymph nodes dissection for the patients with invasive ductal carcinoma of the pancreatic body and tail. We present our standardized procedure and report our results.

Method: The patient was placed in lithotomy position with only upper body twisted to the right. After opening bursa omentalis, gastrosplenic ligament was dissected toward the superior polar of the spleen. The serosa on the right crus of diaphragm was incised and the anterior aspect of the cruses were exposed. Lymph nodes around the common hepatic artery were removed, and then the splenic artery was ligated at the root. After the transverse mesocolon was incised around the jejunum origin, the left renal vein and left adrenal vein was exposed. The left and ventral sides of the superior mesenteric artery (SMA) enveloped by nerve fibers were exposed, and then the left side of the superior mesenteric vein was exposed. After tunneling behind the pancreatic neck, the pancreatic neck and splenic vein were divided using linear staplers, respectively. The splenic artery was divided at the root. Lymph nodes on the left side of the celiac trunk were removed and the left side of the celiac ganglion was exposed. Lifting the resected pancreas, retropancreatic tissue including or excluding the left adrenal gland was resected and the spleen was lastly detached.

Result: Between 2012 and 2016, 18 patients underwent LDP with lymph nodes dissection. Out of them, 2 and 15 patients had been treated with neoadjuvant chemotherapy and neoadjuvant chemoradiotherapy, respectively. The mean operative time and blood loss were 354 min and 152 ml, respectively. The median length of postoperative hospital stay was 15.5 days. Postoperative pancreatic fistula occurred in 2 as grade B. In all patients, R0 resection was achieved.

Conclusion: LDP for pancreatic carcinoma can be performed safely and feasibly in selected patients.

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Poster No.: PP 041
[Hepato-Biliary-Pancreatic]

Sofosbuvir + Peg-Interferon + Ribavarin therapy result for a patient with hepatitis C virus related liver cirrhosis and hypersplenism

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Introduction: Here we report a case of Sofosbuvir + Peg-Interferon + Ribavarin therapy result for a patient with hepatitis C virus related liver cirrhosis and hypersplenism. Due to reduced PLT count and WBC elective laparoscopic splenectomy was done prior initiation of antiviral treatment in a middle aged female patient. Laparoscopic splenectomy was with uneventful post-operative course and combined antiviral treatment was started. This is the first reported case in Mongolia to our knowledge.

Method: A 46-year-old Mongolian female with history of liver cirrhosis, marked thrombocytopenia and leukocytopenia was admitted to surgery department. Laparoscopic splenectomy was performed on August 28th 2014. **Surgical technique:** Patient in supine position., 5 trocars were used., 120 degree telescope was used. Anterior approach: after sectioning of Lig.Gastro-coilic, Lig.Spleno-coli, Lig.Gastro-splenic and mobilization of Splenic flexure using an ultrasonic shear, Splenic artery was isolated at upper border of the pancreas and temporarily occluded with Hem-o-lock clip. Splenic hilum dissection with consequent taping on vessel loop. Splenic hilar transection using 60 mm stapler with White Reload. Removal of Hem-o-lock clip from Splenic artery. Hemostasis control and irrigation and aspiration of surgical field with normal saline. A JP drain tube was placed in left upper abdomen. Removal of specimen through Phffanensteil incision. Closure of wounds.

Result: Operative time 320 minutes. Estimated blood loss < 30ml. Hospital stay 5 days. Hematologic parameters were checked at POD 1,3,5,7 and 30 with normalized results.

Conclusion: Laparoscopic splenectomy is feasible and safe approach in patients with hepatitis C virus related liver cirrhosis and hypersplenism. It offers reduced post operative pain, short incision with less abdominal wall damage, shorter hospital stay, better cosmesis and good patient satisfaction. Sofosbuvir + Peg-Interferon + Ribavarin therapy can be started after successful surgery.

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Poster No.: PP 042
[Hepato-Biliary-Pancreatic]

Adult Pancreatic Hemangioma: Case Report and Literature Review

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Introduction: Pancreatic hemangioma is very rare and hardly suspected clinically due to their nonspecific symptoms and diagnostic characteristics. We report an adult pancreatic hemangioma diagnosed on pathological specimen review following laparoscopic distal pancreatectomy with splenectomy for a two cystic mass in the body of the pancreas.

Method: A 49-years-old woman was admitted to our institution because of bowel distention, constipation, and fatigue. Pancreatic cystic lesions were incidentally found on ultrasound when she visited a gynecologist for evaluation of suspected uterus myoma. A computed tomography (CT) scan demonstrated two lesions, first lesion was 2.7x2.3cm sized unilocular cystic tumor and second lesion was 2.4x2.3cm sized multilocular cystic tumor with septation and intramural nodules in the pancreatic body.

Result: We used three trocars of 5mm and two trocars of 12mm. After the insertion of trocars, the entire gastro colic ligament from distal antrum up to the fundus of stomach, including the short gastric vessels, is divided by Ligasure. The splenic artery is identified at the upper border of the body of pancreas, double clipped and divided. The splenorenal, splenophrenic ligaments, superior pole of the spleen and retrogastric vessels are divided. The splenic vein and the body of pancreas divided by Endo-GIA stapler. The resected specimen of pancreas and spleen is placed into a bag then retrieved by pfannenstiel incision. The surgery was successfully finished by laparoscopy without a perioperative complication.

Conclusion: This case of an adult pancreatic hemangioma is the sixteenth reported in literature since 1939. The histological examinations are very important role for pancreatic hemangioma diagnosis. In pediatric cases, they often regress, no surgical removal is advocated other than follow-up. But in adult cases, the risk of sudden hemorrhage, abdominal pain, and possible differential diagnosis with malignant tumors, surgical resection is recommended.

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Poster No.: PP 043
[Hepato-Biliary-Pancreatic]

WAYS TO IMPROVE OUTCOMES FOR ACUTE PANCREATITIS

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Introduction: Improved results of the complex treatment of acute destructive pancreatitis.

Method: Over the past 15 years in a clinic for treatment were 465 patients with various forms of OP. The men were 187 (40.2%), women - 278 (59.8%). The age of patients ranged from 35 to 82 years. The most common cause of acute pancreatitis is gallstones, which were observed in 320 (68.8%), alcohol abuse - in 86 (18.5%), post-traumatic - in 27 (5.8%), idiopathic - 19 (4.1 %) and 13 (2.8%) of patients the cause could not be determined acute pancreatitis. According to an improved clinical classifications of patients with OP were divided into 4 main forms: a mild form - 320 (68.8%); of average weight - 78 (16.8%); severe - 40 (8.6%); very heavy - 27 (5.8%).
For the diagnosis of acute pancreatitis was used clinical and laboratory studies with the definition of the level of serum procalcitonin, ultrasound, computed tomography and videolaparoskopi.

Result: The presence of acute pancreatitis on ultrasound established in 434 (93.3%) cases, while this method has allowed to establish the presence of acute pancreatitis complications in 54% of cases. Diagnostic laparoscopy was performed in 62 observations, in 45 cases it effectively transformed into a therapeutic benefit. Complex conservative treatment was effective in 339 (73.9%) patients.
Various embodiments of surgical procedures were performed in 81 (17.4%) patients and in 45 (9.7%) cases videolaparoscopic interference produced.
Various specific postoperative complications were observed in 32 (25.4%) patients, with 15 (11.9%) deaths.

Conclusion: Application videolaparoscopic and open the classic methods of surgical treatment of necrotic lesions in combination with intensive infusion therapy provides a basis for improving the results of treatment of acute pancreatitis.

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Poster No.: PP 044
[Hepato-Biliary-Pancreatic]

ADVANTAGES OF THE URGENT LAPAROSCOPIC CHOLECISTECTOMY IN THE ELDERLY PATIENTS

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Introduction: To carry out the comparative evaluation of the results of laparoscopic and traditional cholecystectomy in elderly patients.

Method: The evaluation included analysis of 151 patients of elderly and old ages. Of them, 69 (45.7%) patients underwent laparoscopic cholecystectomy and 82 (54.3%) - the traditional cholecystectomy for acute calculous cholecystitis (control group). Men comprised 51 (33.8%), women - 100 (66.2%) aged from 60 to 80 years old. All patients have gone through common clinical tests.

Result: Conversion was observed in 4 (5.8%) cases. The reasons were: marked adhesions (n=1), expressed inflammatory infiltrate around the gallbladder (n=1), expressed scar-sclerotic alteration in the area of the Kahlo triangle (n=1) and laparoscopic video challenges that we could not fix immediately (n=2).
Suboperation complications were observed in 5 (7.2%) patients, including bleeding of the bed bladder (n=2), bile leakage from the bed bladder (n=1) and liver damage during traction of the gall bladder, leading to parenchymal bleeding (n=2). All cases were successfully eliminated through applications of the Tugin's solution (n=3) and plates Tahoe Comb (n=2) to the gallbladder bed and to the liver parenchyma.
In some cases (n=4) in the presence of adhesive processes expressed in the site of neck and inflammatory infiltrates of the gallbladder wall we performed nonstandard variants of laparoscopic cholecystectomy from the bottom using Pribram method.
Postoperation complications were observed in 4 (5.8%) cases, including bile leakage (n = 1), festering trocar wounds (n=2) and hypertensive crisis (n=1).
Comparative analysis of the results showed that the laparoscopic cholecystectomy facilitated the reduction of operation time, fewer postoperation complication and contributed in significant reduction of postoperation mortality and reduced hospital stay 2 times.

Conclusion: Thus under strict pre-operation diagnosis and proper selection of patients, laparoscopic cholecystectomy in older age groups may be the method of choice.

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Poster No.: PP 045
[Hepato-Biliary-Pancreatic]

LAPAROSCOPIC POSSIBILITY OF CORRECTION IN CHOLELITHIASIS " DIFFICULT " GALLBLADDER IN PATIENTS AT HIGH RISK

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Introduction: Rate correction possibilities laparoscopic gallstone disease in "difficult" the gallbladder in patients with high risk.

Method: In materials research included 67 patients with "difficult" gall bladder, operated in the last 6 years. Men were 23 (34.3%), women - 44 (65.7%). All patients were performed clinical tests.

Result: Availability vistsero-visceral adhesions occurred in 31 (46.3%) cases. Partially intraparenchymal located bladder was identified in 44 (65.7%) cases, and completely intraparenchymal location - in 6 (8.9%) cases. Atypical location of the gallbladder, in which it was located in a 5-6-7 liver segments identified in 5 (7.5%) cases.
In 12 (19%) cases, the separation of adhesions and the allocation of the bladder neck was suspected presence Mirrizi syndrome, which was confirmed by intraoperative cholangiography. Mirrizi Syndrome type I - was diagnosed in 9 (75%) patients, Mirrizi type II - 3 (25%) cases. The syndrome type I Mirrizi us laparoscopic cholecystectomy, and although there were significant morphological changes of tissues in the area of surgery, due to intraoperative cholangiography, allowed to fully verify the topographic anatomical education hepatoduodenal ligament zone it has been successful in all 9 cases. The syndrome Mirrizi II type case formed holetsistoholedohealnogo fistula was performed conversion, traditional cholecystectomy with intraoperative holedohoskopiey and sanitation choledochitis antiseptic solutions. Operative intervention in all 3 cases were completed drainage of the common bile duct.
The development of postoperative complications noted in 6 (9.5%) cases, which showed suppuration trocar wounds (1), bile leakage (4) and the development of hypostatic pneumonia (1).

Conclusion: Laparoscopic cholecystectomy with "difficult" gall bladder in high-risk patients, subject to certain rules is feasible manipulation.

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Poster No.: PP 046
[Hepato-Biliary-Pancreatic]

THE MODERN APPROACH IN CHOOSING SURGICAL TREATMENT OF THE NONMALIGNANT MECHANICAL JAUNDICE

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Introduction: Assess the possibility of less invasive interventions under ultrasound guidance in the case of nonmalignant mechanical jaundice.

Method: There were 31 patients with nonmalignant mechanical jaundice genesis under observation, to whom the transdermal - transhepatic interventions under ultrasound guidance were applied. The age of patients ranged from 19 to 89 years. Men comprised 37.8%, women -62.2%.
Choledochal stricture was considered as cause of 13 (41.9%) jaundice cases, liver abscess and subhepatic space abscesses were couse of 9 (29.0%), choledocholithiasis of 7 (22.6%) jaundice cases, a breakthrough of hydatid cysts to the extrahepatic bile ducts was couse of 2 (6.5%) jaundice cases. The percutaneous techniques performed under ultrasound guidance were represented by: transhepatic cholangiography, transhepatic cholecystostomy and transhepatic cholangiostomy.

Result: The percutaneous transhepatic cholangiostomy was applied in 11 cases, percutaneous transhepatic cholecystostomy - in 9. After applying transhepatic cholangiostomy patients improvement, as well as relief of symptoms of breast and liver failure were obsereved in 9 (81.8%) patients. In 9 cases we made puncture to drainage liver abscess and post operation obstructive subhepatic abscesses, and for 2 patients with hydatid cysts breakthrough to he extrahepatic bile ducts the less invasive interventions puncture and drainage of hydatid cysts under ultrasound guidance were performed.
Out of known, various complications of less invasive interventions under ultrasound guidance only two cases of bile leakage were observed and eliminated conservatively.

Conclusion: Application of the less invasive interventions under ultrasound guidance is the method of choice for the first stage of treatment of patients with obstructive jaundice nonmalignant genesis.

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Poster No.: PP 047
[Hepato-Biliary-Pancreatic]

Efficacy of Endoscopic Self-expandable Metal Stent Placement and Surgical Bypass for Inoperable Pancreatic Cancer related Malignant Biliary

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Introduction: We explored the difference in treatment efficacy of endoscopic self-expendable metal stent (SEMS) and surgical bypass (SB) in the management of malignant biliary obstruction (MBO) secondary to pancreatic cancer.

Method: A retrospective analysis was conducted using the database of the Department of Surgery, Queen Mary Hospital, The University of Hong Kong. Consecutive patients who were admitted from 2008 to 2016 receiving either endoscopic SEMS or SB were extracted. Diagnosis other than pancreatic cancer and SEMS placement as a pre-operative drainage before Whipple's operation were excluded. Propensity score (PS) matching was performed to eliminate the confounding effect of heterogeneity between patients from two treatment groups.

Result: There were 98 patients undergone endoscopic SEMS or SB in the study period. After 1:1 PS matching, 30 patients from each group were analyzed. The hospital-stay was significantly longer in the SB group (13 vs 5 days, P<0.001) with a trend of higher early complication rate (24.1% vs 6.7%, P=0.056). None of the patients in SB group developed recurrent biliary obstruction. Higher readmission rate (36.7% vs 3.1%, P=0.004) and re-intervention rate (40% vs 10%, P=0.017) were found in the SEMS group. The 3, 6, 9-month re-intervention rate for endoscopic SEMS and SB group were 26.7%, 32%, 47.7% and 11.2%, 11.2% and 11.2% respectively (P=0.018). When all subsequent readmissions were taken into account, there was no significant difference in hospital stay in both groups (7.5 vs 14 days, P=0.359); however, the total cost of treatment in SB group was significantly higher than the SEMS group (13,307 vs 7,113 USD, P=0.035).

Conclusion: Despite being more invasive and expensive, surgical bypass provide durable relief of biliary obstruction. Negligible procedural risk and over half of the patients did not require re-intervention in the rest of their lifetime make endoscopic SEMS an acceptable alternative.

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Poster No.: PP 048
[Hepato-Biliary-Pancreatic]

Robot-assisted and laparoscopic liver resection for lesions with major vascular involvement. Single center experience

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Introduction: There are few papers analyzed results minimally invasive liver resection for lesions with major vascular involvement. We aimed to compare results of robotic and conventional laparoscopic liver resections for lesions with major vascular involvement with regards to estimation of learning curve.

Method: The results of 160 consecutive liver resections were analyzed. Two groups of robotic liver resection (16 vs 27) and two groups of conventional laparoscopic (29 vs 88) were compared. Calculation of case number in groups was based on significant change of the difficulty index (Iwate criteria) or the rate of posterosuperior segments resection.

Result: The number of patients underwent liver resection for lesions with major vascular involvement enlarged from 4 (25%) to 14 (52%) in two groups of robotic liver resection ($p>0.05$) and from 2 (7%) to 25 (28%) in groups of conventional liver resection ($p<0.05$). The rate of postero-superior segments liver resection increased significantly in groups of robotic liver resection (from 0% to 44%) and in groups of conventional liver resection (from 10% to 43%). There were no differences in morbidity between groups, 13% vs 26% robotic liver resection and 14% vs 17% for laparoscopic liver resection. The implementation of minimally invasive posterosuperior segment resection started with the robotic approach.

Conclusion: Robotic and conventional laparoscopic approaches demonstrate the equal results in resection for lesions with major vascular involvement. The inclusion of robot-assisted resections in a minimally invasive liver surgery program may be useful to rapidly increase the complexity of laparoscopic liver resections.

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Poster No.: PP 049
[Hepato-Biliary-Pancreatic]

Management of Gallstone Pancreatitis in Pregnancy: A Systemic Review

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Introduction: Cholecystectomy is recommended on index admission or shortly after an admission for gallstone pancreatitis. The role of cholecystectomy in pregnant patients with gallstone pancreatitis however is more controversial. Traditionally a conservative approach has been recommended due to fear of both maternal and foetal risk. However, there is a high rate of recurrence associated with the conservative approach. With advancement in laparoscopic and endoscopic surgery there has been a number of authors that recommend active intervention. Because of inherent risk, randomised control trials are not feasible. Data is thus largely dependent on case studies and retrospective studies. We evaluate the rate of recurrence of gallstone pancreatitis in pregnancy and the role of cholecystectomy.

Method: An electronic search was performed using the databases PubMed and MEDLINE to find relevant studies by using the keywords: 'pancreatitis', 'pregnancy', 'gallstone' and 'biliary'.

Result: Out of the 55 articles, 15 articles were relevant to the topic. A total of 155 cases of gallstone pancreatitis in pregnancy was identified. 94 patients were conservatively managed and 61 patients underwent active management, the majority of laparoscopic cholecystectomies were performed during the second trimester. In the conservative group the recurrence rate in the first, second and third trimester were 92-100%, 50-64% and 44-50% respectively. The recurrent rate post laparoscopic cholecystectomy decreased to 5%. Foetal and maternal morbidity and mortality were similar in both groups.

Conclusion: There are difference risk and recurrence rates of gallstone pancreatitis in pregnancy according to gestational age. Management should be adopted accordingly. We suggest a conservative approach in first trimester and laparoscopic cholecystectomy in second trimester and a conservative approach or endoscopic retrograde cholangiopancreatography in the third trimester with the aim of performing laparoscopic cholecystectomy in early postpartum period.

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Poster No.: PP 050
[Hepato-Biliary-Pancreatic]

Our results of pancreatojejunostomy by procedure, modified Kakita style vs. modified Blumgart style

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Introduction: Postoperative pancreatic fistula (POPF) is a major cause of septic complications after pancreatoduodenectomy. There is still no universally accepted technique for pancreatojejunostomy. We have obtained significantly better results after changing our procedure to modified Blumgart style.

