CHANGE AND INNOVATION IN LIVING DONOR LIVER TRANSPLANTATION IN KYOTO UNIVERSITY

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Change and innovation are essentials for advances in every field. In this presentation, we would like to introduce 3 recent innovations in living donor liver transplantation (LDLT) in Kyoto University.
1) Expanded selection criteria for LDLT for hepatocellular carcinoma (HCC). Expanded selection criteria for LT for HCC can be justified when the criteria show acceptably low recurrence rate. We recently proposed new selection criteria (Kyoto criteria) using the combination of 3 independent risk factors for recurrence: number 10 or less, diameter of the largest tumor 5 cm or less, and des-gamma-carboxy prothrombin level 400 mAU/ml or less. The Kyoto criteria are simple and useful expanded selection criteria with favorable outcomes.
2) Reduction of lower limit of the graft-to-recipient weight ratio (GRWR) Lower limit of the GRWR can be safely reduced to 0.6% in adult-to-adult LDLT in combination with portal pressure control. The reduction of lower limit could lead to increase in left-lobe grafts use and decrease in donor complication rate.
3) Evidence-based perioperative nutritional therapy We have developed a tailor-made perioperative nutritional therapy for patients undergoing LT based on the concept of enhanced recovery after surgery. We would like to talk about the significance of our nutritional therapy in LT.

COMPLEX POST CHOLECYSTECTOMY BILIARY INJURIES: MANAGEMENT WITH 10 YEARS EXPERIENCE IN MAJOR REFERRAL CENTER

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Purpose: A prospective and retrospective work to study and evaluate management techniques either surgical and/or endoscopic used in treatment of complex post cholecystectomy biliary injuries.
Patients & Methods: In the period from Mars 2000 to Feb. 2010, 419 patients (224 females and 195 males) were collected from general surgery department, and gastro-intestinal endoscopy unit, Assuit University hospitals, complaining of post cholecystectomy biliary injuries, and managed accordingly using surgery in 135 patients, and endoscopy in 317 patients, in addition to percutaneous techniques in 32 patients.
Results: Post cholecystectomy complex biliary injuries still seen in Upper Egypt frequently and erroneously managed till presented in late stages to referral tertiary centers. Endoscopy was very successful as an initial treatment of 317 patients (76%), as being less invasive, low morbidity and mortality, competitive to surgery in treatment mild/moderate biliary leakage (82%), and biliary stricture (74%). Its success increased by 2.8% & 8.3% for leakage, and stricture by addition of percutaneous techniques. But endoscopy was complementary to surgery in major leakage, and massive stricture, and surgery was resold to in 19%, and 14% of cases respectively.
Surgery remains the treatment of choice in cases of CBD transection, ligation, and combined injuries of stones, stricture, and leakage in 60% of cases. Bilio-enteric anastomosis was the procedure of choice, done in 76 cases, with trans-anastomotic stent splintage in 30 cases with unhealthy fibrosed, or small sized ducts. And stricture complication was encountered in 5 cases (6.5%), treated by percutaneous rout in 3, and redo surgery in 2 case.

The learning curve seems influential in both endoscopy and surgery. The cumulative experience increase the success rate of endoscopy from initial 50% to 95%nowadays, also surgery improved with decreased morbidity and mortality as complications encountered was seen in initial experience and decreased with time.
Conclusion: Endoscopy was competitive to surgery in simple problems and advised to be the initial treatment choice, but complementary in major leak, ligation, transection, and complex problems, where surgery plays the main role in treatment with its invasiveness, high morbidity and morbidity. Cumulative experience influence endoscopic and surgical treatment of such problems and it is mandatory with other facility and equipment for management of such challenging cases.