Method: Our modified Blumgart style procedures are as follows. Three trans-pancreatic sutures are stitched on the pancreatic stump to create an invagination of the jejunum. The middle suture penetrates the full-thickness pancreas on both sides of the main pancreatic duct (MPD), with seromuscular stitches along the jejunal long axis at both posterior and anterior sides of the pancreatic stump. A short stent is placed within the duct-to-mucosa anastomosis. Two closed suction drains are placed around the pancreaticojejunostomy portion. The drains were removed within 7POD if there were no findings of POPF. In both style, the same procedures were employed regardless of an open or laparoscopic approach.

Result: Between January 2013 and April 2016, 36 patients underwent pancreatojejunostomy with modified Kakita style via laparoscopic approach and 81 patients via open. And then, between May 2016 and December 2016, 7 patients underwent pancreatojejunostomy with modified Blumgart style via laparoscopic and 12 patients via open. In both laparoscopic and open approach, POPF (grade B/C) rates were lower in Blumgart style group (laparoscopic, 22% vs. 14%; open, 30% vs. 0%).

Conclusion: The result of the procedure itself became extremely well in Blumgart style group. By accumulating sufficient number of cases, difficulty of laparoscopic pancreaticojejunostomy may become clearer.

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Poster No.: PP 051
[Hepato-Biliary-Pancreatic]

Routine Intraoperative Cholangiogram: what if it fails?

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Introduction: Routine intraoperative cholangiogram (IOC) during laparoscopic cholecystectomy aims to identify unsuspected bile duct stones, define anatomy and decrease biliary tree injury. However even in experienced hands routine IOC cannot be complete in 5-10% of cases. Current literature has focused on the results when IOC are completed, however there is a paucity of literature investigating the small percent of cases where IOC were unable to be completed when attempted routinely. We aim to identify the outcomes of this group in particular the likelihood of common bile duct stones.

Method: A retrospective study was conducted including all laparoscopic cholecystectomies conducted by two Hepatobillary Surgeons and an Upper GI surgeon on the Gold Coast Hospital between June 2010 and December 2012. IOC was attempted in all cases. If an IOC was unable to be completed the patient was assessed post operatively and ERCP was performed if clinically indicated.

Result: Of the total 1646 cholecystectomies, IOCs were completed in 1459 cases (89%). The completed IOC group had a sensitivity, specificity and negative predictive value of 89%, 100% and 98.38% respectively for common bile duct stones. In the group that IOC was unable to be completed (n= 187), three patients underwent post-operative ERCP, one of which was positive for a bile duct stone. The incidence of common bile duct stones was significantly lower in the incomplete IOC compared to the completed IOC group [0.57% vs 13.34%, OR= 26.60, p <0.001].

Conclusion: When attempted routinely, there is a significantly less risk of common bile duct stones in patients where intraoperative cholangiograms cannot be completed.

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Poster No.: PP 053
[Hepato-Biliary-Pancreatic]

BILE DUCT INJURIES AFTER LAPAROSCOPIC CHOLECYSTECTOMY: CLINICAL CLASSIFICATION, DIAGNOSIS AND TREATMENT OUTCOME

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Introduction: Bile duct injury after laparoscopic cholecystectomy is the most serious complication with different methods of management and outcomes.

Method: Case series report. Between January 2005 and December 2016, there were 19 cases of BDI after laparoscopic cholecystectomy treated in University Medical Center. Strasberg classification was utilized based on ERCP, MRCP, PTC and surgery findings. Management consists of conservative treatment, ERCP with stenting, surgery.

Result: According to Strasberg classification, the types of injuries were as follows: type A in 11 cases (57,9%), type D + E2 in 1 case (5,3%), type E1 in 1 case (5,3%), type E2 in 1 case (5,3%), type E3 in 3 cases (15,8%), non-classified in 2 cases (10,4%). Management according to Strasberg classification: in type A, 8 cases ERCP with stent insertion (42.1%), 1 case laparoscopic fistula closure then reoperate laparoscopically to perform fistula closure and T tube insertion (5,3%), 1 case laparoscopic fistula closure and T tube insertion (5,3%), 1 case laparoscopic Luschka suture and stenting via ERCP (5,3%); in type D + E2, type E1, type E2, each has 1 case hepaticojejunostomy (5,3%); in type E3, 2 cases hepaticojejunostomy (10,4%), 1 case PTBD then hepaticojejunostomy (5,3%), in non-classified type, 2 cases had conservative treatment (10,4%). All of 19 cases were successful. The morbidity rate is 15,8%. The mortality rate is 0%. After follow-up from 16 to 122 months, no recurrent cholangitis, no anastomosis stenosis and no CBD stenosis was noted.

Conclusion: Strasberg A is the most common BDI type after laparoscopic cholecystectomy. ERCP is useful not only for identifying the site of bile leak (except transected bile duct), but also for minor BDI treatment. When ERCP fails, laparoscopic fistula closure and T tube insertion is a suitable alternative. Hepaticojejunostomy is safe and effective in major BDI treatment with low rate of anastomosis stenosis and recurrent cholangitis.

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Poster No.: PP 054
[Hepato-Biliary-Pancreatic]

Our experience of robotic single site cholecystectomy

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Introduction: Single-site robotic platform has been introduced to alleviate some of the technical challenges with laparoscopic single-site surgery. Proper exposure of Calot's triangle is critical for safe laparoscopic cholecystectomy. However, when using current robotic surgical systems for single site cholecystectomy, in exposing the Calot's triangle, the gallbladder is usually retracted in a medial and upward direction, resulting in a narrow triangle. To overcome this situation, a "reverse port technique" has been previously described. We report our experience of robotic single site cholecystectomy in addition to the reverse port technique used during the procedure.

Method: We reviewed the medical records of patients who underwent robotic single site cholecystectomy at our center from April, 2014 to August, 2016.

Result: Thirty two patients underwent RSSC. Of these, the reverse port technique was applied in 23 patients. There were no differences between the original port group (O group) and the reverse port group (R group) in terms of patient age (P=0.466), body mass index (P=0.566), and concomitant cholecystitis (P=0.474). Although not statistically significant, total operation time (102.22 vs 82 min) and console time (57.44 vs 43.20 min) were all shorter in the R group. There were no cases of laparoscopic conversion in both groups. In both groups, there was minimal blood loss during surgery and there was no postoperative mortality.

Conclusion: Operation time and console time tended to decrease with experience and when utilizing the reverse port technique probably due to the more vivid exposure of the calot triangle during dissection.

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Poster No.: PP 055
[Hepato-Biliary-Pancreatic]

Robotic versus laparoscopic liver resection: A comparative study from a single center

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Introduction: The significant advantages of robotic surgery have expanded the scope of surgical procedures that can be performed through minimally invasive techniques. The aim of this study was to compare the perioperative outcomes between robotic and laparoscopic liver surgery at a single center.

Method: From July 2007 to October 2011, a total of 206 patients underwent laparoscopic or robotic liver surgery at the Asan Medical Center, Seoul, Korea. We compared the surgical outcomes between robotic liver surgery and laparoscopic liver surgery during the same period. Only patients who underwent left hemihepatectomy or left lateral sectionectomy were included in this study.

Result: The robotic group consisted of 13 patients who underwent robotic liver resection including 10 left lateral sectionectomies and 3 left hemihepatectomies. The laparoscopic group consisted of 17 patients who underwent laparoscopic liver resection during the same period including 6 left lateral sectionectomies and 11 left hemihepatectomies. The groups were similar with regards to age, gender, tumor type and tumor size. There were no significant differences in perioperative outcome such as operative time, intraoperative blood loss, postoperative liver function tests, complication rate and hospital stay between robotic liver resection and laparoscopic liver resection. However, the medical cost was higher in the robotic group.

Conclusion: Robotic liver resection is a safe and feasible option for liver resection in experienced hands. The authors suggest that since the robotic surgical system provides sophisticated advantages, the retrenchment of medical cost for the robotic system in addition to refining its liver transection tool may substantially increase its application in clinical practice in the near future.

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Poster No.: PP 056
[Hepato-Biliary-Pancreatic]

Laparoscopic liver resection for S7 dome lesion using a combination of rubber band retraction method and flexible laparoscope

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Introduction: Laparoscopic liver resection for tumors involving dome of S7 have been regarded as a contraindication and a few expert teams have reported special techniques to manage those lesions. We introduce a method of laparoscopic liver resection for S7 dome lesion using a rubber band retraction method and flexible laparoscope.

Method: We routinely applied elastic rubber band retraction method for self retraction of both edges of resection line in laparoscopic hepatectomy. For the S7 dome lesions, the right lobe was fully mobilized and inferior edge of resection plane was retracted anteroinferiorly by the anchored two rubber bands rolling down the liver and flexible laparoscopic camera was used. The perioperative outcomes and pathologic results were compared between the two groups of S7 dome lesions and other sites to evaluate appropriacy and feasibility of our laparoscopic approach for the dome lesions of S7.

Result: Of the patients who underwent laparoscopic minor liver resection from May 2014 to December 2016, 10 patients had tumors at dome of S7 (group 1) and 47 at other sites (group 2). There was one open conversion in group 2 because of bleeding due to severe portal hypertension. The mean tumor size were 2.3 and 2.4 cm (p=0.198) and surgical margin were 0.9 and 1.2 cm (p=0.070) in group 1 and group 2, respectively. The total mean operation time were 160 and 135 min (p=0.557) and estimated mean blood loss were 359 and 382 ml (p=0.268), respectively. The mean postoperative hospital stay was 6.2 and 6.5 days (p=0156). There was one postoperative complication in both groups and no postoperative mortality.

Conclusion: Combination technique of rubber band retraction method and flexible laparoscopic camera facilitated feasible and safe laparoscopic liver resection for the S7 dome lesion with only faint modification of conventional laparoscopic technique.

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Poster No.: PP 057
[Hepato-Biliary-Pancreatic]

Early Experience of Laparoscopic Liver resection For 31 months

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Introduction: Laparoscopic liver resection has evolved and widened in its scope. While open liver resections are currently being performed safely in our hospital, laparoscopic liver resections are being implemented in fewer cases. We review our early experience in laparoscopic liver resection to assess the early outcomes of the procedure.

Method: A retrospective chart review was conducted of 25 patients who underwent laparoscopic liver resections for various indications between January 2014 and July 2016 by single surgeon, who had performed 124 open liver resections (segments/< 3 segments: 91/33) at the same time.

Result: There were 25 laparoscopic liver resections preformed. Male/female ratio: 15/10. Mean age: 64. 8 cases were wedge resections, left lateral sectionectomy: 7, left hepatectomy: 6, Right hepatectomy: 4. Pathology included Hepatocellular carcinoma: 12, cholangiocarcinoma: 2, Intrahepatic duct stones:5, metastatic liver carcinoma:5, primary neuroendocrine tumor of liver:1. The mean operation time was 168.9min (40-410 minutes). Mean blood loss was 90.9 mL (10-180mL). There were no intraoperative and postoperative complications except for the following case. Severe portal vein stenosis occurred postoperatively, the patient underwent reoperation (portal vein resection and anastomosis, stenting). The mean hospital stay was 8.71 days (3-44).

Conclusion: Even though our experience in laparoscopic liver resection is not enough, our results are comparable to those in other studies. Therefore, an experienced surgeon in open liver resection will be able to perform the laparoscopic liver resection safely.

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Poster No.: PP 058
[Hepato-Biliary-Pancreatic]

Role of tuftsin and its inhibitor during the progression of acute pancreatitis

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Introduction: To investigate the role of tuftsin and its inhibitor in onset and progress of acute pancreatitis (AP)

Method: Rats were randomly divided into six groups, contral class, AP group, AP+Tuftsin group, splenectomy+AP group, splenectomy+AP+tuftsin group, AP+ Tuftsin inhibitor group. the AP model was developed by retrograde injection of 4% sodium taurocholate into the pancreatic duct. Then tuftsin or its inhibitor was injected at 75 mg/kg. After 3, 6, or 12 hours, the rats were sacrificed, and the pancreas was analyzed for microthrombus by pathobiology and for Mac-1 by immunohistochemical methods, the serum was analyzed for TNF and IL-1 levels by ELISA.

Result: With the progress of AP, the levels of Mac-1, microthrombus, TNF, and IL-1 were increased in experimental groups, and they positively correlated with the increased histological score and worsening pancreatitis symptoms. The histological score and levels of Mac-1, microthrombus, TNF, and IL-1was high at 12hours in AP+tuftsin group; and they were decreased in splenectomy+AP group and AP+inhibitor group (figure1\2\3\4).

Conclusion: Splenectomy can relief acute pancreatitis; Tuftsin makes acute pancreatitis more serious by inducing Mac-1, microthombus, TNF and IL-1, the inhibitor of tuftsin can alleviate acute pancreatitis

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Poster No.: PP 060
[Hepato-Biliary-Pancreatic]

Laparoscopic Enucleation for Giant Liver Hemangioma Larger Than 10 cm: A Single Center's Experience With 5 Patients

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Introduction: The ideal surgical treatment of giant liver hemangioma is still controversial. This study aims to compare the outcomes of laparoscopic enucleation for liver hemangioma larger than 10 cm in different locations of the liver.

Method: Between January 2013 - January 2017 five patients underwent laparoscopic enucleation for symptomatic liver hemangioma equal to or larger than 10 cm in Ankara University School of Medicine were retrospectively reviewed. Patient, tumor characteristics and outcomes were analyzed.

Result: All patients were female with a mean age of 44 (36-51 years). The mean dominant tumor diameter was 11.1 cm (10-13cm). The dominant lesion was located in segment 4 in 2 patients, segment 3 in 1, segment 6 in 1 and segment 7 in 1 patient. Two patients had multiple lesions. All surgeries were performed without hepatic vascular occlusion, in 2 patients ultrasonic surgical aspirator was used. Two patients with lesions located centrally in segment4 required erithrocyte transfusion intraoperatively. One patient with the tumor located at segment 7 was converted to open due to bleeding from right hepatic vein. All patients were followed in the surgical intensive care unit on the surgery day. The mean hospital stay was 3 days (2-5 days). There were no clavien grade 3 or higher complications after surgery. The mean follow-up was 30 months (3-54 months).

Conclusion: Laparoscopic enucleation is a safe and effective surgical treatment for symptomatic liver hemangiomas equal to or larger than 10 cm. The risk of conversion to laparatomy and significant intraoperative blood loss was related to adjacency to major vascular structures and the location of hemangioma.

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Poster No.: PP 061
[Hepato-Biliary-Pancreatic]

The comparison of oncologic and clinical outcomes of laparoscopic and open liver resection for hepatocellular carcinoma

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Introduction: We evaluate the operative outcome and oncologic outcome of laparoscopic liver resection for hepatocellular carcinoma (HCC), and compare with open liver resection.

Method: From January 2004 to February 2013, clinical data of 120 patients who underwent laparoscopic liver resection for HCC (Laparoscopic liver resection group, lapa-group) were collected from two medical centers in Daegu and analyzed retrospectively. Control group (Open liver resection group, open-group) were retrospectively matched, and compared with lapa-group.

Result: Laparoscopic major liver resections were performed in 6 patients. Laparoscopic anatomical resections and non-anatomical resections were performed in 65 patients, and 55 patients, respectively. Mean operative time was shorter in lapa-group, mean intraoperative transfusion rate and total amount were small in lapa-group. In lapa-group and open-group 5-year disease free survival rate (DFS) were 40.0 ± 0.08 %, and 47.5 ± 0.06 %, respectively(possible to change). (p-value = 0.773) In lapa-group and open-group 5-year overall survival rate (OS) were 65.9 ± 0.8 %, and 65.1 ± 0.6 %, respectively. (p-value = 0.479)

Conclusion: Laparoscopic liver resection for HCC is feasible and safe in a large number of patients, with reasonable operative and oncologic results.

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Poster No.: PP 065
[Hepato-Biliary-Pancreatic]

Laparoscopic versus open distal pancreatectomy for non-functioning pancreatic neuroendocrine tumors

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Introduction: Pancreatic neuroendocrine tumor (PNET) is rare neoplasm of the pancreas with a poorly defined natural history. Non-functioning pancreatic neuroendocrine tumor (NF-PNET) accounts for 60% to 90% of all PNET. Complete surgical resection plays a central role in the curative treatment for patients with PNET. Laparoscopic surgery has not yet been widely accepted as the gold standard for NF-PNET.

Method: Between April 1995 and September 2016, 94 patients with NF-PNET who underwent distal pancreatectomy at Samsung Medical Center. Clinicopathologic data were prospectively collected in electronic medical record form and retrospectively reviewed. Patients were divided into two groups, who underwent laparoscopic distal pancreatectomy (LDP) and open distal pancreatectomy (ODP).

Result: Overall complication rates did not differ significantly between ODP and LDP ($p = 0.379$). LDP patients had a significantly lower hospital stay compared with ODP patients amounting to a mean of 2 days ($p < 0.001$). The 5 year year overall survival rates for ODP group were 91.1%. No mortality was seen in the LDP group, yet

Conclusion: This study shows that LDP is a safe approach for NF-PNET and it is associated with a shorter hospital stay compared with ODP. Multicenter study and randomized controlled trial are needed to better assess the clinical and oncologic outcomes.

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Poster No.: PP 066
[Hepato-Biliary-Pancreatic]

LAPAROSCOPIC OR OPEN FREY PROCEDURE – SELECTION CRITERIA

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Introduction: To determine selection criteria for laparoscopic Frey procedure.

Method: From November 2013 to October 2016 laparoscopic Frey procedure were performed in 29 patients (23 male and 6 female) with chronic pancreatitis type C (classification of M.Buchler). The age of the patients was 49.8±9.9 years. The average size of the pancreatic head was 33.5±12.8 mm, the average diameter of the main pancreatic duct was 9.4±2.7 mm. The average diameter of the portal vein was 14.7±3 mm. The 11 patients had portal hypertension (diameter of portal vein was more than 14 mm by CT). The 15 patients had past surgery and 6 of them had past surgery on the pancreas for acute pancreatitis.

Result: The laparoscopic Frey procedure was performed in 23 patients (79%). In 4 cases the laparoscopic procedure was converted to open Frey procedure (15%). In 1 case was performed laparoscopic longitudinal pancreaticojejunostomi (3%) and in other case was performed laparoscopic Beger procedure (3%). In 4 cases where laparoscopic procedure was converted to open 3 patients had past surgery on the pancreas for acute pancreatitis. The average operating time and blood loss were bigger in patients with portal hypertension than in patients without it: 515±110.1 min. and 421.3±73 min; 275±245 ml and 163.3±131.5 ml.

Conclusion: The laparoscopic Frey procedure should be use carefully for patients with portal hypertension and past surgery on the pancreas for acute pancreatitis.

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Poster No.: PP 067
[Hepato-Biliary-Pancreatic]

Laparoscopic Distal Pancreatectomy for Solitary Fibrous Tumor of the Pancreas : A Rare Case

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Introduction: Solitary Fibrous Tumor (SFT) is a rare mesenchymal neoplasm of fibroblastic origin, which is the most frequent primary localized spindle cell neoplasm of the pleura. It can also be found in other viscera, however, SFT of the pancreas is extremely rare, and only 16 cases have been reported to date.

Method: A 67-year-old woman transferred to our hospital for incidental pancreatic mass. Abdomen computed tomography scan demonstrated a 2.2 cm exophytic enhancing mass in the body of the pancreas, and neuroendocrine tumor was clinically suspected.

Result: The patient underwent a laparoscopic distal pancreatectomy. Immunohistochemically, the tumor cells were positive for CD34 and bcl-2 but negative for S100, and are confirmed as SFT of the pancreas.

Conclusion: The diagnosis of SFT of the pancreas is difficult to distinguish radiologically from neuroendocrine tumor, is confirmed by immunohistochemical stain. Although the behavior of SFT is rather benign, complete surgical excision and close clinical follow-up are recommended due to a potentially malignant nature.

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Poster No.: PP 068
[Hepato-Biliary-Pancreatic]

Initial experience in laparoscopic liver resection: case report

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Introduction: Progress in laparoscopic surgery supported by the development of dedicated equipment has made laparoscopic liver resection (LLR) a procedure of choice for the majority of benign and malignant liver lesions without vascular invasion. The laparoscopic approach brings benefits such as less intraoperative blood loss and less hospital stay. For this considerations, we've initiated LLR program in our department.

Method: 28 y.o. female presented with asymptomatic liver lesion occasionally found on ultrasound. Oncologic markers (CA 125, CA19-9, CEA, AFP) were negative. Upper and lower endoscopy showed no pathologic findings. CT showed 30 mm Sg 6 hypodense lesion described as unknown metastasis. LLR of Sg 6 was planned.
Five trocars were used – 10 mm camera port supraumbilically, two main working ports subcostal on right midclavicular line (5 mm) and right anterior axillary line (10 mm), and two assistant's ports - subxiphoideus (10 mm) and subcostal on left midclavicular line (5 mm). After typical cholecystectomy mobilization of right liver lobe was made. Retrohepatic IVC was partially dissected to one-third. Inferior right (Makuuchi) vein was dissected and encircled. Resection line was marked on the Sg 6 border. Transsection of liver parenchyma was performed using laparoscopic ultrasound dissector and bipolar forceps. Pringle maneuver was used with standard fashion and 15-5 clamping intervals. Sg 6 glissons were dissected, double clamped with metal clips and cut. The specimen was extracted through 5 cm Pfannenstiel incision.

Result: Operation duration time was 300 minutes and estimated blood loss was 350 mL, total portal clamping time was 45 minutes. Postoperative period was uneventful. The patient was discharged on the fifth postoperative day. Histology showed benign hepatic adenoma.

Conclusion: Small liver lesion in anterior segments is ideal for first LLR. Further expansion of indication may be made with the set of experiences.

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Poster No.: PP 069
[Hepato-Biliary-Pancreatic]

Lap S2,3 resection of liver for echinococcus of liver using 3 ports and the harmonic scalpel

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Introduction: Laparoscopic surgical technique is arising in Mongolia, performing of liver resection undertakes using by open operative techniques. We describe herein our first technique report of laparoscopic performing bisegmentectomy 2, 3 of the liver by blunt dissection and using a harmonic scalpel.

Method: The advantages of laparoscopic liver resection are less postoperative pain, shorter hospital stay, faster postoperative recovery, and fewer wound complication.

Result: We have many experiences in open surgery, whereas laparoscopic liver resection is the new technique and here we explain our first laparoscopic performance of bisegmentectomy of liver in Department of Surgery, Mongolian National University of Medical Science.

Conclusion: In developing country like Mongolia could be develop the laparoscopic anatomical resection of liver near future. The advantage of harmonic scalpel had given the chance of laparoscopic liver resection improvement.

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Poster No.: PP 070
[Hepato-Biliary-Pancreatic]

The comparison of Laparoscopic versus Open distal pancreatectomy for Benign or Borderline lesion in a local university hospital

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Introduction:

The laparoscopic distal pancreatectomy (LDP) is replacing the open distal pancreatectomy (ODP) and becoming a standard operative technique for benign and borderline lesions of the body and tail of pancreas. We compared the results of the open and laparoscopic distal pancreatectomy performed at Ulsan University Hospital, Korea.

Method: We retrospectively reviewed the records of 120 patients who underwent laparoscopic and open distal pancreatectomy at Ulsan University Hospital, Ulsan, Korea from January 2001 to December 2015. 77 patients were enrolled and divided into two groups, LDP (n=33) and ODP (n=44).

Result: LDP has been started since 2008 and total 44 cases have been performed until 2015 at this institute. There were no significant intergroup difference in clinical characteristics such as sex ratio (15:29 for LDP vs. 14:19 for ODP, p = 0.455) and age (52.1 year for LDP vs. 49.3 year for ODP, p = 0.425). There were statistically differences in the hospital stay after surgery (8 days for LDP vs. 21 days for ODP, p = 0.000) and the duration of drain (2.5 days for LDP vs. 4.3 days for ODP, p = 0.000). There was no statistically difference in postoperative pancreatic fistula Grade 2 and 3 (4 cases for LDP vs. 7 cases for ODP, p = 0.156).

Conclusion: Our center first began the LDP in 2008 and conducted the 5.5 cases/year on average. The rate of LDP is increasing. There was no statistical difference in OP time, the amount of transfusion and the occurrence frequency of complications. But there was statistical reduction in length of hospital stay and duration of drain in LDP. Also, in our center, the laparoscopic approach is considered as a gold standard approach for left-side pancreatic benign or borderline lesions. We think that the LDP could be undergone without difficulty in low volume center, too.

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Poster No.: PP 071
[Hepato-Biliary-Pancreatic]

Pure laparoscopic right hemihepatectomy for a patient with HCC following sequential transcatheter arterial chemoembolization and right portal vein embolization

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Introduction: The aim is to confirm pure laparoscopic right hemihepatectomy for a patient with HCC following sequential transcatheter arterial chemoembolization and right portal vein embolization

Method: Preoperative sequential selective transcatheter arterial chemoembolization (TACE) and PVE could increase the rate of hypertrophy, mainly by decreasing the arterial flow in the embolized liver, suppression of arterioportal shunts. The patient underwent sequential TACE 7 wks ago and RPVE 4 wks ago before pure laparosocpic right hemihepatectomy

Result: The remnant left liver volume was increase from 30.8% to 41.2%. The selective isolation technique was used when the hepatoduodenal ligament was dissected. The operative time was 330 mins and estimated blood loss was 350 ml. There was no operative complication.

Conclusion: Pure laparoscopic right hemihepatectomy could be equally applied to a patient with HCC following sequential transcatheter arterial chemoembolization and right portal vein embolization.

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Poster No.: PP 072
[Hepato-Biliary-Pancreatic]

Laparoscopic edge liver resection for HCC recurrence: case report

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Introduction: Hepatocellular carcinoma without vascular invasion is the good indication for laparoscopic liver resection (LLR) in the vast majority of cases. LLR reduce morbidity levels such as bleeding and ascites.

Method: 22 y.o. female presented 1 year before with palpable mass in right upper abdomen. She was diagnosed on imaging with giant 22 cm size HCC in right liver lobe (Sg 4-8, 1) with vascular invasion in retrohepatic IVC. AFP was eight-fold increased to 38,6 IU/ml. Blood tests were normal. No other abnormalities were found. After preparing she received right trisectionectomy and postoperative period was uneventful. Histologically HCC was found. After 1-year follow-up, she was diagnosed on MRI with small 2 cm HCC recurrence, located on the anterior surface of Sg 3 with the minor elevation of AFP level. RFA was thought contraindicated due to the close contact of the tumor with transverse colon, so LLR was proposed. Four trocars were used – 10 mm camera port suprapubic (due to liver enlargement caused by strong Sg 2-3 regeneration), one subumbilical 5 mm port for retraction and two lateral ports for working instruments. Minor adhesions after previous surgery were taken down progressively and liver was partially mobilized. Pringle maneuver was not used. Cutting line was marked within 2 cm from the lesion. Liver transection was performed by crush-clamp and bipolar sealing device. The specimen was evacuated through the small incision made in place of the previous scar.

Result: Estimated blood loss was 50 mL, operation time was 180 minutes. Minor morbidity was observed in postoperative period – small seroma in the postoperative scar which was successfully treated. Further follow-up showed the absence of HCC recurrence in next 6 months.

Conclusion: Small HCC recurrence, located superficially can be successfully managed with LRR, but liver mobilization may be a challenge due to adhesions from previous operations.

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Poster No.: PP 073
[Hepato-Biliary-Pancreatic]

Toward zero complication during laparoscopic cholecystectomy; the strategic points and landmarks.

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Introduction: Laparoscopic cholecystectomy (LC) is one of most common operation in the world. However, the major complications during LC, which are injury of hepatic artery, bile duct and bile leakage, could be result in disastrous condition to patients.

Method: Herein, we will suggest some strategic points and anatomical landmarks during LC.

Result: First is infundibulum of gallbladder (GB), it is the low margin of GB, and connected to neck portion, cystic duct (CD). Therefore the method of pulling down the infundibulum of GB with laparoscopic clamp device, isolating neck of GB, CD, and grossly checking CD are most safety point for protection of bile duct injury. Second is Rouviere's sulcus (RS) of liver, it was present in 82% of the cadaveric cases. The right posterior sectional pedicle was found in the RS in 70% of the cases. Therefore, dissected plane of low margin of GB should be above the RS. Third is Calot's node, it is located in superior to the CD, lateral to the common hepatic duct (CHD), and anterior to the cystic artery (CA). After identifying Calot's node, we begin the dissection always caudal and lateral to the node. In that area is safety area. Fourth is Calot's triangle, the boundary are CHD, CD and lower margin of liver. The CA is rested in the triangle.

When GB away from liver by coagulating device, if any thin pedicle was seen in GB bed, it should be ligated with metal clip, because about 0.2~2%, the accessory duct of GB (duct of Luschka) can be presented in GB bed and one cause of bile leakage.

Conclusion: We can safely perform LC by the strategic points and landmarks which are infundibulum of GB, Rouviere's sulcus, Calot's node, Calot's triangle and duct of Luschka.

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Poster No.: PP 074
[Hepato-Biliary-Pancreatic]

Laparoscopic cholecystectomy in a patient with situs inversus totalis presenting with acute cholecystitis

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Introduction: Situs inversus totalis can cause diagnostic mistake difficulty disease due to anatomical variation. Laparoscopic cholecystectomy for acute cholecystitis in patient with this disorder is challenging for reversed anatomy, and unaccustomed working hand.

Method: A 57-year-old woman visited at emergency room with left upper quadrant pain lasting for five days ago. Abdominal computed tomography revealed gallbladder wall thickening with pericholecystic fluid collection with situs inversus totalis.

Result: We performed laparoscopic cholecystectomy after adjustment of trocar site, and the site of operator on 24th August 2016. On 4 days after operation, the patient was discharged without any complications. Pathologic result was compatible with acute cholecystitis.

Conclusion: Laparoscopic treatment is a feasible option for selective patients with these disease entity.

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Poster No.: PP 075
[Hepato-Biliary-Pancreatic]

What is the Effective Single Incision Laparoscopic Biliary Surgery Platform: Needlescopic Grasper Assisted Single Incision Laparoscopic Surgery.

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Introduction: We aimed to investigate the safety and feasibility of needlescopic grasper-assisted single-incision laparoscopic cholecystectomy(nSILC) and common bile duct exploration (nSIL-CBDE) by comparing the surgical outcomes of this technique with those of conventional laparoscopic CBDE (CL-CBDE).

Method: We retrospectively analyzed the clinical data of patients who underwent CL-CBDE or nSIL-CBDE for the treatment of common bile duct (CBD) stones between January 2000 and December 2014. Also, We analyzed the medical records of the patients who underwent nSILC and CLC for benign gallbladder disease between January 2011 and December 2015. A needlescopic grasper was used in nSILC and nSIL-CBDE, which was inserted separately through a direct puncture and effectively assisted the transumbilically inserted instruments

Result: In terms of nSILC, Totally 1221 patients underwent laparoscopic cholecystectomy during the period. Among them, 577 patients underwent nSILC and 644 patients underwent CLC. The critical view of safety (CVS) obtaining success rate is more higher in nSILC group. However, there was no significant difference in operation time (skin incision to skin incision), and postoperative hospital stay (operation time: 57.9 ± 38.0 vs. 50.7 ± 30.8 minutes; *P* = 0.388, postoperative hospital stay: 2.5 ± 3.8 vs. 2.5 ± 1.6 minutes; *P* = 0.99). In terms of nSIL-CBDE, During the study period, 40 patients underwent laparoscopic CBDE. Of these patients, 20 underwent CL-CBDE and 20 underwent nSIL-CBDE. The operative time for nSIL-CBDE was significantly longer than that for CL-CBDE (238 ± 76 vs. 192 ± 39 minutes; P = 0.007). Postoperatively, the nSIL-CBDE group required less intravenous analgesic (pethidine) (46.5 ± 63.5 vs. 92.5 ± 120.1, P = 0.010) and had a shorter hospital stay than the CL-CBDE group (3.8 ± 2.0 vs. 5.1 ± 1.7 days, P = 0.010).

Conclusion: The results of this study suggest that nSILC and nSIL-CBDE could be safe and feasible while improving cosmetic outcomes

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Poster No.: PP 076
[Hepato-Biliary-Pancreatic]

UTILITY OF LAPAROSCOPIC ALPPS TO BETTER SELECTION OF PATIENTS TO BE TRANSPLANTED FOR IRRESECTABLE METASTATIC LIVER IN CASES OF COLORECTAL CANCER

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Introduction: Two techniques are described to R0 control of bilateral tumoral volumen in metastatic liver from CRC. Both including 2 procedures (2-STAGES hepatectomy) and ALPPS, inducing between FRL hypertrophy to avoid postoperative hepatic insuficiency. It is recomended today to perform ALPPS using laparoscopic way by experienced surgeons. Simultaneusly, liver transplantation appear to be an nouvel effective option to offer long term survival to irresectable liver metastasic patients.

Method: Inclusion critters

- BILATERAL IRRESECTABLE LIVER METASTASIS FROM CRC
  STABILITY OF PROGRESSION METASTATIC DISEASE (ONLY- LIVER) BASED IN 3 SYSTEMIC CHEMOTHERAPY LINES
  POSSIBILITY OF RAPID PROGRESSION BETWEEN 2 STAGE HEPATECTOMIES
  PATIENTS WHO HAVE A POTENTIAL INTRAFAMILIAL LIVING DONOR APPROVED FOR LDLT PROCEDURE
  PATIENTS WHOM NOT OBTAIN ENOUGH LEFT SIDE LIVER HYPERTROPHY AFTER 10 DAYS AND CALCULATED REMNANT LIVER IS TOO SMALL FOR SIZE

PROTOCOL PROPOSED:
1st step of LAPAROSCOPIC ALPPS
Laparoscopic Ultrasound to define exactly intraoperative anatomy of liver nodules, calculation of total hepatic tumor volume and definition of portal vein anatomy at glissonian hilar plaque
Limited dissection of liver pedicle (only rigth portal vein branch ligation)
Laparoscopic wedges resection of left sided nodules
Only 2 CM LINE OF SECTION on liver surface to complete 1st step of ALPPS technique and enough to develop a correct inflamation response to induce future hypertrophy

Result: In 10 days LAPAROSCOPIC 2nd LOOK
US-Evaluation of left hypertrophyc volumen obtained in future remnant liver and Direct view to eliminate possibility of peritoneal carcinomatosis
decision flow:
ARM 1 (If no new left side lesions and not enough left hypertrophy): INCLUDE TO IMMEDIATE LDLT
ARM 2 (If no new left side lesions and enough left hypertrophy) CONTINUE
WITH IMMEDIATE LAPAROSCOPIC RIGTH HEPATECTOMY
ARM 3 (If new left side lesions and not enough left hypertrophy) GOT
TO NEW PALLIATIVE CHEMOTHERAPY AND FORMAL CONTRAINDICATION TO LT

Conclusion: We propose for evaluation this new clinical treatment approach.

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Poster No.: PP 077
[Hepato-Biliary-Pancreatic]

LAPAROSCOPIC TREATMENT HEPATIC HIDATIDOSIS AND BILIARY FISTULA

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Introduction:

The clinical features of hydatid disease depend on the site, size, number, viability and stage of development of the cyst. In adults, the liver represents the prevalent organ followed by the lungs. We present the video of laparoscopic surgery performed for the treatment of hepatic hydatidosis and biliary fistula, with excellent results at 2 years of follow-up.

Method: A 34-year-old woman hospitalized for abdominal pain in right hypochondrium and nausea. Background: Right basal lobectomy Surgery of thorax 08/05/2014 pathological anatomy: pulmonary hydatid cyst. Exams: CT scan of the thorax and abdomen: liver: presence of cystic image that occupies segments vii, viii and iv of 12 x 10 liquid content without partitions. Ecoendoscopy: Negative to membranes in biliary tract. Normal preoperative laboratory. Patient during hospitalization received albendazole prior to surgery.

Result: Surgical Technique:4 laparoscopic accesses, 3 of 10mm, one in umbilical scar, one in left flank, one in right flank, 1 of 5 mm, one in subxiphoid space. Intra-abdominal operative field protection with hypertonic serum gauze, laparoscopic hepatic cystectomy, laparoscopic cholecystectomy, cholangiography with methylene blue, biliary fistula burst, hemostasis review, and placement of jackson pratt drainage.

Relevance: Hepatic hydatidosis is a common entity in Peru. That requires adequate diagnosis, therapy and preoperative planning. Laparoscopic surgery reduces postoperative morbidity and recovery time is lower compared to open surgery techniques. The most frequent complication as the cyst is larger is the biliary fistula, which requires adequate diagnosis and treatment.

Conclusion: The laparoscopic treatment of hepatic hydatidosis and biliary fistula has proven to be an effective surgery. The choice of the same is determined by the appropriate location of the

Hydatid cyst, clinical status and the HPB team for therapy. Its a common pathology in our region that we are able to treat that by minimally invasive way.

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Poster No.: PP 078
[Hepato-Biliary-Pancreatic]

LAPAROSCOPIC TREATMENT OF HEPATIC POLYCHISTOSIS

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Introduction: Polycystic liver disease is a rare disease in Peru. This disease has a prevalence of 0.13 to 0.52% in the general population. Patients may have a personal or family history of polycystic kidney disease. The symptoms depend of de size of the mass and location. We present the video of the laparoscopic surgery performed for the treatment of polycystic liver disease, with excellent results.

Method: A 42-year-old man who was hospitalized for abdominal pain in a dull-type epigastrium from 3 months before. Background: Bilateral polycystic kidney disease. Exams: computer tomography: Liver: Presence of multiple cystic images occupying segments II and III, of liquid content. Preoperative laboratory: Normal

Result: Surgical Technique: 4 Laparoscopic approach, 3 of 10mm, one in umbilical scar, one in left flank, one in right flank, 1 of 5 mm, one in subxiphoid space. Drainage of hepatic cysts, left multiple stool resection with ligation, monopolar scalpel and laparoscopic scissors, hemostasis with laparoscopic hemolock clips. Hemostasis review.

Relevance: Polycystic liver disease is a genetic disorder characterized by the appearance of cysts in the liver. Most patients are asymptomatic and not being treated. For symptoms, treatment depends on the extent, distribution, and anatomy of the cysts. Laparoscopic surgery reduces postoperative morbidity and recovery time is lower compared to open surgery techniques.

Conclusion: The laparoscopic hepatic polychistosis treatment has been shown to be an effective surgery. The choice of the same is determined by the appropriate location of the cyst, the clinical status of the patient and the HPB team for treatment.

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Poster No.: PP 079
[Hepato-Biliary-Pancreatic]

Early Laparoscopic Cholecystectomy for Acute Cholecystitis among a sample of Sudanese patients.