COMPLICATION RATE DURING AND IMMEDIATELY AFTER PROPOFOL-BASED DEEP SEDATION FOR COLONOSCOPY IN MARKED OBESITY PATIENTS

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Presenting Author: Somchai Amornyotin

Objective: To evaluate and compare the complication rate of propofol-based deep sedation (PBDS) for colonoscopy in marked obesity (BMI>30) and non-obesity (BMI)
Methods: We undertook a retrospective review. All patients were classified into two groups according to body mass index (BMI). In group A, the patients had BMI30. The primary outcome variable was overall complication rate. The secondary outcome variables were sedation and procedure-related complications and mortality rate.
Results: After matching age, gender, ASA physical status and indications of procedure, there were 100 colonoscopies in group A and 33 colonoscopies in group B. There were no significant differences in patients' characteristics, sedation time, indication, overall complication rate, anesthetic personnel and mortality rate between the two groups. Upper airway obstruction in group B was relatively higher than in group A. All complications were easily treated, with no adverse sequelae.
Conclusion: PBDS for colonoscopy in marked obesity patients by trained anesthetic personnel with appropriate monitoring was safe and effective. The complication rate of this technique in marked obesity (BMI>30) patients was not different or worse than in non-obesity (BMI)

DEVELOPMENT OF A FULL PANCREAS TRANSPLANTATION PROGRAM

Aothors: Fabio Vistoli, Piero Marchetti, Gabriella Amorese, Massimiliano Barsotti, Franco Mosca, Ugo Boggi
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Background: Starting in 1996 at University of Pisa was developed a full pancreas transplantation (PTx) program to treat diabetic uremic and non uremic patients. The landmarks of the development were: 1996 first simultaneous cadaveric pancreas-kidney transplantation (SPKTx); 2000, first pancreas transplantation alone (PTA), 2001, first simultaneous cadaveric pancreas-living kidney transplantation (SPLKTx) and first islets transplantation, 2002 first pancreas after kidney transplantation (PAK); 2010-2011 world first 3 laparoscopic robotic assisted PTx (PAK, SPKTx PTA).
Methods: From May 1996 to December 2011, 330 PTx were performed in 319 patients (mean age 39.4 yrs; range 22-60): 186 SPKTx, 28 SPLKTx, 88 PTA and 28 PAK. Of the 214 combined transplantations, 77 (36.0%) were performed on type 1 diabetic uremic patients preemptively. Overall, mean waiting time was 118 days (range 1-913 days). Mean cadaveric donor age was 29.0 yrs; range 5-55 yrs. PTx were systemic-bladder drained in 39 cases, systemic-enteric drained in 121 cases and portal-enteric drained in 170 cases. Immunosuppressive regimen was quadruple for each procedure: induction (ATG=112; Basiliximab=218) + calcineurin inhibitor (CSA=66; TAC=264) + antimetabolite (AZA=2; MMF=328 + low dose steroids. Overall, mean cold ischemia time was 660 min for pancreas, 693 min for cadaveric kidney and 55 min for living kidney.
Results: One-3-5-10 year cumulative insulin-independence rate was 86%-81%-79%-77%, respectively. In SPKTx was 89%-87%-85%-83%-83% at 1-3-5-10-15 years. In PTA was 87%-78%-77%-74% at 1-3-5-10 years. Overall, delayed graft function rate was 3.0% (10/330) for pancreas and 8.9% (19/214) for kidney. Twelve pancreas (3.6%) were lost due to vascular thrombosis, no pancreatitis was recorded, in further 22 grafts (6.7%) partial vascular thrombosis was resolved by anticoagulation, alone (11 grafts) or combined with angiography and selective thrombolysis (9 grafts), in further 2 grafts associated with surgical

thrombectomy. Relaparotomy rate was 14.8% (49/330). Acute rejection rate was 25.2% (54/214) for kidney. Therefore, 30/330 (9.1%) pancreas alone rejection episodes were recorded. Cumulative infection rate was 27.4%. Seven SPKTx patients (3.3%) and 1 PTA recipient (1.1%), developed tumors lately after Tx. Overall, 1-3-5-10-15 year patient survival rate was 95%-94%-94%-92%-92% respectively; at the same time kidney survival rate was 92%-89%-88%-84%-84% respectively.
Conclusions: PTx is a safe and effective therapy for type 1 diabetic patients, and, until now, the only able to recover stably and reproducibly euglicemia and to normalize metabolic parameters.