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Introduction: : Studies have been conducted worldwide to assess the safety and feasibility of early laparoscopic cholecystectomy (LC) for management of acute cholecystitis (AC). The Sudanese literature is rather scarce regarding this field.
: Studies have been conducted worldwide to assess the safety and feasibility of early laparoscopic cholecystectomy (LC) for management of acute cholecystitis (AC). The Sudanese literature is rather scarce regarding this field.

Method: : It was a descriptive, retro-prospective, analytic hospital based multicentric study where done inAtbara medical complex and Fedailspecialized hospital,included 70 patients.After met the Inclusion and exclusion Criteria.A consecutive non-probability sampling was performed. A self-administered questionnaire was used to collect data. Aim of this study to evaluate the safety of early laparoscopic cholecystectomy (LC) in management of acute cholecystitis (AC) without time frame among a sample of Sudanese patients.

Result: 70 cases were studied, with female predominance, females to male ratio of 0.16: 1. The mean age was 47.7 +13.7 year. About 40 (57.1%) of patients had duration of symptoms of less than 24 hours. 41 (58%) of patients had the surgery within the first 24 hours of the onset of symptoms, and 20 (28%) underwent the operation within 24 to 72 hours. Conversion rate into open surgery was 7(10%); with most common indications are adhesions (57%).The mean time for surgery was 90.65+32 minute, Postoperative specific complications were encountered in 7 (10%). however; no cases of biliary duct injury or returned stones were reported. No mortality was reported. The average duration of hospital stay was 43.8+42 hour.

Conclusion: Early laparoscopic cholecystectomy is a reliable and safe method of management forAcutecholecystitis in our sample of Sudanese patients. Early LC can be performed within the first 24 hours since symptom's onset as it is associated with a lower rate of conversion.

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Poster No.: PP 080
[Hepato-Biliary-Pancreatic]

The straightened splenic vessels method dramatically improves surgical outcomes after laparoscopic distal pancreatectomy Short title: Improving distal pancreatectomy outcomes

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Introduction: Laparoscopic distal pancreatectomy (LDP) is widely used to treat pancreatic tumors. However, separating the splenic artery and vein from the pancreatic parenchyma sometimes requires advanced techniques, particularly for laparoscopic splenic vessel-preserving distal pancreatectomy (LSVPDP). Herein, we describe our novel “straightened splenic vessels” (SSV) method that we developed for this procedure, which dramatically improves surgical outcomes.

Method: To adjust the ultrasonic instrument axis, the splenic artery was straightened by grasping two points of its nerve sheath after the pancreas was widely mobilized at the superior border of the pancreas. Then, the layer between the splenic artery’s nerve sheath and the pancreatic parenchyma was dissected to isolate the splenic artery. Next, the pancreas was completely mobilized from body to tail at the inferior border of the pancreas, and the splenic vein was straightened by three-point retraction and separated from the pancreatic parenchyma. To evaluate this technique’s efficacy and outcomes, we retrospectively investigated 40 patients who underwent LDP with pancreatic transection on the left side of the superior mesenteric artery for benign or borderline malignant pancreatic tumors.

Result: The SSV technique was performed in 21 consecutive patients; results were compared to those of 19 patients treated with conventional LDP. In 29 patients who underwent LDP with splenectomy, the mean operating time was significantly shorter in the SSV group than in the conventional group ($P = 0.020$). In 11 patients who underwent LSVPDP, mean intraoperative blood loss in the SSV group was 23.8 mL, significantly lower than that in the conventional group ($P = 0.019$).

Conclusion: This method is feasible and safe for separating the splenic artery and vein while performing LDP, particularly LSVPDP, with little intraoperative blood loss and short operation time and can be applied as a standard procedure for LDP.

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Poster No.: PP 081
[Hepato-Biliary-Pancreatic]

Laparoscopic right hemihepatectomy using anterior approach for giant hemangioma

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Introduction: Hemangiomas are the most common benign liver tumors and the majority represent incidental findings on routine abdominal imaging. However giant hemangiomas, defined as those exceeding 5cm in diameter, may present with abdominal pain, nausea, vomiting, or obstructive jaundice. They often necessitate an extended hepatectomy with the associated risk of massive intraoperative bleeding. Here, we present our technique of laparoscopic right hemihepatectomy using anterior approach in patient with 20cm-hepatic hemangioma.

Method: A 56-year-old woman was admitted to the hospital for a large hepatic mass lesion and her laboratory findings showed a normal level of AFP, CA19-9, and a normal liver function including indocyanine green excretion test. Computed tomography (CT) imaging showed about 20cm in diameter mass in right hepatic lobe. Using hemangioma SPECT, She was diagnosed with hepatic hemangioma. Because she had a previous transverse suprapubic incision for Caesarian section, the authors decided to perform laparoscopic hepatectomy instead of open hepatectomy. We used previous suprapubic incision for specimen removal. Using 3-D dynamic CT image, the estimated left remnant liver volume (left lobe and segment 1) was 48%. It was sufficient.

Result: Because of huge hemangioma, we anticipated that mobilization of liver is very difficult. So, we decided to perform anterior approach. First of all, we blocked the inflow of the right hemiliver, we started parenchymal transaction using intermittent Pringle maneuver. After parenchymal dissection and cutting the right hepatic vein, we removed retained intra-hemangioma. So, we mobilized shrunk right liver easily. The operative time was 330 minutes and estimated blood loss was 400 ml. The patient was able to walk on the first day after surgery, discharged on postoperative Day 10 without complications. Histology showed hepatic hemangioma.

Conclusion: Laparoscopic hepatectomy for giant hemangioma is feasible. Anterior approach is very useful when more than 10cm-hemangioma located in right lobe.

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Poster No.: PP 082
[Hepato-Biliary-Pancreatic]

Laparoscopic Glissonian approach with extra-corporeal control from first branch to second branch.

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Introduction: Glissonian approach is useful method in open hepatic resection. Glisonian approach have benefit of less blood loss, operation time saving and better oncologic outcomes. Laparoscopic Glissonian approach is difficult to challenge and dangerous to surgeons on his initial stage for laparoscopic liver resection. So, laparoscopic Glissonian approach for main brach and second bifurcation branch could be introduced for helping laparoscopic anatomical liver resection.

Method: The detailed knowledge of the segmental anatomy of the liver has led to a rapid evolution in resectional surgery based on the intrahepatic distribution of the portal trinity (the hepatic artery, hepatic duct and portal vein). The classical intrafascial or extrahepatic approach is to isolate the appropriate branch of the portal vein, hepatic artery and the hepatic duct, outside the liver substance. Another method, the extrafascial approach, is to dissect the whole sheath of the pedicle directly after division of a substantial amount of the hepatic tissue to reach the pedicle, which is surrounded by a sheath, derived from Glisson's capsule. This Glissonian sheath encloses the portal trinity. In the transfissural or intrahepatic approach, these sheaths can be approached either anteriorly (after division of the main, right or umbilical fissure) or posteriorly from behind the porta hepatis.

Result: We describe the technique for laparoscopic approaching the Glissonian sheath and hence the hepatic pedicle structures and their branches by the intrahepatic approach that allows early delineation of the liver segment without the need for ancillary techniques.

Conclusion: This method could have benefit of less blood loss, operation time saving and better oncologic outcomes than conventional hepatectomy. But, this method should require more time and effort for learning curve. In addition, the indications for the use of this technique in the technical and oncologic settings are also discussed.

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Poster No.: PP 141
[Hepato-Biliary-Pancreatic]

Multivariate analysis of preoperative risk factors for prolonged operating time in laparoscopic liver resection

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Introduction: Laparoscopic liver resections (LLR) are associated with improved short-term patient outcomes. However, LLR is technically demanding, and complex procedures such as major hepatectomy take significantly longer when undertaken laparoscopically. The aim of our study was to evaluate preoperative factors that influence operating time in LLR.

Method: Retrospective analysis of a prospective database of consecutive patients undergoing LLR between January 2011 and June 2016. Univariate and multivariate analyses of factors influencing operating time were performed.

Result: 159 patients underwent LLR during the study period. Median age was 67 years (IQR 57-74). Median BMI was 27 (24-30). 56 patients (35%) had previous laparotomy and 131 patients had malignant tumours (82%). Conversion to open surgery occurred in 21 patients (13%). Median operating time was 125 min (100-166) and 340 min (264-416) for minor and major resections, respectively. Median Iwate difficulty index was 4 (IQR 3-5), including 29 patients (18%) with an Iwate index > 6. ASA grade, BMI, Iwate index, parenchymal disease and postero-superior tumours were all significantly associated with prolonged operating time on univariate analysis. Previous laparotomy ($p=0.013$), Iwate index ($p<0.001$) and parenchymal disease ($p=0.003$) were significant on multivariate analysis.

Conclusion: This study has identified risk factors for prolonged operating time in laparoscopic liver resection. High risk patients should be operated by experienced surgeons, and conversion to open surgery should be considered in the event of slow progression.

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Poster No.: PP 142
[Hepato-Biliary-Pancreatic]

Comparative study of Pure laparoscopic living donor right hepatectomy versus Conventional open living donor right hepatectomy

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Introduction: To compare the outcomes of pure laparoscopic living donor right hepatectomy(LLDRH) versus conventional open living donor right hepatectomy (OLDRH)

Method: All consecutive cases of LLDRH between November 2014 and July 2016 in a tertiary referral hospital and 1:2 case matched OLDRH during same period were enrolled in this retrospective cohort study. All surgical procedures were performed by one surgeon. The LLDRH and OLDRH groups were compared in terms of donor demographics, preoperative data, clinical perioperative outcomes, and recipient perioperative outcomes.

Result: LLRDLH group (n=15) had a significantly shorter postoperative hospital stay than the OLDRH group (n=30) (7.27 ± 1.22 vs 11.13 ± 2.31 days, $p < 0.001$) and less intravenous pain medication than OLDRH group (1.73 ± 1.75 vs 4.30 ± 2.26 vials, $p < 0.001$). In LLDRH group, there were no post operative complication such as transfusion, wound infection, or bleeding. Furthermore, there were no open conversion during LLDRH procedure.

Conclusion: LLDRH was a safe and feasible procedure for selected donors. It required shorter hospital stay and resulted in less analgesic requirements. The authors suggest that LLDRH could be a reasonable operative option for selected donors.

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Poster No.: PP 083
[Stomach]

Thermo-sensitive isopentane aerification for mucosal lift during endoscopic resection in animal models

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Introduction: Mucosal lift is critical for successful endoscopic treatment. Normal saline(NS) is widely used as the submucosal filler, but its short persistency restricts clinical endoscopic submucosal dissection(ESD) procedure. In this study, thermo-sensitive isopentane was introduced for submucosal injection. With 27℃ boiling point, liquid isopentane could be easily applied, while gasification inflation could provide great support for submucosal lifting at body temperature. The feasibility and efficiency of isopentane were evaluated in this study.

Method: The porcine stomachs were firstly introduced for in vitro evaluation. 37℃ water bath was applied to mimic body temperature. Compared with NS, isopentane was studied for its lifting efficacy, including injection dosage, lifting strength and persistency. The submucosal tissue changes were also compared. For in vivo evaluation, rats were applied to further compare the difference between isopentane and NS, including the lifting efficacy, pathological effect and safety.

Result: Compared with NS, the maximum lifting height could be achieved by less isopentane (2% NS volume). Longer persistency was also recorded for isopentane during in vitro study. Aerification could result in the vacuolization of submucosal connective tissue, which would facilitate endoscopic mucosal resection and postoperative recovery. The same results were confirmed in the rat model. With the same dosage, isopentane led to a better mucosal elevation and larger range than NS. According to histological examination, no tissue injury was observed with isopentane application.

Conclusion: As submucosal injection agent, the feasibility, efficacy and safety of isopentane were demonstrated. Thermo-sensitive aerification would be a promising approach to facilitate ESD.

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Poster No.: PP 084
[Stomach]

A novel predictive model for predicting prognostic value of preoperative blood lymphocyte-monocyte ratio in gastric cancer patients after radical resection

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Introduction: Evaluate the predictive value of the preoperative blood lymphocyte-to-monocyte ratio (LMR) on the clinical outcomes of patients with gastric cancer(GC) after radical surgery.

Method: We enrolled 1810 patients who were diagnosed with GC and underwent radical surgery. The relationship between preoperative blood LMR and clinical pathological data was analyzed and compared.Univariate and multivariate survival analysis were used to identify prognostic factors for GC. A nomogram was adopted to predict OS（*P*=0.001）、CSS（*P*=0.006）and RFS（*P*=0.006）after surgery.

Result: The LMR was significantly lower in patients with GC than in matched normal volunteers ($P < 0.05$). According to the multivariate analysis, the LMR was an independent prognostic factor of OS、CSS and RFS. Nomograms, including the LMR, had superior discriminative abilities to predict clinical outcomes. The recurrence rate was 28.2%（511/1810）. The LMR in the recurrence group was significantly lower than that in the no recurrence group（*P*<0.001）. The LMR were correlated with lymph node and liver metastases (both $P < 0.05$).

Conclusion: Preoperative LMR was an independent prognostic factor for GC.A novel nomogram based on blood LMR can improve the predictability of long-term outcome. Patients with low preoperative blood LMR should be followed up more closely after surgery because they are prone to have metastases.

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Poster No.: PP 085
[Stomach]

A Novel Prognostic Scoring System Based on Preoperative Sarcopenia Predicts the Long-Term Outcome of Patients after R0 Resection for Gastric Cancer: Experiences of a High-Volume Center

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Introduction: The relationship between sarcopenia and prognosis of gastric cancer (GC) is unclear. We sought to develop a prognostic scoring system combining sarcopenia with preoperative clinical parameters for patients with GC to predict 3-year overall survival (OS) and 3-year recurrence-free survival (RFS).

Method: 924 patients with GC underwent radical gastrectomy were retrospectively analyzed. The data were divided into training set and validation set. The skeletal muscle cross-sectional area was measured by preoperative computed tomography, and sarcopenia was diagnosed by the cut-off value of skeletal muscle index (SMI) obtained by X-tile software. COX regression was used to identify preoperative risk factors associated with 3-year OS and RFS.

Result: In the training set, 103 (14.8%) patients were sarcopenic based on the cut-off value of the SMI (32.5 cm^2/m^2 for men and 28.6 cm^2/m^2 for women). Multivariate analysis showed the following preoperative risk factors for the training set: sarcopenia, and the preoperative T (cT) and N stage (cN), and we developed a prognostic scoring system based on these findings. 3-year OS rates for low-, intermediate- and high-risk patients were 89%, 77.9% and 54.8%, respectively($p<0.001$); and 3-year RFS rates were 86.9%, 75.3% and 49.3%, respectively($p<0.001$). The area under the receiver operating characteristic curves were 0.708 for 3-year OS rates and 0.713 for 3-year RFS rates. There were no significant differences between the observed and predicted incidence rates for 3-year OS and RFS in the validation set.

Conclusion: The prognostic scoring system combining sarcopenia with the cT and cN system can accurately predict 3-year OS and RFS rates after radical gastrectomy for GC.

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Poster No.: PP 086
[Stomach]

A preoperative scoring system to predict the risk of No.10 lymph node metastasis for advanced upper gastric cancer: A large case report based on a single-center study

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Introduction: To investigate upper stomach carcinoma risk factors for No. 10 lymph node metastasis, and establish a preoperative scoring system to predict No.10 lymph node metastasis.

Method: Between January 2011 and December 2014, we prospectively collected and retrospectively analyzed the medical records of 398 patients with upper-third gastric cancer (GC) who underwent laparoscopic spleen-preserving hilar lymph-node dissection (SHLND). We use the logistics regression analysis risk factors of No. 10 lymph node metastasis to establish and verify a new scoring model.

Result: The preoperative risk factor analysis for No. 10 lymph node metastasis in the modeling group showed that tumor size, preoperative T staging, and preoperative N staging are independent risk factors. To establish a new scoring system, we divided the modeling group of patients into three levels: low risk (0-2 points), intermediate risk (3 points), and high risk (4 points). The No. 10 lymph node metastasis rates of the low risk, intermediate risk and high risk groups were 13.9% 2.84% and 13.9%, respectively, and this difference was statistically significant ($P<0.001$). The value for the area under the ROC curve of the scoring system was 0.820, and there were no statistically significant differences between the observed and predicted incidence rates for No. 10 lymph node metastasis in the validation set ($P>0.05$).

Conclusion: The scoring system comprising the tumor size, preoperative T stage and N stage is a simple and effective method to predict the risk of No. 10 LN metastasis and to preoperatively select cases suitable for laparoscopic spleen-preserving SHLND.

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Poster No.: PP 087
[Stomach]

A simplified and efficient modified TNM staging system for patients with gastric cancer after radical gastrectomy

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Introduction: The seventh edition of the American Joint Committee on Cancer (AJCC) staging classification for stomach carcinoma has been used worldwide. However, there were still some controversies regarding this staging system. We investigated the validity of the 7th edition of the American Joint Committee on Cancer (AJCC) classification system and developed a modified TNM (mTNM) staging system for improving the prognostic prediction of patients with gastric cancer after curative surgery.

Method: Data from 4957 consecutive patients who underwent radical gastrectomy between 1997 and 2014 were retrieved from our database. Kaplan-Meier analyses were performed for each subject's TNM stages in a comparative manner. The relative discriminatory abilities of different staging systems were assessed using the Akaike's Information Criterion (AIC) and Harrell's concordance index (c-statistic). Additional external validation was performed using a dataset (n=3803) from the National Cancer Institute's Surveillance, Epidemiology, and End Result (SEER) database.

Result: The 5-year overall survival (OS) of the entire cohort was 58.0%. according to the 7th of the AJCC guidelines, the OS rate in each subgroup of stage IIIB and stage IIIC patients was significantly different, and for patients with the same pN stages, the pT4a and pT4b groups had a similar 5-year OS ($P>0.05$). Basis on the survival data, we revised the stage grouping system. In the mTNM staging system, the overall survival rates were without statistics different for each subgroup in the same TNM stage. The mTNM staging exhibited superior prognostic stratification with lower AIC values and a higher c-statistic compared to the seventh edition TNM classification. Similar results were found in the external validation dataset from the SEER database.

Conclusion: The seventh edition AJCC TNM classification is associated with some stage migration. Our modified TNM staging system seems to be simplified yet showed better predictability of overall survival for patients with gastric cancer after radical gastrectomy.

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Poster No.: PP 088
[Stomach]

Development of a nomogram for predicting individual survival after curative resection in patients with linitis plastic: Compared with the 7th AJCC TNM staging system

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Introduction: Current staging for gastric adenocarcinoma do not differentiate between linitis plastic (LP) and non-LP cancers. However, there are still many controversies over the classification system for LP.

Method: Clinicopathological data from LP patients who underwent a surgery with curative intent at Fujian Medical University Union Hospital from 2006 to 2014 were used to develop the original nomogram based on a Cox regression model. The predictive accuracy and discriminative ability were measured by concordance index (C-index) and compared with the 7th AJCC TNM staging system.

Result: A total of 265 patients were included in this study. The group included 190 male and 75 female with a median age of 61years (interquartile range 21–89). The median follow-up time was 51 months (interquartile range 2-111). The 1-year、3-year、5-year overall survival (OS) was 67.5%、25.7%、10.6% and 1-year、3-year、5-year recurrence-free survival (RFS) was 57.7%、23.4%、9.8%. Multivariate analyses confirmed that BMI, R0 resection, ASA, T stage, and N stage were independent prognostic factors for OS; R0 resection, ASA、T stage, and lymphovascular invasion were independent prognostic factors for RFS. The calibration curves for probability of 3-, and 5-year OS and RFS showed optimal agreement between nomogram prediction and actual observation. The C-index of the nomogram was higher than that of the 7th AJCC TNM staging system for predicting OS (0.73vs0.66, $p<0.001$) and RFS (0.72vs0.62, $p<0.001$), respectively. The stratification into different risk groups allowed significant distinction between survival curves within respective 7th AJCC TNM categories.