LAPAROSCOPIC CHOLECYSTECTOMY IN PATIENTS WITH SICKLE CELL ANAEMIA: A TERTIARY HOSPITAL EXPERIENCE

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Background: Surgery in sickle cell anaemia (SCA) patients is associated with high morbidity.Safer surgery can now be achieved by adequate perioperative comprehensive management which may not be readily available in tertiary care institutions for patients with minor surgical ailments.
This study aims to report the experience as a tertiary care hospital of laparoscopic
cholecystectomy (LC) in SCA patients.
Methods: A prospective study over 3 year period (January 2006 - December 2009). All SCA patients with gallstones who underwent LC were included in the study. Preoperative parameters included demographics, clinical presentation, preoperative risk factors were assessed. A standardized preoperative workup and perioperative care was implemented.
Results: 40 patients (16 males; 40% and 24 females; 60%) with SCA underwent LC, with a mean age of 26.6 (range: 6-53) years. Three patients (7.5%) presented with acute cholecystitis. Sixteen patients (40%) received

preoperative blood transfusion (9 simple transfusion and 7 partial exchange transfusion). Eleven patients (27.5%) had preoperative ERCP for suspected common bile duct stones. The mean operative time was 98.3 (range 60-180) minutes. There were 5 (12.5%) postoperative complications; 3 mild vaso-occlusive crisis, 1 bronchopneumonia and 1 acute chest syndrome. All complications occurred in the group who received blood transfusion ($P < 0.007$). There were no mortalities and the mean preoperative hospital stay was 2.8 (range 1- 8) days.
Conclusion: This study shows that in a tertiary medical facility, LC can be performed in SCA patients without preoperative blood transfusion with low morbidity, short hospital stay and no mortality.

LAPAROSCOPIC CHOLECYSTECTOMY IN SITUS INVERSUS TOTALIS A REPORT OF 3 CASES IN ONE CENTER

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In the last 20 years, 3 patients with left sided abdominal pain and symptoms consistent with cholelithiasis attended Mansoura Gastroenterology Surgery Center The 3 cases were preoperatively diagnosed by abdominal ultrasonography to have gall stones as well as situs inversus with the liver and gall bladder on the left side and the spleen on the right side.Laparoscopic cholecystectomy was performed to them without incident.The difficulty was that the procedure is mirror image to that done with the gall bladder in the normal location.Situs inversus totalis does not appear to be a contraindication to laparoscopic management of cholelithiasis

PROPOFOL-BALANCED ANESTHESIA FOR SINGLE BALLOON ENTEROSCOPY: A COMPARISON BETWEEN ANTEGRADE AND RETROGRADE INTUBATION

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Aims: To compare and evaluate the success rate of propofol-balanced anesthesia (PBA) for the single balloon enteroscopy (SBE) procedure between antegrade and retrograde intubation.
Methods: We undertook a retrospective review. All procedures were classified into two groups according to route of the intubation: group A (antegrade) and group B (retrograde). The primary outcome variable was the successful completion of the procedure. The secondary outcome variables were sedation-related complications, mortality rate and hemodynamic parameters.
Results: 108 patients underwent SBE procedures. After matching age, gender, weight, height, ASA physical status, duration of endoscopy and indications of procedures, there were 21 patients in group A and 19 patients in group B. There were no significant differences in type of enteroscopy, anesthetic personnel and hemodynamic parameters between the two groups. All procedures were successful completion of the endoscopies. Overall and cardiorespiratory-related adverse events were not significantly different between the two groups. All adverse events were transient, mild degree and easier treatable. Serious adverse events were none.
Conclusion: PBA for SBE procedure in adult patients by experienced anesthesiologist is relative safe and effective. The success rate of the endoscopy does not depend on the route of intubation. Serious adverse events were rare in our population.