Conclusion: A novel nomogram was developed to predict individual OS and RFS after R0 resection for LP. This nomogram would be helpful in the assessment of individual risks and in the consideration of additional therapy in clinical practice.

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Poster No.: PP 089
[Stomach]

Development of a novel preoperative unplanned reoperation risk score for gastric cancer patients undergoing laparoscopic and open gastrectomy.

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Introduction: To evaluate the risk-factors of unplanned reoperation (URO) for gastric cancer patients undergoing laparoscopic gastrectomy (LAG) and open gastrectomy (OG) and develop a new scoring system to predict the risk of URO.

Method: The data of 1361 patients who underwent LAG and 1361 patients who underwent OG were selected using the propensity score-matching from a database prospectively constructed between 2005 and 2014. The outcomes of URO were compared between the matched groups, and a predictive scoring system was established.

Result: Among the 2722 patients, 39(1.4%) required URO (LAG 1.2% vs. OG 1.6%, p=0.420). Among the 39 cases, the main causes for URO were intraabdominal bleeding, anastomotic leakage and intestinal obstruction in 48.7%(19/39), 12.8%(5/39) and 12.8%(5/39), respectively. The proportion of intraabdominal bleeding was higher (p=0.025) and the hospital stay was shorter (p=0.040) in the LAG group than the OG group. Multivariate analysis showed that age (p=0.001), gender (p=0.021), body mass index (BMI) (p=0.005) and the Charlson score (p=0.015) were independent risk factors for URO. Each of these factors contributed 1 or 2 point to the risk score. Based on these factors, we developed the following predictive scoring: low risk (1 point or less), intermediate risk (2 points), and high risk (3 points or more). The observed risks of URO were 0.6%, 2.9% and 6.2% for the low-, intermediate- and high-risk categories, respectively. The area under the receiver operating characteristic curve for the logistic regression model and the simplified prediction model were 0.738 and 0.728, respectively.

Conclusion: The URO rate after LAG was similar to OG but with a faster recovery after URO than OG. Based on four independent risk factors, including age, gender, BMI, and charlson score, we established a simple and applicable scoring model to predict the risk of URO for gastric cancer patients undergoing gastrectomy preoperatively.

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Poster No.: PP 090
[Stomach]

Different long-term oncologic outcomes after radical surgical resection for neuroendocrine carcinoma and adenocarcinomas of stomach—A Propensity Score Case-Match Approach

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Introduction: To explore the differences of in long-term outcomes between gastric neuroendocrine carcinoma (GNEC) and gastric adenocarcinoma (GAC) and the impact factors after radical gastrectomy.

Method: We prospectively collected and retrospectively analyzed the data of clinicopathologyclinicopathological data, which were derived from 100 GNEC patients and 3089 GAC patients with radical gastrectomy during between January 2006 and December 2013. The differences of long-term outcome differences between two the groups and impact factors were analyzed by 1:2 propensity score matching (PSM).

Result: There were statistics significantlyStatistically significant difference between two the groups were noted in terms of gender, the American Society of Anesthesiologists (ASA) scores, tumor size, T stage, N stage, TNM stage and operation type. The differences turned to nowere not significant after matching. The 3-year and 5-year overall survival rates in the GNEC group were worse than those inreduced compared with those of GAC group, whereas the disease-free survivals (DFS) rates were similar. Although mean recurrence times were similar, the mean post-recurrence survival (PRS) of the GNEC group was significantly worse than that of the GAC group (5.2 vs. 14.8 months, $p<0.001$). There was aA strong negative correlation was noted between a high Ki-67 positive index and overall survival time. Cox regression analysis indicated that the Ki-67 positive index was an independent factor influencing patient's PRS.

Conclusion: The long-term oncologic outcome of GNEC was worse than GAC, which may be relative to its shorter reduced PRS. High A high Ki-67 positive index was an independent factor influencing patient's PRS.

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Poster No.: PP 091
[Stomach]

Do Preoperative Enlarged LNs Affect the Long-term Outcome of Laparoscopic Radical Gastrectomy for Gastric Cancer? A Propensity Score-matched Case-Control Study

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Introduction: To investigated the oncologic efficacy of laparoscopic radical gastrectomy (LAG) for gastric cancer(GC) with preoperative enlarged lymph nodes (LNs).

Method: We prospectively collected data from 855 patients who underwent LAG for GC. Patients were divided into a large (>10 mm) and a small (≤10 mm) LN group (LG and SG) based on the long-axis diameter of the LN as measured preoperatively. The long-term outcomes were compared with the matched groups using a 1:1 propensity score matching method.

Result: Before matching, the LG was associated with more LNs retrieved than the SG, whereas after matching, the number of LNs retrieved was similar between the two groups and remained similar with increases in the number of enlarged LN areas. Before matching, patients in the LG demonstrated a significantly lower 3-year overall survival rate than those in the SG (P<0.001); additionally, in the LG, 3-year overall survival rates were similar among patients with a different total number of enlarged LN areas. After matching, the 3-year overall survival rate of the LG was close to that of the SG (81.1% vs. 72.4%, *P*=0.066). A stratified analysis according to the only independent prognostic factor (pTNM stage) demonstrated that the 3-year overall survival rates of each stage were similar between the LG and SG.

Conclusion: LAG is a procedure that is also safe and feasible for GC with preoperative enlarged LNs. Furthermore, the total number of areas with enlarged LNs had no impact on the long-term outcome of patients in the same tumor stage.

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Poster No.: PP 092
[Stomach]

Is laparoscopic radical gastrectomy more suitable than open gastrectomy for advanced gastric cancer with enlarged suprapancreatic lymph nodes

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Introduction: To compared the oncologic outcome of laparoscopic radical gastrectomy (LG) with open radical gastrectomy (OG) for gastric cancer with preoperative enlarged lymph nodes (LNs).

Method: The long-term outcomes of LG (n = 855) versus OG (n = 154) in gastric adenocarcinoma patients were analyzed retrospectively. Patients were stratified according to enlarged (>10 mm) and small (≤10 mm) LNs (ELN and SLN) based on the long-axis diameter of the LNs.

Result: The violin plot indicates that the distribution of ELN size was similar between two groups. Survival curves demonstrated that the overall survival (OS) in LG is enhanced compared with OG (p=0.034).A stratified analysis revealed that the OS was better in the LG group compared with the OG group for patients with ELNs (p=0.038). In a forest map analysis, the actual 3-year OS rate for LG was significantly increased compared with OG in enlarged suprapancreatic LN (ESLNs) patients. Stratified analysis based on different diameters of ESLNs revealed no difference in the actual 3-year OS rate between LG and OG for pI stage patients. For pII or pIII stage patients, the actual 3-year OS rate for LG was significant increased compared to OG with a diameter from 1.0 to 1.9 centimeters. However, the actual 3-year OS rate for LG was significantly reduced compared with OG when the size exceeded 2.5 centimeters.

Conclusion: For advanced gastric cancer with an ESLN diameter from 1.0 to 1.9 centimeters, LG could be chosen preferentially; nevertheless, OG was recommended when LN size exceeded 2.5 cm.

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Poster No.: PP 093
[Stomach]

Is three years duration of adjuvant Imatinib Mesylate treatment sufficient for patients with high-risk gastrointestinal stromal tumor? A study based on long-term follow-up

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Introduction: The therapy for gastrointestinal stromal tumors (GIST) has changed significantly since the use of Imatinib Mesylate (IM). However, the appropriate duration of receiving adjuvant IM for patients with high-risk GIST who underwent R0 resection is still controversial.

Method: From January 2005 to December 2014, 234 patients who underwent R0 resection and were treated with adjuvant IM at our institution were identified from a prospectively collected database. The effect of the medication duration on the long-term outcomes was analyzed.

Result: The 5 year recurrence-free survival (RFS) rate and overall survival (OS) rate in the whole groups were 76.2% and 83.4%, respectively. The patient's prognosis was improved due to the prolongation of the time of receiving the Imatinib treatment ($P<0.05$). According to the results of the risk stratification analysis, the outcomes of the moderate-risk patients who received IM adjuvant therapy was not statistically significant ($P>0.05$). However, in the high-risk patients, the RFS rates of the 1 year group, 1-3 years group, 3-5 years group and more than 5 years group were 36.5%, 68.7%, 71.2% and 90.8%, respectively, and the OS rates were 36.7%,76.6%, 84.0% and 97.4%, respectively ($P<0.001$). Additionally, linear regression analysis showed that the long-term outcomes of patients with high-risk GIST significantly improved due to prolonged adjuvant IM treatment durations ($P<0.05$). Multivariate COX regression analysis in the patients with high-risk GIST showed that tumor located in small intestine was an independent risk factor, while receiving IM treatment was an independent protective factor for prognosis.

Conclusion: The long-term outcomes of patients with high risk GIST improved due to the prolongation of the IM treatment. To reduce the recurrence and improve the long-term survival, we suggest that patients with high-risk GIST receive Imatinib treatment for at least 5 years.

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Poster No.: PP 094
[Stomach]

Optimal extent of abdominal lymph node dissection for advanced Siewert type II and III esophagogastric junction carcinoma

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Introduction: The aim of this study was to clarify the optimal abdominal lymphadenectomy for advanced in Siewert types II and III adenocarcinoma of the esophagogastric junction (AEG).

Method: From June 2007 to June 2014, the data of 573 patients who underwent radical total gastrectomy due to advanced Siewert types II and III was collected and retrospectively analyzed. The incidence of abdominal lymph node metastasis (LNM) of each station were compared between patients with Siewert type II and III AEG. And we used the therapeutic index to assess the efficacy of abdominal lymph node dissection of each station.

Result: Of the 573 patients, 247 (44.0%) had Siewert type II AEG and 326 (56.0%) had type III AEG. Among them, 252 patients carried out abdominal D2 lymphadenectomy and 321 patients underwent D2 lymphadenectomy without No. 10 lymphadenectomy (D2-). The mean number of dissected LNs was 34.6±13.0, and the numbers of dissected lymph nodes at each lymph node station did not significantly differ between patients with type II and III AEG ($P > 0.05$). The therapeutic index of No.1-3, 7, 9 and 11 LNs was over 4.0 in advanced type II AEG cases, while the index was higher than 4.0 in No.1-4 and 7-11 LNs in patients with type III AEG. The index of No.10 LNs was more than 10 in type III AEG subgroups with primary tumors invading the serosa layer (15.6), undifferentiated cancers (10.9) and tumor size ≥50mm (10.5).

Conclusion: Dissection of No. 1-3, 7, 9 and 11 LNs would obtain highest survival benefits regardless of the Siewert subtype. Patients with type AEG, especially those with primary tumors invading the serosa layer, undifferentiated cancers and tumor size ≥50mm might obtain relatively higher survival benefits from No. 10 lymphadenectomy.

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Poster No.: PP 095
[Stomach]

Randomized, controlled phase III trial comparing 3D and 2D Laparoscopic Gastrcetomy for Gastric Cancer

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Introduction: To determine the relative safety and efficacy of three-dimensional (3D) laparoscopic gastrectomy (LG) and two-dimensional (2D) laparoscopic surgery in patients with gastric cancer.

Method: A large-scale, phase III, prospective randomized controlled trial was conducted.

Result: A total of 438 patients were randomized (3D group: 219 cases; 2D group: 219 cases) between January 1, 2015 and April 1, 2016. Nineteen patients were excluded. Finally, data from a total of 419 patients were analyzed (3D group: 211 cases, 2D group: 208 cases). There were no significant differences between the two groups regarding the operation time (3D vs. 2D, 176±35 min vs. 174±33 min, p=0.562). The analysis of operation time was further stratified by patient body mass index (BMI) and operative region, and the results showed that the splenic hilar regional lymph node dissection time was significantly lower in the 3D group than in the 2D group for BMI $^{3}25$ kg/m^{2} (29.4±7.8 min vs. 23.3±6.4 min, p=0.024). The intra-operative blood loss in the 3D group was significantly lower than that in the 2D group (61±83 ml vs. 82±119 ml, p=0.045). Further analysis suggested that the use of 3D laparoscopic surgery was a protective factor against excessive blood loss ($^{3}200$ ml).

Conclusion: The use of 3D LG not only significantly reduces the operation time for a complicated region but also provides the benefit of less intra-operative blood loss and a lower occurrence of excessive bleeding than the use of conventional 2D LG.

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Poster No.: PP 096
[Stomach]

The long-term prognosis and risk factors for splenic hilar lymph node metastasis in patients with gastric cancer: a systematic review and meta-analysis

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Introduction: The Japanese Gastric Cancer Association guidelines stipulate that D2 gastrectomy is required for treating advanced gastric cancer. However there is controversy regarding lymph node dissection around the splenic artery and hilum in advanced astric carcinoma. The purpose of this study was to investigate the long-term prognosis and risk factors for splenic hilar lymph node metastasis(SHM) in patients with gastric cancer.

Method: A systematic search of PubMed, EMBASE, and Web of Science from January 1994 to June 2016 was conducted. All original studies comparing splenic hlar lymph node metastasis(metastasis group) to the non-metastasis(non-metastasis group) were included by critical appraisal. The following evaluated endpoints were assessed: prevalence of splenic hilar lymph node metastasis rate, 5 year overall survival rate and risk factors of SHM.Data synthesis and statistical analysis were carried out using R environment 3.0.1 softw.

Result: a total of 10 studies were included,representing 1,910 individuals. The pooled prevalence of lymph node metastasis at the splenic hilus was 16% (95% confidence intervals (CI): 5, 26%),in advanced proximal third gastric carcinoma.Compared with non-metastasis group, metastasis group had worse long-term prognosis [HR=0.34, 95%CI(0.29, 0.42);P<0.05]. And our meta-analysis showed that, tumor located at greater curvature [RR=0.49, 95%CI(0.37,0.65); P<0.05],proximal third gastric carcinoma[RR=0.49, 95%CI(0.29,0.83); P<0.05], Borrmann IV [RR=0.31, 95%CI(0.16,0.63); P<0.05], depth of invasion T4 [RR=0.31, 95%CI(0.22,0.43); phatic invasion [RR=0.64, 95%CI(0.49,0.86); P<0.05] and vascular invasion [RR=0.44, 95%CI (0.22,0.87); P<0.05] were statistically significantly associated with splenic hilar lymph node metastasis.

Conclusion: The long-term prognosis of gastric cancer patients who had SHM was worse than those who had non-metastasis of splenic hilar lymph node.we identified risk factors consistently associated with SHM in patients with gastric cancer. These factors help to offer doctors postoperative clinical treatment for SHM in patients with gastric cancer.

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Poster No.: PP 097
[Stomach]

The Preoperative Blood Lymphocyte-to-monocyte Ratio Acts as a Superior Prognostic Factor and Predicts Tumor Metastasis in Gastric Neuroendocrine Neoplasms after Surgery

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Introduction: A low LMR has been reported to be a predictor of poor survival in patients with various cancers but has not been extensively examined in patients with g-NENs. The aim of this study is to investigate the prognostic significance of the preoperative blood lymphocyte-to-monocyte ratio (LMR) in gastric neuroendocrine neoplasms (g-NENs).

Method: We enrolled 177 patients who had been diagnosed with g-NENs and undergone radical surgery. Receiver operating characteristic curve analysis was used to identify the optimal value for the LMR. Univariate and multivariate survival analyses were used to identify prognostic factors. A nomogram was adopted to predict recurrence free survival (RFS) and overall survival (OS) after surgery.

Result: The LMR was significantly lower in patients with g-NENs than in matched normal volunteers (NVs) (P<0.05) and was associated with age, tumor site, tumor size, depth of invasion, the lymph node ratio (LNR),and lymphovascular invasion (all P<0.05). Multivariate analysis demonstrated that the LMR was an independent prognostic factor for RFS and OS. The concordance index (C-index) of the nomograms for RFS (OS), which included the lymph node ratio, histological type and the LMR, was 0.776 (0.760), which was higher than the C-index of the traditional TNM staging system [0.678 (0.667)]. The recurrence rate was 38.9% (69/177), and the median time to recurrence was 10 months. We noted a significant correlation between the LMR and tumor recurrence, especially liver, peritoneal and lymph node metastases (all P<0.05).

Conclusion: As an independent prognostic factor for survivals in patients with g-NENs, the LMR combined with the lymph node ratio and histological type had a more superior ability to predict clinical outcomes in post-surgery patients than the traditional TNM staging system. Patients with low LMRs require close surveillance to identify tumor recurrence early.

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Poster No.: PP 098
[Stomach]

Trends of incidence and survivals for gastric neuroendocrine neoplasms: An analysis of 3523 patients in the SEER database

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Introduction: The aim of this study is to investigate trends in incidence and survivals for gastric neuroendocrine neoplasms (g-NENs).

Method: Patients diagnosed with g-NENs (n=3523) were identified from the Surveillance, Epidemiology and End Results (SEER) database. Patients diagnosed with g-NENs (n=199) in our department were assigned as validation set. Univariate and multivariate survival analysis were used to identify prognostic factors. A nomogram was adopted to predict disease special survival (DSS) and overall survival (OS).

Result: The incidence of g-NENs is steadily increasing over time at a rate higher than any other cancer [annual percentage change (APC) = 6.3, 95% confidence interval (CI) 5.6–7.0]. The 1-, 3-, 5-years of DSS (OS) rates were 87% (84.3%), 78.6% (71.9%) and 70.6 (53.7%), respectively. The multivariate analysis identified that patient's age, sex, T stage, M stage, and histological type were the common independent prognostic factors for both DSS and OS (all $P<0.05$). The concordance index of the nomograms for DSS (OS) in the training set was superior to that of the 7th edition of AJCC staging system [0.899 (0.849) versus 0.864 (0.783)]. Calibration plots of the nomograms showed that the probability of DSS (OS) corresponded to actual observation closely in both training set and validation set.

Conclusion: The incidence of g-NENs has been steadily increasing at a high rate over the past four decades. The nomograms based on SEER database had a more superior ability to predict clinical outcomes for g-NENs patients than the traditional TNM staging system.

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Poster No.: PP 099
[Stomach]

The short-term outcome and quality of life after isoperistaltic jejunum-later-cut overlap method ——A new esophagojejunostomy anastomosis after totally laparoscopic total gastrectomy: a Propensity Score-Matched Analysis

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Introduction: To compare the short-term outcome and quality of life of patients after totally laparoscopic total gastrectomy(TLTG) who used isoperistaltic jejunum-later-cut overlap mothed and patients after laparoscopic assisted total gastrectomy who used traditional Roux-en-Y anastomosis.

Method: From April 2014 to March 2016, 507 patients who underwent laparoscopic radical gastrectomy (D2) (LG) was retrospectively analysed. The patients was grouped according to the way of anastomosis that who used isoperistaltic jejunum-later-cut overlap mothed after TLTG was Group T(n-51) and who used Roux-en-Y anastomosis after LATG was Group A(n=456). The short-term outcomes and quality of life(Qol) were compared between the two groups after 1:2 propensity-score matching. QoL was assessed by the European Organization for Research and Treatment of Cancer QoL Questionnaire (QLQ)-C30 and QLQ-STO22.