PROPOFOL-BASED DEEP SEDATION FOR ENDOSCOPIC ULTRASONOGRAPHY IN SICK PATIENTS IN THAILAND

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Objectives: To evaluate clinical efficacy of propofol-based deep sedation, and to compare complication rate between ASA physical status I-II and III-IV for EUS procedure in a hospital in Thailand.
Methods: We undertook a retrospective review. All patients were classified into two groups according to ASA physical status. In group C, ASA physical status was I-II, and ASA physical status in group S was III-IV. The primary outcome variable was successful completion of procedure. The secondary outcome variables were sedation-related complications.
Results: Sedation was provided for 197 patients. Of these, 156 procedures were in group C, and 41 procedures were in group S. There were no significantly differences in age, gender, weight, procedure time and indication of endoscopy between the two groups. All patients in both groups were concluded with the successful completion of procedure. Overall complication rate in group C was occurred less common than in group S. Hypotension was the most complication in both groups. All complications were easily treated, with no adverse sequelae.
Conclusion: In the setting of the developing country, propofol-based deep sedation for EUS in sick patients by trained anesthetic personnel with appropriate monitoring was relatively safe and effective. Serious complications were rare in our population.

PROPOFOL DEEP SEDATION FOR ELDERLY PATIENTS: A COMPARISON BETWEEN EUS WITH OR WITHOUT FINE NEEDLE ASPIRATION PROCEDURE

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Objectives: To evaluate and compare the clinical efficacy of propofol deep sedation (PDS) for elderly patients underwent EUS with or without fine needle aspiration (FNA) procedure in a hospital in Thailand.
Methods: We undertook a retrospective review from December 2006 and September 2009. All patients were classified into two groups according to type of procedure. In group A, EUS was only done for diagnosis. In group B, EUS with FNA was done. The primary outcome variable was overall complication rate. The secondary outcome variables were sedation and procedure-related complications and hemodynamic parameters.
Results: PDS was provided for 513 patients. After matching age, gender, weight and ASA physical status, there were 47 patients in group A, and 40 patients in group B. All patients in both groups were concluded with the successful completion of procedure. There were no significant differences in overall complication rate, sedation and procedure-related complications and hemodynamic parameters among the two groups. All complications were easily treated, with no adverse sequelae.
Conclusions: PDS for EUS with or without FNA procedure in elderly patients by trained anesthetic personnel with appropriate monitoring was relatively safe and effective. Complications in both groups were comparable. Serious complications were rare in our population.

PROPOFOL DEEP SEDATION FOR SMALL BOWEL ENTEROSCOPY PROCEDURE IN ELDERLY PATIENTS IN A WORLD GASTROENTEROLOGY ORGANIZING ENDOSCOPY TRAINING CENTER IN A DEVELOPING COUNTRY

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Objectives: To compare and evaluate the clinical efficacy of propofol deep sedation (PDS) for small bowel enteroscopy (SBE) procedure in elderly patients in a hospital in Thailand.
Methods: This study was a retrospective study. All SBE patients were classified into two groups by using age: group 1 (Age)
Results: 116 patients underwent SBE procedures. Premedications were none before the procedure. After matching gender, weight, ASA physical status and indications of procedures, there were 45 patients in group 1 and 28 patients in group 2. All procedures were successful completion but one in group 1. Mean dose of propofol, fentanyl and midazolam in both groups was comparable. There were no significant differences in the complication rate, mortality rate and hemodynamic parameters between the two groups.
Conclusion: In the setting of developing country, PDS for SBE procedure in elderly patients by experienced anesthesiologist with appropriate monitoring were relatively safe and effective. Sedation-related complications in elderly patients are relatively higher than in the younger patients, but not significantly different.