Result: Before matching, age,sex,tumor size,tumor location, preoperation albumin were significantly different between the two groups($P < 0.05$). After propensity-score matching, the two groups were well balanced in clinicopathologic characteristics. Before matching,the blood lost volume in Group T is significantly less than Group A($P < 0.05$),After matching, besides the blood lost volume,the postoperative day in Group T is also significantly less than Group A($P < 0.05$). After matching,Group T shows better Qol in Pain and Dysphagia.Among the items constituting Pain and Dysphagia, Group T tended to exhibit the better Qol('Have you felt pain' and 'Have you felt difficult to eat solid food') ($P < 0.05$).

Conclusion: Using isoperistaltic jejunum-later-cut overlap method to performe digestive reconstruction after TLTG can reduce the blood loss volume and relieve the pain and dysphagia to improve the Qol after LG.

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Poster No.: PP 100
[Stomach]

No Surgical Complications in 70 Consecutive Laparoscopic Sleeve Gastrectomies for Morbid Obesity: The Significance of Reinforcement Suture

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Introduction: Laparoscopic sleeve gastrectomy (LSG) is becoming a popular bariatric procedure. However, there exists a low but potential serious risk of surgical complications.

Method: In our past 60 consecutive LSG cases, we adopted a strict standard of procedure, which included routine reinforcement of staple line and intraoperative endoscopic checking. We reported our short-term result after LSG and compared to other published LSG series. The individual types of complications for the published series were evaluated.

Result: In the present series, no surgical complication or death occured. No patients needed reoperation. All the patient could tolerate water intake within 24 hours after surgery. The mean hospital stay was 1.2+/-0.8 days. No patients need prolonged use of proton pump inhibitor for 6 months after surgery. Published LSG complications were diverse, with the most common being reoperation, occurring after 3.6% of procedures.

Conclusion: LSG is a safe procedure. Zero complication rate could be achieved, with staple line reinforcements and intraoperative endoscopy taken into account.

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Poster No.: PP 101
[Stomach]

Comparison the AJCC sixth and seventh editions for T1 gastric cancer: A long-term follow-up study of 2124 Patients

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Introduction: The aim of this study was to establish an appropriate TNM system for early gastric cancer.

Method: We evaluated 2124 patients who had undergone gastrectomy for early gastric cancer between 1989 and 2000

Result: Using the staging system of the AJCC seventh edition we found no significant differences in tumor recurrence and survival between N1 and N2, or N3a and N3b cancers, whereas the survival curves for N2 and N3 cancers were quiet different. Similarly, using the classification of the AJCC sixth edition there was no significant difference in survival between the N2 and N3 groups, whereas the survival curves of N1 vs. N2 or N3 cancers were quite different.

Conclusion: The classification of the AJCC sixth and seventh editions has a limitation for T1 gastric cancer (EGC

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Poster No.: PP 102
[Stomach]

Totally laparoscopic total gastrectomy using the overlap method; early outcomes of 50 consecutive cases

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Introduction: Construction of an esophagojejunostomy is still a challenging procedure in totally laparoscopic total gastrectomy (TLTG) and there is no standard anastomosing method. The aims of this study were to describe our TLTG with the overlap method using a linear stapler and report surgical outcomes.

Method: From January 2015 to April 2016, 50 patients underwent TLTG using the overlap method for gastric cancer. The procedures were performed by a single surgeon and the patients' medical records were reviewed. Their clinicopathologic characteristics, operation time, date of flatus, hospital stay, morbidity, and mortality were analyzed.

Result: The median age and body mass index were 56 years and 23.5, respectively. Stage 1A tumors were the most common. Mean operating time was 144.6 min and no cases required changing to open laparotomy during surgery. On average, flatus occurred 3.5 days after surgery and patients were discharged 6.8 days after surgery. No patient experienced anastomosis leakage, stricture, duodenal stump leakage, luminal bleeding, pancreatic fistula, or wound problems. There were two cases of intra-abdominal bleeding that required additional surgery. Intra-abdominal fluid collection and mechanical ileus occurred in two patients, respectively, and were successfully managed with conservative treatment.

Conclusion: We reported favorable surgical outcomes of TLTG using the overlap method. It is a feasible and safe option for treatment of gastric cancer.

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Poster No.: PP 103
[Stomach]

Minimally invasive abdominal and left thoracic approach (MALTA) for adenocarcinoma of the esophagogastric junction with esophageal diverticulum: A case report.

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Introduction: We report a novel technique for combined use of laparo- and thoracoscopy for the adenocarcinoma of esophagogastric junction (EGJ) with esophageal diverticulum.

Method: Patient: In 70's years old male, 15mm 0-Is+IIc lesion of EGJ and a diverticulum in the right wall of the lower esophagus were pointed out by esophagogastroduodenoscopy. Since the neoplasm was well differentiated adenocarcinoma and limited in the mucosal layer (M), he underwent endoscopic submucosal dissection. Because the pathological diagnosis of the specimen revealed to have invasion to lymphatic vessels (ly (+)), he was referred to our department for additional resection.

Result: Surgical technique: Patients were placed in the reverse Trendelenburg and left upper body lifted position with spread legs under general anesthesia. Laparo- and thoracoscopic proximal gastrectomy and lower esophagectomy with D1 lymph nodes dissection reconstructed with double tract reconstruction was performed. The surgery was started by laparoscopic proximal gastrectomy with five ports. Then, we added 3 ports in 8th, 9th, and 11th intercostal space in the same body position, and performed thoracoscopic lower esophagectomy and lymph node dissection of lower mediastinum under artificial pneumothorax with intrathoracic pressure of 8-10mmHg. Finally intrathoracic circular stapling esophagojejunostomy was performed using a transoral anvil (OrVil™) and circular stapler (EEA25™) using the laparo- and thoracoscopic technique. The operation time was 339 min and blood loss was 40g. He was discharged on the 23th day after the operation without any postoperative morbidities.
Pathology: Pathological diagnosis of the specimen confirmed that there was no residual adenocarcinoma nor metastasis of lymph nodes. The diverticulum was diagnosed as pseudodiverticulum.

Conclusion: MALTA for adenocarcinoma of EGJ is technically feasible, even with lower esophageal diverticulum.

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Poster No.: PP 104
[Stomach]

Outcomes of the functional side-to-side esophagojejunostomy using endoscopic linear stapler in totally laparoscopic total gastrectom: experience at a large–volume center.

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Introduction: Totally laparoscopic total gastrectomy (TLTG) is a more complicated procedure than laparoscopic assisted total gastrectomy (LATG) for gastric cancer. The aim of study is to introduce the technical details of our method of TLTG with functional side-to-side esophagojejunostomy (EJ) using endoscopic linear and evaluate the safety and efficacy of our procedure with it by comparing the outcomes of laparoscopic assisted total gastrectomy (LATG) using circular stapler.

Method: Between August 2004 and October 2015, 421 patients underwent TLTG and 266 patients underwent LATG for middle or upper gastric cancer in one institute. The clinical characteristics, surgical outcomes and postoperative symptoms of two groups were compared retrospectively.

Result: As compared with the LATG group, the TLTG group had a significantly shorter operative time, less dropping the hematocrit, shorter bowel movement, less postoperative pain score, shorter postoperative hospital stay, less intraoperative event and less complication for the EJ (P<0.005). Of the 421 TLTG patients, none of patients required conversion to open surgery. Regarding surgical outcomes, there were no significant differences in the postoperative symptoms between two groups.

Conclusion: TLTG is a feasible and efficacy procedure for the treatment of middle or upper gastric cancer. Further consider refinement for techniques of EJ are required for safe application of TLTG.

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Poster No.: PP 105
[Stomach]

Lymph Node Dissection using Bipolar Vessel-Sealing Device during Reduced Port Laparoscopic Distal Gastrectomy for Gastric Cancer : Result of a Pilot Study from a Single Institute

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Introduction: The electrothermal bipolar vessel-sealing device (BVSD) is known to supply a strong vessel-sealing power. However, only few studies have reported lymph node dissection (LND) using only BVSD during laparoscopic surgery for gastric cancer. The purpose of this study was to investigate the feasibility of LND using BVSD during reduced port laparoscopic distal gastrectomy for gastric cancer.

Method: From May 2015, patients in whom three- or single-port laparoscopic distal gastrectomy had been engaged for gastric cancer enrolled in this study. We performed D1+ or D2 LND using only LigaSure™ Maryland (Medtronics, Minneapolis, MN, USA), a recently developed BVSD. Clinical outcomes of these patients were investigated.

Result: From May 2015 to November 2016, 20 patients were enrolled in this study. The mean operation time was 262.6 ± 36.6 (200-340) min. The mean time for LND was 124.7 ± 19.2 (93-171) min. Only one patient had a morbidity of Clavien-Dindo grade more than II. No mortality was observed in all patients. The mean number of retrieved lymph nodes was 46.8 ± 22.8 (15-105).

Conclusion: LND using the Mayland jaw-type BVSD was feasible during reduced port (single- or three-port) laparoscopic distal gastrectomy for gastric cancer. Objectively evaluating the potential advantages of BVSD in reduced port laparoscopic surgery is necessary.

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Poster No.: PP 109
[Colorectal]

Long-term Results of Single Incision Laparoscopic Colorectal Cancer surgery

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Introduction: The safety and efficacy of laparoscopic colon cancer surgery were already proved by multi-center prospective randomized studies compared to conventional open surgery in colon cancer. In the advent of single incision laparoscopic surgery, this is another method of minimally invasive colo-rectal surgery. The purpose of study is to evaluate oncologic safety and operability of single incision laparoscopic colo-rectal cancer surgery.

Method: From the April 2011 to July 2013, 14 cases of colo-rectal cancer operations were performed by single incision laparoscopic surgery. The 7 male and 7 female patients were enrolled. Mean age was 75.6. The 10 patients were hypertension. The two patients were diabetes mellitus. All procedures were performed by straight laparoscopic tools without any curved instruments.

Result: The mean operation time was 240 minutes and mean blood loss was 150cc. The procedures were 7 right hemi-colectomies, 5 anterior resections, one total colectomy with ileo-rectal anastomosis and one extended left hemi-colectomy. The mean number of harvested lymph nodes were 36. The two patients were stage 1. The stage 2 was seven and stage 3 was five respectively. Mean proximal and distal margins were 9.5cm and 8.6cm individually in fixed specimen. The mean tumor size was 4.25*3.86cm. The mean follow-up period was 49.7 months with one recurrence. There were no operation related complication and death.

Conclusion:
The single incision laparoscopic surgery is safe and feasible procedure for colo-rectal cancer in my experience with comparable outcomes.

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Poster No.: PP 110
[Colorectal]

Robot-Assisted Lateral Pelvic Lymph Node Excision In Patients With Advanced Rectal Cancer: a personal experience of 11 cases.

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Introduction: Lateral pelvic lymph node (LPLN) of low rectal cancer is rare, but known to be associated with poorer clinical outcomes. LPLN excision (LPLNE) is not routinely performed, because of broad application of preoperative chemo-radiation therapy and technical difficulty of LPLNE. The aim of the present study is to evaluate the technical feasibility, safety, and short-term outcome of robot-assisted LPLNE following total mesorectal excision (TME) in patients with advanced rectal cancer.

Method: Clinical data on rectal cancer patients who underwent robot-assisted TME with LPLNE from Apr 2014 to Aug 2015 were reviewed. A total of 11 patients were preoperatively diagnosed for LPLN metastasis. Data regarding patient demographics, operation time, LPLN status, postoperative morbidity and mortality, and short-term oncologic result were analyzed.

Result: Among 11 patients with LPLNE, preoperative chemo-radiotherapy was performed in 7 patients (63.6%). Mean tumor location from anal verge was 4.9cm (range 3-7). Mean operative time was 341 min (range 217-450 min), and mean time of unilateral LPLNE was 41.3 min (range 22-64). LPLNE was bilaterally performed in 5 patients (45.4%). The mean number of each side of LPLNs harvested was 10.4. A total of five patients (45.4%) had lymph node metastasis, and a mucin pool without viable tumor cell in a LPLN was found in a patient proven to negative metastasis of LPLN. Of 10 patients with rectal anastomosis, eight patients (80%) had diverting ileostomies. Postoperative mortality and morbidity was 0 and 27.3%, respectively. Recovery after operation was rapid, and mean postoperative hospital stay was 8.6 days (range 5-33 days). During 10 months of mean follow-up period, one patient had a liver metastasis and recurrence of LPLN was not observed.

Conclusion: Robot-assisted LPLNE following TME is safe and feasible, and showed acceptable short-term outcomes. Further prospective controlled study and long-term follow-up evaluation is needed to expand the application of this approach.

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Poster No.: PP 111
[Colorectal]

The advantage of puncture-drainage treatment of appendicular abscess

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Introduction: To study the effectiveness of puncture-drainage treatment of appendicular abscess.

Method: During the period 2012-2016, in surgical departments of Dushanbe city ambulance under ultrasound guidance treated 13 patients with appendicular abscess. The age of patients ranged from 16 to 67 years. Men were 9 (69.2%), women - 4 (30.8%). Size of abscesses up to 4.0 cm in 7 (53.8%) patients, from 4.0 to 6.0 cm - 4 (30.8%), over 6.0 cm - in 2 (15.4%). In abscesses up to 4.0 cm treatment was performed by puncture, and in other cases the draining method.

Result: In the treatment of appendicular abscess under ultrasound guidance in all cases achieved recovery. In patients with abscesses from 4.0 to 6.0 cm (n = 7) and more than 6.0 cm (n = 2) demand from 1 to 4 punctures under ultrasound guidance for the full rehabilitation of the abscess. Almost all patients with symptoms of intoxication felt better after the first manipulation. Using color Doppler mapping enabled, to improve the quality of visualization of puncture instruments, assess the adequacy of the installation of drains in the abscess cavity, in the dynamics of clotting to control the puncture channel, identify the development of local complications before the onset of clinical symptoms.

When draining method of treatment recovery was achieved in 83,3% (n = 5) of cases. Complications in the form of hemorrhage at the puncture channel was observed in 1 (7.7%), drainage migration - in 2 (15.4%), which were conservatively and accordingly corrected by ultrasound navigation.
During the puncture-draining manipulation complications, which could lead to adverse effects, were not observed.

Conclusion: Puncture-drainage treatment of appendicular abscess under ultrasound guidance in contrast to conventional surgical methods are technically simple, requires no anesthetic support, is well tolerated by weakened. elderly patients with severe comorbidities.

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Poster No.: PP 112
[Colorectal]

COMBINED INTERVENTIONAL PROCEDURES UNDER ULTRASOUND CONTROL AND VIDEOLAPAROSKOPY IN THE TREATMENT OF APPENDICULAR ABSCESS

Farukh Makhmadov, Farukh Gafurov
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Introduction: Explore the benefits of combined interventional procedures under ultrasound guidance and videolaparoskopy in the treatment of appendicular abscess.

Method: There were analyzed the results of 37 patients with appendicular abscess treated by Combined interventional procedures under ultrasound guidance and videolaparoskopy. The age of patients ranged from 16 to 62 years. Men were 16 (43.2%), women - 21 (56.8%). In 14 (37.8%) cases of appendicular observed pattern, and in 23 (62.2%) - per appendicular abscess.

Result: The scan stage, 13 (35.1%) of patients with atypical variants of the appendix locations have been identified, and, accordingly, appendicular abscess, including pelvic location - in 5 (13.5%), obstructive - 6 (16.2%) and retrotcecal - 2 (5.4%). Percutaneous ultrasound done in operation hall to 26 (70.3%) patients with appendicular abscess and per appendicular abscess performed. Percutaneous intervention in detecting appendicular abscess under ultrasound guidance Centre done in 11 (29.7%) patients. In 2 (5.4%) cases patients having a preoperative signs of peritoneal irritation was not observed, and an abscess size of no more than 5.0 cm, which holds a puncture sanitation of purulent cavity. In the other 9 (24.3%) when the abscess is larger than 5.0 cm in diameter - was performed drainage. In 2 (5.4%) patients reached the size of the abscess 8.0-10.0 cm, for a thorough reorganization of the cavity and the evacuation of fluid there was a necessity of installing a second or double-lumen drainage.
In the postoperative period, there were 2 (5.4%) complications in the form of infiltration and accumulation of fluid in the pelvic cavity that were eliminated conservatively.

Conclusion: Combined interventional procedures under ultrasound guidance and videolaparoskopy allows precisely and adequately drain the abscess cavity with minimal trauma and duration of the intervention, which is important in patients with complicated forms of acute appendicitis.

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Poster No.: PP 113
[Colorectal]

ONE STAGE OPERATIONS OF LEFT SIDED TUMOR COLONIC OBSTRUTION

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Introduction: The improvement of immediate results of surgical treatment of left-sided colonic obstruction tumor.

Method: We have the experience of diagnosis and treatment of 64 patients with left-sided colonic obstruction tumor. There were 29 (45.3%) men, women - 35 (54.7%). More than 63% of patients were patients of elderly and senile age. On the first day 14.1% of the patients were hospitalized onset of the disease, and in the first 3 days, about 82% and only 3.9% of the patients were hospitalized for 4 days or more. In 18 cases there was decompensated stage of intestinal obstruction in 32 (50.0%) - sub compensated and 14 - compensated stage of disorders of intestinal permeability. For the diagnosis of left-sided colonic obstruction tumor examined indicators of endotoxemia, patients underwent through sigmoidoscopy, colonoscopy, barium enema, colonoscopy and ultrasound.

Result: Prior to the introduction into clinical practice of modern technologies to patients (n=30), of control group performed two-stage procedure. Patients of the main group (n=34) underwent one-stage radical surgery. So, in 23 (35.9%) cases in patients with left-sided OTH in the stage of compensation and sub compensation admission performed endoscopic "suited for microfracture" tumor obstruction zone, after which delayed (n = 9) and planned (n=14) performed the procedure of one-step radical surgery. Complications and death are not mentioned. In 11 cases, patients with left-sided colonic obstruction tumor were operated on urgently. In the postoperative period in 2 cases mentioned complications of purulent - septic character with 1 death.

Conclusion: Application of modern technologies in emergency surgery of the colon allow to perform surgery in deferred and planned manner, thereby reducing the number of postoperative complications.

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Poster No.: PP 114
[Colorectal]

IMPORTANCE OF MODERN TECHNOLOGY IN THE DETERMINATION TUMOR STAGE IN ACUTE COLONIC OBSTRUCTION

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Introduction: Improvement of immediate results in treatment of patients with neoplastic colonic obstruction.

Method: In the last 5 years there were 140 patients in the clinic of surgical diseases in the ultrasonic colonoscopy treatment. Men were 64 (45.7%), women's -76 (54.3%). 68% of patients with neoplastic colonic obstruction were patients in elderly age.
For the diagnosis of neoplastic colonic obstruction and determining tumor stage along with barium enema, colonoscopy, sigmoidoscopy, ultrasound colonoscopy and videolaparoskopy were effectively used.

Result: The leading method of diagnosing tumor stage was ultrasonic testing, which conducted 38 patients. Method effectively allowed to determine not only the presence of tumor, but also the degree of germination bowel wall and surrounding anatomical structures.
In 84 observations when performing a standard ultrasound research, along with the ultrasonic colonoscopy in 17 cases the presence of metastases in the liver and lungs, allowed to choose the most effective method of surgical treatment. Videolaparoskopy for diagnostic colonoscopy and ultrasound determination of the tumor process steps performed in 10 cases. Thus in 6 patients diagnosed with liver metastases (n = 4) and the mesentery of the small intestine and colon (n=2).

Conclusion: Modern technologies allows effective diagnosing not only tumorprocess, but the stage of the disease, which gives reason to choose the most rational method of surgical treatment.

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Poster No.: PP 115
[Colorectal]

Oncologic outcomes of laparoscopic versus open resection following stent insertion for obstructing colon cancer : multi-center retrospective study

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Introduction: As a bridge to surgery, self-expanding metallic stents has the advantages of converting an emergency operation to an elective one and have been used for potentially resectable colorectal cancer. The aim of our study was to compare oncologic outcomes between open and laparoscopic approach for obstructing colon cancer.

Method: The study group included 36 patients who underwent an open surgery and 44 patients who underwent a laparoscopic surgery for obstructing left-sided colon cancer at three tertiary referral hospitals between June 2005 and December 2013.

Result: The median follow-up period was 50 months in the open group and 47 months in the laparoscopic group. The median operation time, time to soft diet, and length of stay and were comparable between two groups. Four cases converted to open surgery (9.1 %) in laparoscopic group. The morbidity within 30 days after surgery were comparable between the two groups. The proximal and distal resection margins, the histologic grade of tumor, TNM stage, median tumor size, and presence of lymphovascular invasion did not differ significantly between two groups. The 5-year overall survival rates of the open group and laparoscopic groups were 63.9% and 69.8%, respectively (p=0.877), and the 5-year disease-free survival rates were 55.8% and 60.6% (p=0. 883), respectively. The recurrence pattern did not differ between groups.

Conclusion: Laparoscopic resection following stent insertion for obstructing colon cancer can be performed safely, with long-term oncological outcomes comparable to those obtained with open surgery.

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Poster No.: PP 116
[Colorectal]

Comparison outcomes of Robot surgery for Obese patients in Rectal cancer with Laparoscopic surgery

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Introduction: Although laparoscopic surgery (LS) has been acceptable in colon cancer, it seems to be still many controversies in rectal cancer because of pelvic dissection. Especially in technically demanding cases such as male, obese patients with low rectal cancer in deep and narrow pelvis, the benefit of LS is not clear. Although robot surgery (RS) makes surgeons to overcome technical obstacles of pelvic dissection in rectal cancer, there is no definite evidence to prove it.

Method: A total of 869 patients were evaluated retrospectively who underwent either robotic or laparoscopic curative resection of pathologically-confirmed rectal adenocarcinoma between Jan 2th, 2007 and Dec 31th, 2011. 106 patients were excluded who received combined operation or had other malignancies. The enrolled patients were classified into RS (n=358) and LS (n=405) as to intended surgical approach. Clinical parameters including operation time, postoperative morbidity, tumor location and body mass index (BMI) (obesity: BMI ≥ 25kg/m^2) were analyzed

Result: There were no differences between groups in preoperative characteristics except age, tumor location and operative method. In RS group with BMI ≥ 25kg/m^2, operation time remained similar regardless of tumor location. However, in LS group with BMI ≥ 25kg/m^2, it had increased significantly as tumor location became lower.

Conclusion: Although tumor location became lower, operation time did not become longer in RS for obese patients. It means RS does not be affected by difficult condition such as obese patients in low rectal cancer.

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Poster No.: PP 117
[Colorectal]

Clinical effect of indocyanine green (ICG) enhancement pattern to reduce anastomotic complications during laparoscopic colorectal surgery

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Introduction: This study is to evaluate clinical effect of indocyanine green (ICG) enhancement pattern to reduce anastomotic complications during laparoscopic colorectal surgery.

Method: Fluorescence imaging system, IMAGE1 S™ (Karl Storz, Germany) was applied to colorectal cancer patients (n=57) from July, 2015 to December, 2016. Fluorescence intensity of colonic flow was measured as mean value of interested area. Time to half of maximal intensity (T1/2max) was calculated and adjusted with latency (adjusted T1/2max). ICG enhancement patterns were categorized to fast, moderate, and slow group by adjusted T1/2max. We compared anastomotic complications between initial period (n=21) with simple ICG perfusion test and recent period (n=36) with ICG perfusion analysis and optimal engagement.

Result:) Incidence of anastomotic complication was 8.8% including stricture (n=1), leak (n=3), and colonic necrosis (n=1). Reoperations were needed for 3 cases (5.3%). ICG enhancement pattern of initially planned transection segments were classified as fast (n=46), moderate (n=8), and slow (n=3) group. After transection lines were changed in some cases, patients were reclassified to fast (n=52), moderate (n=4), and slow (n=1) group. Anastomotic complication rates were 1.9% (1 case), 75% (3 cases) and 100% (1 case), respectively ($p<0.001$). According to period, incidences of poor perfusion were similar (33.3% vs. 11.1%, $p=0.121$), but anastomotic complications were reduced significantly (19.0% vs. 2.8%, $p=0.036$) in the period 2 with perfusion analysis and optimal engagement. Diagnostic values of perfusion analysis were 80% of sensitivity, 98.1% of specificity, 96.5% of accuracy, 80% of positive predictive value, 98.1% of negative predictive value to detect poor perfusion segment. On logistic regression model, ICG enhancement pattern was analyzed as independent factor for anastomotic complications ($p=0.013$).

Conclusion: ICG enhancement pattern using adjusted T1/2max could be applied to detect poor perfusion segment for optimal anastomosis and to reduce anastomotic complications during laparoscopic colorectal surgery.

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Poster No.: PP 118
[Colorectal]

Reduced dose administration of oxaliplatin retaining therapeutic efficacy as an adjuvant FOLFOX chemotherapy for colorectal cancer

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Introduction: Oxaliplatin-based FOLFOX chemotherapy is the most commonly used adjuvant chemotherapy for patients with stage II/III colorectal cancer. Many patients experience dose reduction or early termination of the chemotherapy due to side effects such as severe peripheral neuropathy. We conducted this study to identify the clinical characteristics of patients who needed dose reduction of oxaliplatin and to verify the range of reduction with oncologic safety.

Method: Patients with stage II/III colorectal cancer who received adjuvant FOLFOX chemotherapy postoperatively were enrolled. Total amount of oxaliplatin administered per patient was calculated in percentile based on 12 cycles of full dose FOLFOX as a standard dose. The cut-off values showing significant differences in disease-free survival (DFS) and overall survival (OS) were calculated, and patient groups classified according to this value were compared for clinicopathologic outcomes.

Result: Total of 611 patients were included in this study. At a point of 55% of standard dose of oxaliplatin, 5-year DFS showed significant difference with 67.2% in the reduced group and 75.5% in the control group ($p = 0.039$). From with 40% of standard dose, significant difference was showed in 5-year OS between the groups (36.5% vs. 82.3%, $p=0.030$). When we compared the reduced group and the control group classified in 60% of standard dose of oxaliplatin, patients in the reduced group were older, with low BMI, and exposed neoadjuvant treatment more frequently than in the control group. With this dose, there was no statistical significance in 5-year DFS and 5-year OS between two groups.

Conclusion: Based on the result with 60% of the standard dose of oxaliplatin, patients with old age, low BMI, highly exposed neoadjuvant treatment had low compliance of chemotherapy, but they showed still comparable oncologic outcome.

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Poster No.: PP 119
[Colorectal]

Surgical and oncologic outcome of robotic surgery for colon cancer: comparison with open and laparoscopic surgery using propensity score matching

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Introduction: Robotic surgery (RS) is an emerging technology that has technical advantages over traditional laparoscopic surgery (LS). In colorectal cancer, robotic surgery has been used increasingly but there is still no consensus on its comparative merit compared with LS, especially in colon cancer than rectal cancer. The aim of this study was to investigate surgical and oncologic outcome after RS for colon cancer in comparison with open surgery (OS) and LS. Further, we assessed the impact on inflammatory reaction according to the surgical modalities.

Method: Using propensity scores, 66 patients in each group was created by matching each patient who underwent RS with one who underwent OS and LS. For a total of 198 patients after matching, their surgical and oncological outcomes were assessed. Biochemical indices that were assumed to reflect the degree of inflammatory reaction were included leukocyte count, neutrophil count and prognostic nutritional index (PNI).

Result: Comparing surgical outcomes between robot and other groups, RS group showed shorter time to pass first flatus and resume surgical soft diet than OS group. Analyzing oncologic outcomes, there were no significant differences among three groups. Comparing inflammatory indices of postoperative maximal leukocyte and neutrophil among the groups, RS and LS group showed significantly lower leukocyte and neutrophil count than OS group. Comparing postoperative PNI among the groups, RS group showed significantly higher result than other two groups. Investigating the ratio between pre- and postoperative value, LS and OS group showed significant reduction of PNI than RS group.

Conclusion: In this study, RS for colon cancer showed better patients' recovery in terms of time to pass first flatus and resume surgical soft diet than open surgery likewise laparoscopic surgery. Also, postoperative maximal leukocyte and neutrophil were lower after RS and LS than OS. Furthermore, PNI was relatively preserved after RS than OS or LS.

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Poster No.: PP 120
[Colorectal]

Surgery and Chemotherapy of the lung metastasis in Colorectal cancer

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Introduction: Colorectal cancer is the third most common cancer in the World in 2012. Colorectal cancer frequently metastasizes to lung. Surgical resection for lung metastasis is known to be the optimal therapy, but there is also development of chemotherapy for the lung metastasis This study is to compare the surgery to chemotherapy, to find optimal therapy of the lung metastasis of the colorectal cancer.

Method: Between January 2006 and December 2012, a total of 1031 patients who diagnosed colorectal cancer with lung metastasis in Severance hospital, Yonsei university health system retrospectively identified. Total 712 patients were excluded, 456 patients who underwent primary colorectal cancer operation at other institution, 9 patients who underwent colostomy only, 17 patients who determined to had no lung metastasis after pathologic review, 50 patients who had another malignancy, 180 patients who had other organ metastasis. Total of 319 patients were retrospectively studied.

Result: Total number of 171 patients did not undergo operation for lung metastasis, and 148 patients undergo lung operation. Among 171 patients who did not underwent lung operation, only 38 patients consulted with thoracic surgeon. Mean age was showed difference with 63.09 vs 58.15, but there is no difference in sex. TNM cancer stage which evaluated in primary colorectal cancer operation, pT showed difference, but there is no difference in TNM stage, pN, pM stage. Tumor grade and location of colorectal cancer showed no difference between operation group and no-onperation group. Mean survival was 34.326 months in no-operation group, and 83.156 months in operation group. In underwent lung operation group, 5-year survival rate after lung metastasis was 65.8% vs 16.5% in not operation group. In multivariate analysis, the synchronous metastasis of lung and operation for lung metastasis showed significantly differences for survival.

Conclusion: In pulmonary metastasis of colorectal cancer, doing metastasectomy showed positive effect for survival.

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Poster No.: PP 121
[Thyroid-Endocrine]

Transoral Endoscopic Thyroidectomy Vestibular Approach (TOETVA) for Graves' Disease: A Comparison of Surgical Results with Open Thyroidectomy

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Introduction: Transoral endoscopic thyroidectomy vestibular approach (TOETVA) provides excellent cosmetic results from its potential for scar-free operation. The procedure has been applied successfully for Graves' disease by the authors of this work and compared with the standard open cervical approach to evaluate its safety and outcomes.

Method: From January 2014 to November 2016, a total of 97 patients with Graves' disease were reviewed retrospectively. Open thyroidectomy and TOETVA were performed in 49 patients and 46 patients, respectively. For TOETVA, a three-port technique through the oral vestibule was utilized. The thyroidectomy was done endoscopically using conventional laparoscopic instruments and an ultrasonic device. Patient demographics and surgical variables, including operative time, blood loss, and complications, were investigated and compared.

Result: TOETVA was performed successfully in all 45 patients, although conversion to open surgery was deemed necessary in 1 patient. All patient characteristics for both groups were similar. Operative time was shorter for the OT group compared to the TOETVA group, which totaled 101.97±24.618 and 134.11±31.48 minutes, respectively ($p<<0.5$). Blood loss was comparable for both groups. The VAS pain score for the TOETVA group was significantly lower than for the OT group on Day 1 (2.08±1.53 vs 4.57±1.35) , Day 2 (0.84±1.12 vs 2.57±1.08) and Day 3 (0.33±0.71 vs 1.08±1.01) ($p<<0.05$). Transient recurrent laryngeal nerve palsy (RLN) was found in 4 and 2 cases of TOETVA and OT group, respectively. Transient hypocalcemia was found in 10 and 7 cases of TOETVA and OT group, respectively. No other complications were observed.

Conclusion: TOETVA is a feasible and safe treatment for Graves' disease in comparison to the standard open cervical approach. It is considered a viable alternative for patients who have been indicated for surgery with excellent cosmetic results.

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Poster No.: PP 122
[Thyroid-Endocrine]

Our tactics of surgical treatment of adrenal tumors – single center experience

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Introduction: The analysis of results of treatment of 240 patients with adrenal tumors treated at the TMA clinic from 2000 to 2016.

Method: Patients were divided into 3 groups. The first group included 80 patients with traditional adrenalectomy (TAE). In the second group were 52 patients, with tumor size about 1.5 cm, who underwent endovascular intervention (EI). 108 patients, included in the third group, underwent laparoscopic adrenalectomy (LAE).

Result: Intraoperative blood loss during TAE - 350±25.3 ml. After performing TAE complications developed in 12 (15%) cases. The mortality was in 1 case. The hospital stay after TAE was 22,4±3,8 bed-days, returning to usual life was in 65,4±2,2 day.
In case of LAE tumor sizes ranged from 1.5 to 10 cm. The duration of transabdominal LAE was 88±13.2 min. Blood loss - 67±12 ml. In case of retroperitoneal LAE operative time was 71±11,2 min. When tumors were 8 to 10 cm in size, adrenalectomy was supplemented by "hand-assist". No mortal outcome was observed. Complications developed in 3 cases. The average hospital stay after LAE was 3,3±0,3 bed-days, full recovery time - 15,4±2,2 day.
In case of EI complications developed in 1 case. The hospital stay after EI was 2,5±0,5 bed-days, full recovery time - 5,4±1,2 day. This method was effective when the tumor size was 1 cm. When the size of tumor was larger than 1 cm, in a period of 6 months to 3 years we observed recurrent hypertension, although the size of the tumor did not change.

Conclusion: Thus, the surgical treatment of adrenal tumors using LAE is preferable when tumor size is 1 to 10 cm. When the tumor size up to 1 cm and particularly at bilateral process allow us to recommend IE. When the size of adrenal tumors is greater than 10 cm it is advisable to perform open adrenalectomy.

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Poster No.: PP 123
[Thyroid-Endocrine]

Robotic versus Laparoscopic adrenalectomy for benign adrenal tumor: A retrospective review in a single centre

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Introduction:

Retrospective review of a prospectively collected database on the experience of robotic and laparoscopic adrenalectomy for benign adrenal tumors from a single centre in Hong Kong

Method:

This is a retrospective review of consecutive patients who underwent robotic and laparoscopic adrenalectomy during the period of August 2011 to September 2016 in Pamela Youde Nethersole Eastern Hospital, a single center in Hong Kong. Chi-square test and Fisher's Exact test are used for categorical data and independent sample t-test is used for continuous data. The calculations were performed by IBM® SPSS® version 23.

Result:

A total of 50 patients with laparoscopic adrenalectomy and 44 patients with robotic adrenalectomy were included in the study period. There is no statistically significant difference in patient's demographics data including age, gender, history of previous abdominal surgery and tumor size.

Regarding surgical outcomes, there is no statistically significant difference in operative time and blood loss. There is one open conversion in laparoscopic group, but no conversion is observed in robotic group. The hospital stay is significantly shorter in robotic group.

There are six operative complications in laparoscopic group which required surgical or radiological interventions, while only one complication is observed in robotic group. Although there is a tendency favoring robotic adrenalectomy, it has not reached statistical significance.

Conclusion:

Robotic adrenalectomy is a safe and effective surgical approach compared with the standard laparosopic approach in the management of benign adrenal pathologies, with the early experience showing promising results. A tendency favoring robotic approach in operative morbidity is observed, although it has not reached statistical significance.

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Poster No.: PP 124
[Thyroid-Endocrine]

Single port laparoscopic adrenalectomy (SPLA) in comparison with conventional laparoscopic adrenalectomy

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Introduction: Since laparoscopic adrenalectomy was introduced by Gagner and et al in 1992, it has been a standard procedure for the benign adrenal disease. Recently, single port laparoscopic surgery was introduced in various surgical areas, but few reports about adrenalectomy have been published.
The aim of this study was to investigate the results of SPLA in comparison with conventional laparoscopic adrenalectomy in our institute.

Method: From March 2012 to March 2015, 49 patients underwent laparoscopic adrenalectomy. Among them, 33 and 6 patients received conventional laparoscopic adrenalectomy via anterior approach and posterior approach. Remaining 10 patients received SPLA. Conventional laparoscopic adrenalectomy was performed by 4 surgeons but SPLA was performed by a single surgeon.
SPLA was performed via anterior approach using the glove port. The data was collected retrospectively.

Result: Among 10 patients who underwent SPLA, conversion did not occur and 2 patients received transfusion during surgery. Although the operative time and days of hospital stay were increased in the single port groups, date of oral intake or Clavien-Dindo complications did not differ between conventional groups and single port groups. Tumor sizes of SPLA were larger than sizes of other groups, but statistical significance was not found.

Conclusion: SPLA was feasible in comparison with conventional laparoscopic adrenalectomy, although operative time and hospital day were somewhat more increased. The better results would be expected through more experience accumulation.

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Poster No.: PP 125
[Other]

A Rare Case of Misdiagnosed Retroperitoneal Leiomyoma

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Introduction: Leiomyomata are the most common benign tumours in women, and arise monoclonally from smooth muscle cells. Retroperitoneal leiomyomata are rare and since 1941, just over 100 cases have been described in the literature. The incidence of leiomyomata among primary retroperitoneal tumours is 1.2%, and therefore poses diagnostic and therapeutic challenges due to relative rarity to other malignant tumours.

Method: A 42-year-old lady presented to clinic with a 4-month history of increasing abdominal distension and constipation. An abdominal CT scan revealed a large solid-cystic abdomino-pelvic mass measuring 38x28x20cm suspicious of a right ovarian malignancy.

Result: The patient underwent an exploratory laparotomy, total hysterectomy and bilateral salpingo-opherectomy with biopsy of the retroperitoneal mass. Histology revealed no features of malignancy with fragments of smooth muscle tumour consistent with a leiomyoma. She underwent laparotomy and excision of the retroperitoneal mass which weighed 4342g, histology confirming it to be a leiomyoma.

Conclusion: We present a rare case of a large retroperitoneal leiomyoma that was initially misdiagnosed as an ovarian malignancy. Retroperitoneal leiomyomas are often misdiagnosed preoperatively as subserous fibroids, ovarian malignancies, or fibromas even with modern imaging techniques. Knowledge of the unusual and protean imaging manifestations is essential to distinguish them from malignant tumours that bear a close resemblance. Complete excision is the treatment of retroperitoneal leiomyomas and is usually curative. However, recurrence has been documented in the literature and is associated with factors such as positive surgical margins. Close post-operative surveillance is therefore essential. Retroperitoneal leiomyomas are a rare entity and pose significant diagnostic and therapeutic challenges.