ROLE OF CANCER STEM CELLS IN THE PATHOGENESIS OF HEPATOCELLULAR CARCINOMA(HCC)

Authors: Mahmoud El-Ansary
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Hepatocellular carcinoma (HCC) is the fifth most common cancer worldwide affecting 1 million individuals annually.
In the last few years, a growing body of evidence has been reported supporting the notion that tumors are organized in a hierarchy of heterogeneous cell populations with different biologic properties and that the capability to sustain tumor formation and growth exclusively resides in a small proportion of cells called *cancer stem cells* (CSCs).
The identification of tumorigenic liver CSCs could provide new insight into the HCC tumorigenic process and possibly bear great therapeutic implications.
In this presentation, the role of CSCs in the pathogenesis of HCC will be elucidated, together with the impact of this role on future treatment of HCC.

SEROPREVALENCE OF SUBCLINICAL HEV INFECTION IN ASYMPTOMATIC, APPARENTLY HEALTHY, PREGNANT WOMEN IN DAKAHLYA GOVERNORATE, EGYPT

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Presenting Author: Yahia Zakaria Gad

Hepatitis E virus (HEV) is a major public health problem in the developing countries. HEV infection in pregnant women is more common and fatal in the third trimester. The present study was designed to determine the seroprevalence of subclinical HEV infection in asymptomatic pregnant women.
Methods: A total of 116 asymptomatic pregnant women divided into: group 1 included 56 pregnant women with HCV positive serology and group 2 included 60 pregnant women with negative HCV serology . Prevalence of anti-HEV antibodies and anti-HCV were determined by an enzyme linked immunosorbent assay (ELISA) kit.
Results: The overall prevalence of anti-HEV IgG was highly significant among pregnant women with chronic HCV infection 40/56 (71.42%) than pregnant women free from chronic HCV infection 28/60 (46.7%) (p=0.006). Chronic HCV infection in pregnant women appeared to be a risk factor associated with HEV IgG seropositivity (OR=2.86, CI=1.24-6.6). The seropositivity of anti-HEV IgG was significantly high in rural areas than urban areas (62.5% versus 37.5%) in group 1 and (78.58% versus 21.42%) in group 2 (p=0.15) and OR= 2.2, CI= 0.65-7.7). A significant decrease in albumin (p= 0.047) and increase in bilirubin (p= 0.025), ALT (p= 0.032), and AST (p= 0.044) in pregnant women with positive HCV and IgG anti HEV than the second group with negative HCV serology.

Conclusions: the seroprevalence of anti-HEV IgG in pregnant women is high in Egypt especially in rural areas. With chronic HCV co-infection, marked increase in anti-HEV IgG seropositivity and significant worsening of the biochemical liver indices were noted. Increased public awareness about the sound hygienic measures for a less prevalence of HEV is strongly advised.

SEVERE DYSPHAGIA DUE TO LINGUAL THYROID: A CASE REPORT

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Ectopic thyroid tissue may be deposited any where along an early thyroglossal tract. Lingual thyroid tissue is the most frequent ectopic location with a variable incidence (3,000 -10,000) and a seven fold female predominance
An 18-year-old female presented to our outpatient clinic with increasing breathing, swallowing difficulties, occasional mouth bleeds over the last 6 months and persistent foreign body sensation. On examination, a hard, spherical midline mass, with an intact mucosal covering, about (2x2x1.5 cm) located on the dorsum of the tongue. Neck examination revealed apparently normal thyroid gland and no cervical lymphadenopathy. On investigation, thyroid scan revealed ectopic thyroid tissue at the tongue base and atrophic cervical thyroid in a clinically and laboratory confirmed euthyroid female. A 99m Tc scanning showed increased uptake at the tongue base only. A standard transoral micro-laryngoscopic surgical reduction was performed to relieve patient's symptoms. Specimen histopathologically showed thyroid follicles filled with colloid. Postoperative 0.1 mg l-thyroxine maintenance therapy to suppress TSH to prevent ectopic thyroid tissue re- hypertrophy. The patient still euthyroid on 1-year follow-up with no residual or recurrent mechanical symptoms.
Conclusion: Partial surgical removal relieved mechanical symptoms and substitution therapy maintained the euthyroid state in our case till-now.