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Poster No.: PP 126
[Other]

Laparoscopic Repair of Inguinal Hernia -TAPP- Pubic Tubercle is a Sufficient Land Mark For Mesh Fixation

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Introduction: Laparoscopic inguinal hernia is a very well established technique and is very popular all around the world. Inguinal hernia is operated either transabdominal or extra abdominal technique. In Trans Abdominal Pre Peritoneal mesh (TAPP) insertion, most of the surgeons dissect the medial boundary of inguinal canal till the level of contralateral pubic tubercle for mesh fixation. We have operated a case of inguinal hernia in which we just exposed the pubic tubercle of ipsilateral side and fixed the mesh at it.

Method: Our objective was to find that how we can implement the true spirit of laparoscopic surgery. Instead of doing extended dissection in laparoscopic hernia we can do less dissection and get the same result.
A 40 years old man had swelling in the left inguinal region which was reducible and then was confirmed to have indirect inguinal hernia. He was operated laparoscopically by Transabdominal Pre peritoneal (TAPP) technique. Three ports were inserted in transverse plane at the umbilical region. Lt inguinal region was dissected and peritoneal layer was separated. On medial side dissection was done till at the level of pubic tubercle and laterally till the anterior superior iliac spine. Mesh was fixed at the pubic tubercle medially and Iliac spine laterally

Result: Post-operative recovery was unevent full and patient was discharged safely on the following day. He had follow up visit after one year and there was no recurrence.

Conclusion: Concept of laparoscopic surgery is to do less surgery and get the sufficient results. By doing extra surgery till the level of contralateral pubic tubercle by thinking that overlapping will reduce the recurrence chances is no more beneficial. By doing surgery till the level of pubic tubercle is very much sufficient for mess fixation

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Poster No.: PP 128
[Other]

Laparoscopic Inguinal Hernia Repair: TEP versus TAPP

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Introduction: The purpose of the study was to compare the results of laparoscopic inguinal hernia repair using two different methods: transabdominal preperitoneal (TAPP) repair and the technique of totally extraperitoneal repair (TEP)

Method: In this retrospective study were included 100 cases of inguinal hernia, which underwent for laparoscopic approach of inguinal hernia repair at Tashkent Medical Academy Hospital between 2012 and 2014. The primary outcome was recurrence of the hernia at two years follow-up. Secondary outcomes were short and long-term complications: hematoma and seroma formation, inflammation of the testis, chronic inguinal pain, reoperation, 30 days mortality.

Result: Of the 100 patients who underwent unilateral hernia repair, 90 were completely followed-up for 24 months, 46 patients with TEP and 44 with TAPP. Regarding the main outcome there was no recurrence of the hernia at two years follow-up. There were two cases of postoperative hematoma in the TEP group; both were managed by puncture of fluid collection, 4 cases of post-operative edema of testis in TAPP and 2 cases in TEP. Regarding the subcutaneous emphysema there were 2 cases in TAPP and 3 cases in TEP.

Conclusion: Differences between TEP and TAPP in our study were related to minor complications, no major complications occurred. After the two years follow-up of 90 of a total of 100 patients, there was no recurrence of the hernia.

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Poster No.: PP 129
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The experience of video assisted thoracoscopic lobectomy in Mongolia

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Introduction: Video assisted thoracoscopic lobectomy has become the standard surgery for early stage lung cancer throughout in the world. But application of VATS in major lung resection is far from routine in most hospital. Therefore VATS lobectomy performed in only 3 specialized centers around the Mongolia

Method: Here we present 17 cases of a patient who underwent VATS right-sided and left sided lobectomy due to lung cancer. This retrospective study was performed in our Surgery department, between 2014 Jan-2016 Jun. The clinical records of all patients
reviewed.

Result: A total of 18 VATS lobectomies were performed over the study period. Mean operation time was 180 minutes. Patients stayed in the hospital 7 days. No complication occurred in the postoperative course as the patient showed good lung re-expansion .There was no morbidity and mortality. The histology report was Non-small cell carcinoma in 7 patients, benign tumor in 8 patients and 3 patients with
tuberculoma

Conclusion: The role of VATS lobectomy is taking increasingly important place and can be seen as an eminent technique to early stage Lung cancer and benign tumor. VATS lobectomy should be performed by surgeon with adequate skills with this technique and may require the thoracoscopic instrument.

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No-intubated video assisted thoracoscopic surgery for small wedge resection

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Introduction: Traditionally video assisted thoracoscopic surgery (VATS) is performed with general anesthesia and double-lumen endotracheal intubation, but recent studies showed that VATS lung wedge resection can be performed by using epidural anesthesia without endotracheal intubation. Therefore we communicate our cases of non-intubated VATS under epidural anesthesia for benign tumor

Method: 27-years-old woman was admitted to our hospital with history of tuberculosis. General physical examination was normal. Computed Tomography confirmed the Fibrotic lesion with traction bronchiolectasis in right upper lobe, apical segment. Patient in prone position, 3 trocars and 120 degree telescope ENDOCAMELEON (KARLSTORZ, GERMANY) was used**.** Thoracoscopic surgery was performed under the epidural anesthesia (Ropivacaine and fentanyl) by paramedian approach. Breathing was spontaneous and only a fascial. Two 5 mm trocars and one 12mm trocars were used. A 2*3 cm tumor was located on right upper lobe with apical adhesion. Wedge resection was done with three Echilon-60mm linear endoscopic stapling devices and sutured in stapling line

Result: Operation time was 135 minutes. Estimated blood loss 60ml. The patient stayed in the hospital for 3 days post surgery. There were no complication occurred in the intraoperative and postoperative course as the patient. The surgical pathology confirmed to chronic granulomatous inflammation with caseous necrosis, consistent with tuberculosis

Conclusion: Non-intubated VATS lung resection under epidural anesthesia is feasible and safe in selected patients and more benefits for anesthesiologist than surgeons. Therefore we believe that small wedge resection should be treated with video assisted thoracoscopic surgery. Nevertheless, more evidence and studies are needed to ascertain the risks and benefits of this technique. This is the first reported case of this kind to our knowledge

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THORACOSCOPIC EXCISION OF POSTERIOR MEDIASTINAL CYST

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Introduction: 34-years-old woman was admitted to our hospital with dyspnea and chest pain of two months duration. General physical examination was normal. Computed Tomography confirmed the probable mucoid containing cyst in posterior mediastinum right paravertebral region at Th 7/8/9 level. A video assisted thoracoscopic excision of posterior mediastinal cyst was performed.

Method: Patient in prone position, 3 trocars and 120 degree telescope ENDOCAMELEON (KARLSTORZ, GERMANY) was used**.** Thoracoscopic surgery was performed under the general anesthesia using double lumen endothracheal tube. Two 5 mm trocars and one 12mm trocars were used. A 4*5 cm cyst was located on posterior mediastinium. Initially clammy brown fluid is aspirated and decompressed which made manipulation of the cyst easier. The cyst was excised with a blunt and sharp dissection by using hook and grasper

Result: Operation time was 90 minutes. Estimated blood loss < 50ml. The patient stayed in the hospital for 3 days post surgery. Post-surgically her symptom was completely resolved. There were no complication occurred in the intraoperative and postoperative course as the patient. The surgical pathology confirmed to bronchogenic cyst.

Conclusion: Bronchogenic cysts are relatively uncommon. Routine surgery has traditionally been mediastinal cyst excision by thoracotomy. Therefore we believe that mediastinal bronchogenic cyst should be treated with video assisted thoracoscopic surgery. Because thoracoscopy in mediastinal cysts is a safe and effective procedure with less pain and shorter hospital stay. This is the first reported case of this kind to our knowledge.

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Video assisted Thoracoscopic Bullectomy, apical pleurectomy and pleurodesis of Bullae in patients with spontaneous pneumothorax

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Introduction: The pneumothorax due bullous emphysema is the common problems seen by the thoracic surgeons, there is no golden standart technique in Mongolia. However Video assisted thoracoscopic surgery has been changed the management of bullous emphysema over the past decade. VATS involving bullaectomy can be performed by three, two and one port technique. But only two hospital surgeons use three port technique in Mongolia. Therefore we communicate our small experience with three port VATS to this surgeries

Method: Here we present a 5 cases of patient who underwent video assisted thoracscopic bullaectomy due to left and right sided bullous emphysema with pneumothorax. All patient in prone position, 3 trocars and 120 degree telescope ENDOCAMELEON (KARLSTORZ, GERMANY) was used**. Our** thoracoscopic surgery was performed under the general anaesthesia using double lumen endothracheal tube. Two 5 mm trocars and one 12mm trocars were used. This cases was perfomed in our General Surgery department, between 2014-2016

Result: Mean operation time was 160 minutes. Estimated blood loss < 20ml. The patients stayed in the hospital for 7 days post surgery. Chest x-ray was checked at 1, 3, 5, 7 and 14 days post surgery and gradual improvement was noticed over those days. No complication occurred in the postoperative course as the all patient showed good lung re-expansion and there was no prolonged air leakage

Conclusion: VATS is useful for three stages technique of bullaectomy, pleurectomy and pleurodesis in the management of bullae disease. Indeed the role of VATS is taking increasingly important place and can be seen as an eminent technique to approach multiple bullous emphysema and plays a major role in its treatment. This is the first reported data in Mongolia to our knowledge

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[Other]

The experience of laparoscopic sewing of perforated duodenal ulcers.

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Introduction: Objective: improvement of the results of surgical treatment of perforative duodenal ulcers.

Method: We analysed results of treatment of 98 patients with perforative duodenal ulcers. Male were 81 (82,6%), female - 17 (17,4%). Age ranged from 16 to 79 years, average - 36±4,3 years. 69 (69,9%) patients were admitted in the first 12 hours after perforation, 23 (23,7%) – from 12 to 24 hours, 6 (6,4%) – later than 24 hours.
The management and further surgical treatment was defined according to endoscopic and laparoscopic picture of ulcer perforation and the substrate, character and prevalence of peritonitis, presence of Paneth-Davydov cells in periulcerous field and the level of acidity of the stomach. These parameters were determined intraoperatively by our offered express methods. Intraoperatively from perforated ulcer area we took smear and conducted rapid morphological study to determine the Paneth-Davydov cells. Intraoperative level of acidity was determined by using pH test strips.
The follwing types of operations were performed: 1) Laparocopic sewing of perforated duodenal ulcer in 31 (31,6%) cases; 2) Laparoscopic sewing through the mini-approach – 48 (48.9%); 3) Truncal vagotomy with piloroplastic by Judd and incision of ulcer – 10 (10,2%); 4) Distal resection of stomach by Billroth II – 5 (5,1%); 5) Closure by open sores – 4 (4,1%) patients.

Result: No complications were observed during the operation. Postoperative complications had 7 (7.1%) patients. 1 patient had mechanical ileus in early postoperative period. In 1 case was developed subdiaphragmatic abscess. 3 patients had wound complications.
Two mortality cases were occurred due to multiorgan insufficiency. In one case cause of death was myocardial infarction. After minimally invasive surgery mortality was not observed.

Conclusion: Results of clinical studies indicate that the choice of rational variants of surgical treatment reduces postoperative complications and mortality rate.

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The cheapest laparoscopic cholecystectomy in developing country (Mongolia)

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Introduction: Cholecystectomy is among surgical procedures with the longest waiting list and a significant amount of patients waiting for surgery suffer symptoms related to complications of cholelithiasis. The purpose of this study is to evaluate the economic impact caused by waiting lists. Physicians identified insufficient equipment supply (69%), insufficient training (41%), and cost (38%) as barriers for laparoscopy. The cheapest laparoscopic cholecystectomy is more needed procedure in Mongolia, which has a big land and not enough equipments of laparoscopic cholecystectomy for the territory.

Method: This study was conducted between September 2016 and October 2016 on a total of 28 patients with acalculous cholecystitis in Tuv Province of Mongolia. We divided the patients two groups, 14 patients with laparoscopic cholecystectomy and 14 patients cholecystectomy by xenoscope.

Result: The cheapest laparoscopic tower with camera, light source, and laparoscope 10mm 0^{o} are 10,999 dollars. The xenoscope is 125 dollars for using 25 times. There are not significant difference between above two groups at the operation time, hospital stay, and the complication. The using xenoscope was second time in the world in Mongolia, which cooperated American college of surgeons and Mongolian laparoscopic association.

Conclusion: The using xenoscope is the way of the cheapest laparoscopic cholecystectomy in developing country like Mongolia. Operation time, hospital stay and the complication did not differ significantly between the two groups.

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Laparoscopic versus Open Excision of Choledochal Cyst in Neonates

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Introduction: Laparoscopic excision of choledochal cyst (LEC) can be performed preferably in pediatrics and adults. However, laparoscopic surgery is not performed well in neonates so that the safety and feasibility of neonatal LEC remain unknown. The purpose of this study is to evaluate the surgical outcomes for LEC in neonates.

Method: We retrospectively reviewed 35 neonates who underwent excision of choledochal cyst between November 2001 and May 2016. Nineteen patientss underwent open excision of choledochal cyst (OEC) and 16 neonates underwent LEC. the perioperative and surgical outcomes included age, operative time, postoperative hospital stay, time to diet, and surgical complications.

Result: The median age of the OEC and LEC groups were 13 days (range, 2-30) and 12.5 days (range, 6-26) and the median body weight at the time of operation were 3.50kg (range, 2.64-4.22) and 3.32kg (range, 2.73-4.22), respectively. The median operative time was 163 minutes (range, 126-336) in OEC and 237.5 minutes (range, 150-351) in LEC groups and there was no significant difference between OEC and LEC groups (P=0.116). Intraoperative bleeding was minimal in both groups. The postoperative hospital stay, time to start diet, and time to return to full feeding had no significant differences in both groups. There were no intraoperative complication in both groups and no open conversion in the LEC group except one case which was ruptured choledochal cyst. After discharge, 5 of 19 (26%) OEC patients experienced readmission due to cholangitis and ileus, while there were none in the LEC group.

Conclusion: This study revealed that LEC had better prognosis compared to OEC. LEC provided an excellent cosmetic result. So we suggest LEC could be the treatment of choice for neonatal choledochal cyst. This is a small series, therefore future studies will have to include a larger number of patients and evaluate long-term follow-up.

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Characteristics and factors associated with adverse events after laparoscopic appendectomy in Taiwan: a nationwide study in 2008-2013

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Introduction: Laparoscopic appendectomy was considered as a safe and standard procedure for the treatment of appendicitis. However, the adverse events after laparoscopic appendectomy should not be ignored. The purpose of this study is to report factors associated with adverse events after laparoscopic appendectomy.

Method: Using Taiwan's National Health Insurance Research Database, we identified 53632 adults aged 20 and older who received laparoscopic appendectomy in 2008-2013. Prolonged length of hospital stay, increased medical expenditure, and mortality after laparoscopic appendectomy were considered as adverse events. We used multivariate logistic regression to calculate adjusted odds ratios and 95% confidence intervals of adverse events after laparoscopic appendectomy associated with sociodemographics and medical conditions.

Result: The average of length of hospital stay is 3.77 (±2.42) days. Older age (OR 14.1, 95% CI 1.88-105), low income (OR 2.86, 95% CI 1.14-7.14), ischemic heart disease (OR 1.62, 95% CI 1/03-2.53), diabetes (OR 2.53, 95% CI 1.66-3.84), heart failure (OR 2.60, 95% CI 1.50-4.52), liver cirrhosis (OR 2.85, 95% CI 1.22-6.68), renal dialysis (OR 4.36, 95% CI 2.33-8.15), and anemia (OR1.88, 95% CI 1.07-3.32) were significant factors associated with adverse events after laparoscopic appendectomy.

Conclusion: Older age, low income, diabetes, heart failure, liver cirrhosis, and renal dialysis were important factors associated with adverse events after laparoscopic appendectomy in Taiwan. Prevention of postoperative adverse events is needed in these susceptible populations.

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OUTCOME OF LAPAROSCOPIC HELLER MYOTOMY MANAGING RECURRENT ACHALASIA AFTER PNEUMATIC DILATATION

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Introduction: Previous pneumatic dilatation may make laparoscopic Heller myotomy for recurrent achalasia more difficult and may effect the surgical outcome.

Method: Controlled trial study
Objectives: Evaluate the detrimental effects of pneumatic dilation to laparoscopic Heller myotomy managing recurrent achalasia by the feasibility, safety and efficacy.

Result: From 03/2011 to 04/2016, there were 36 patients (16 male and 20 female) who had achalasia and treated by laparoscopic Heller myotomy with Dor hemifundoplication in University Medical Center, Ho Chi Minh city, Vietnam. Among them, 15 patients underwent primary laparoscopic Heller myotomy (group A) while the other 21 patients underwent laparoscopic Heller myotomy after pneumatic dilatation with recurrence (group B). The mean age was 40.8 ± 16.3. There was no conversion to open surgery in both groups. The mean operating time was not significantly different between two groups (102.3 and 117.8 minutes in group A and group B, respectively) (p=0.34). Mucosal perforations during myotomy occurred in 3 patients (20%) in group A and 1 patient (4.7%) in group B, but there was no significant difference (p=0.287). No post-operative complications were found in both groups. There is no significant difference in mean hospital stay (p=0.11). The median clinical following – up was 35.76 months. Response to treatment was evaluated based on Eckardt symptom score. The successful rates are similar (p = 0.47) in both groups (group A: 73.3% and group B: 61.9%).

Conclusion: Laparoscopic Heller myotomy in recurrent achalasia after pneumatic dilatation is as feasible, safe and effective compare to primary laparoscopic Heller myotomy.

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Laparoscopic reduction and herniorrhaphy for incarcerated obturator hernia: A report of two cases

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Introduction: Obturator hernia (OH) is a rare variety of abdominal hernia, and the treatment of choice is not well established. A laparoscopic reduction and herniorrhaphy may become one of choice for incarcerated obturator hernia.

Method: An 89- and a 77-year-old woman were admitted to the emergency department because of abdominal pain with vomiting and severe inguinal pain, respectively. Abdominal computed tomography scan showed dilated small bowel loops and multiple air-fluid levels near a small bowel loop obturator hernia, between the external obturator and pectineus muscle.

Result: Emergency laparoscopic explorations were performed and the loops of small intestine were reducted from the obturator foramen by a transabdominal approach. The bowel was intact after reduction in both cases. Subsequently, one patient underwent totally extraperitoneal (TEP) repair and the other underwent transabdominal preperitoneal (TAPP) repair. The patients were discharged without any complications.

Conclusion: Laparoscopic repair for incarcerated OH can be an effective and safe surgical procedure.

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Laparoscopic repair for Diastasis Recti

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Introduction: Diastatis recti is derived from weakening of the linea alba and the patients usually complain abdominal protrusion. We reported a case of laparoscopic repair for a patient with Diastasis Recti.

Method: A 30-year woman came outpatient department for abdominal protrusion a year ago. Physical examination revealed abdominal wall defect, which was along the linea alba. Computed tomography showed thining and stretching of linea alba. We performed laparoscopic repair of Diastasis recti. Stretched linea alba was approximated using interrupted suture from epigastrium to infraumbilicus. Furthermore, dual mesh was applied below the peritoneal side to prevent recurrence of hernia.

Result: The patient was discharged without any complications and followed up without recurrence for a year.

Conclusion: Laparoscopic repair is a feasible treatment modality for Diastasis recti.