TREATMENT ALGORITHM FOR MANAGEMENT OF CHRONIC HBV

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Chronic hepatitis B (CHB) remains an important public health problem and a leading cause of liver-related morbidity and mortality worldwide. An estimated 350 million persons worldwide are chronically infected with HBV. The goal of therapy for CHB is to eliminate or significantly suppress the replication of HBV and prevent the progression of liver disease to cirrhosis, with culmination in liver failure, or Hepatocellular carcinoma, eventually leading to death or transplantation.
Currently, seven drugs are available for the management of chronic HBV infection: Interferon alfa-2b, Lamivudine, Adefovir, Entecavir, Peginterferon alfa-2a, Telbivudine, and Tenofovir are approved as initial therapy for chronic hepatitis B and have certain advantages and disadvantages. Although all of these agents can be used in selected patients, the preferred first-line treatment choices are Entecavir, Peginterferon alfa-2a, and Tenofovir. In choosing a therapy, however, consideration should be given to the advantages and disadvantages of the seven therapies. The issues to consider are efficacy, safety, resistance, and method of administration. Entecavir, Tenofovir, and Telbivudine are the most potent oral agents and have shown superiority to comparable agents. The treatment algorithm for management of chronic HBV provides answers to several practical questions :(1)Which patients are candidates for antiviral therapy? (2) What are the advantages and disadvantages of available treatment options? (3) When should therapy be initiated? (4) When can therapy be stopped? (5) What is the role of on treatment monitoring? (6) which strategies should be used to modify therapy to decrease the risk for antiviral resistance? Additionally, a better understanding of the advantages and disadvantages of new treatments has led to the development of strategies for reducing the rate of resistance associated with oral agents and optimizing treatment outcomes.

Recommendations in the guidelines for HBV treatment are (1) Evaluation of patients with chronic HBV infection, (2) Prevention of HBV infection, (3) Management of chronically infected persons and (4) Treatment of chronic hepatitis B.(5) Management of hepatitis B in patients waiting for liver transplantation and prevention of recurrent hepatitis B post-liver transplant have also been discussed in these guidelines

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USE OF RIGHT LOBE GRAFT WITH TYPE IV PORTAL VEIN ACCOMPANIED BY TYPE IV BILIARY TREE IN LIVING DONOR LIVER TRANSPLANTATION

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Presenting Author: Mahmoud Refaa Shehata

Anatomic variations of the portal vein (PV) and bile duct (BD) are more common on the right lobe as compared with the left lobe grafts in living donor liver transplantation (LDLT). We recently experienced a case of LDLT for hepatocellular carcinoma combined with liver cirrhosis secondary to hepatitis B virus and hepatitis C virus infection. The only available donor had right lobe graft with type IV PV (right anterior PV branching from the umbilical portion of the left PV) associated with type IV BD (right posterior duct drains into left duct at its umbilical portion). The patient underwent re-laparotomy for PV stenting due to PV stenosis. Percutaneous transhepatic biliary drainage was done for a stricture at the site of biliary reconstruction. Thereafter, the patient was discharged in good health. Our experience suggests that, the use of right lobe graft with type IV PV accompanied by type IV BD should be the last choice for LDLT, because of its technical difficulty and risks of associated complications.

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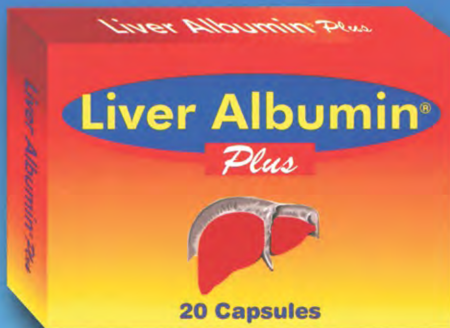

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