BILIARY COMPLICATIONS AFTER LIVING DONOR LIVER TRANSPLANTATION

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Introduction: Biliary complication after liver transplantation is one of the most significant postoperative problems. It occurs in 7-29% of patients in cadaveric liver transplantation and in 12-35% after living donor liver transplantation. The complications may be intrahepatic or extrahepatic. The latter includes anastomotic leak or stenosis.
Results: From May 2004 to July 2006 we have done 25 cases of living donor liver transplantation (Rt. Lobe) with duct to duct anastomosis. Biliary strictures occurred in 4 patients (16%). ERCP was done for all of them revealing tight anastomotic strictures in two patients failed to be dilated and referred to surgical correction in the form of hepatico-jejunostomy. The other two patients underwent multiple sets of endoscopic dilatation and they are doing well up till now.

Conclusion: The incidence of biliary complications after LDLT duct to duct anasomosis is more than those following cadaveric transplant. Surgical and endoscopic correction of the biliary complications are feasible and result in better quality of life of these patients.

CENTRAL CHOLANGIOCARCINOMA; HOW TO MANAGE?

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Central cholangiocarinoma is the second common cause of malignant obstructive jaundice after periampullary tumours. In the past the tools of diagnosis were limited so many cases had not been diagnosed. Now and after advancement of ultrasonic apparatus and advancement of visualization of biliary tree (Cholangiogram) through magnetic resonance cholangiography (MRCP) and also angiography. The diagnosis of central cholangiocarcinoma became easier as more clear. Also the advancement of surgical techniques and perioperative management precipitate to more surgical progress e.g. local excision of the tumour with or without right or left hepatectomy or caudate lobectomy (Burke et al., 1998, Nehaus et al., 1999).

Conclusion: surgical excision of early central cholangiocarcinoma is the treatment of choice. And even surgical palliation may be preferable than non. Surgical palliation like PTD or ERCP.

CIRRHOSIS IN LIVER ALLOGRAFT WITHOUT PRIMARY DISEASE RECURRENCE

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Abstract: Liver allograft cirrhosis is a relatively uncommon complication of liver transplantation. Most cases can be attributed to disease recurrence, particularly recurrent hepatitis C. Little is known about the frequency, aetiology and natural history of liver allograft cirrhosis occurring without evidence of recurrent disease. The aim of the present study was to review the clinico-pathological features in this group of patients. We retrospectively reviewed data from all adult patients who were transplanted between 1982 and 2002 and survived > 12 months post-OLT (n=1287). Cases of histologically proven cirrhosis were identified from histopathological data entered into the Liver Unit Database. 48 patients (3.7%) developed cirrhosis. In 29 of these, cirrhosis could be attributed to recurrent disease (hepatitis C-11, hepatitis B -4, autoimmune hepatitis-4, primary biliary cirrhosis -2, primary sclerosing cholangitis -3, non-alcoholic steatohepatitis-4, alcoholic liver disease-1). In 9 of the 19 patients without evidence of disease recurrence another cause of cirrhosis could be identified (de novo autoimmune hepatitis – 4, biliary complications -4, acquired hepatitis B -1). In the remaining 10 cases the cause of cirrhosis was unknown – in all 10 of these cases previous biopsies had shown features of chronic hepatitis of uncertain aetiology. Three patients in this group died, the remaining seven are alive with good graft function 3-12 years after cirrhosis was first diagnosed. The prevalence of "cryptogenic" post-transplant cirrhosis was significantly higher in patients initially transplanted for fulminant seronegative hepatitis (6%) than in those transplanted for other diseases (0.3%). In conclusion, post-transplant cirrhosis without disease recurrence is uncommon, but is more frequent in patients transplanted for fulminant seronegative hepatitis. Chronic hepatitis is the most frequent underlying pathological process in cases where the cause of cirrhosis remains uncertain.

CONCENTRATION OF TOTAL MATRIX METALLOPROTINASE-2 IN THE SERUM OF PATIENTS WITH COLORECTAL CANCER

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Background:- The processes of basement membrane degradation and remodeling of extracellular matrix (ECM) involves proteolytic enzymes called metalloprotienases. Among the numerous metalloprotienases enzymes of this group the key role is played by matrix metalloproteinase-2 (MMP-2).

Objective. The purpose of this study was to evaluate the concentration of MMP-2 in blood serum of patients with colorectal cancer and the effect of surgical treatment on this parameter in the postoperative period as well as assessment whether MMP-2 serum concentration correlate with clinicopathological variables.

Patients and Methods. We measured, prior to primary surgery and 4 weeks after surgery, the concentrations of MMP-2 in serum samples of 40 patients with colorectal cancer. Also the serum concentration of MMP-2 of 10 healthy volunteers were measured. The measurements were performed with enzyme linked immunosorbent assays (ELISA).

Results:- MMP-2 concentrations are higher in cancer than control ($p < 0.001$). The levels of MMP-2 in serum (median of the control cut-off limit) correlated with Dukes' stage ($P = 0.03$), grade (P=0.04), and lymph node metastasis ($P = 0.02$). No statistically significant correlation was found between the circulating MMP-2 and the other clinicopathological factors. Comparing the blood serum concentration of MMP-2 before and after operation reveals a significant decrease after radical surgery. Conclusion: Plasma concentration MMP-2 was correlated with clinical staging in colorectal cancer, and falling to the normal range following curative surgery.

Key wards:- MMP-2 – ELISA - colorectal cancer- Dukes' staging

DUODENOGASTROESOPHAGEAL REFLUX RESULTS OF MEDICAL TREATMENT AND ANTIREFLUX SURGERY

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Introduction: Recent studies have shown that reflux of the duodenal contest to the esophagus plays an important role in esophageal mucosal damage.
Aims & Methods: The aim of the study is to compare the duodenogastoesophageal (DGER) with the severity of reflux esophagitis and evaluate its response to either medical and/or antireflux surgery. Ninety-six patients with DGER were subjected to thorough history, upper GI endoscopy, barium study, esophageal manometry and 24-hr esophageal pH metry combined with Bilitec 2000. Medical treatment was given for all, while Nissen fundoplication was done for 28 patients. All patients were evaluated after Nissen fundoplication and treatment.
Results: The age of studied patients was 36.26+12.7 years with male to female ratio 2:1. The chief symptom was heartburn in 73 (76%) patients. Upper GI endoscopy revealed, 30 (31.2) patients had grade I reflux, 30 (32.2%) patients had grade II reflux, 7 patients had grade III reflux, 5 patients had grade VI reflux, Barrett's esophagus in 14 patients (14.5%), hiatus hernia (HH) in 26 (27%) patients. Barium study revealed that, 40 (41.6%) patients had evidence of reflux, while 34 (35.4%) patients had reflux with HH. Esophageal motility revealed the mean LESP (12.7±7.6), 68 patients (70.8%) had normotesnive body while ineffective esophageal body motility was encountered in 28 (29.1%) patients. Eshophageal 24-he pH study and Bilitec 2000 revealed that 54 (56.2%) patients had bile reflux with pathological acid reflux, while 42 (43.7%) patients had bile reflux in alkaline pH. Medical treatment gave excellent to good response in 68 (70.8%) patients, while Nissen fundoplicaton was done for 28 (29.2%) patients. Endoscoic examination 6 months after Nissen fundoplication showed marked improvement in endoscopic injury. Barium study after Nissen fundopilcation revelaed repair of HH and control of GERD in all patients except one. Esophageal motility, 24 hr pH study and Bilitec 2000, after six months of Nissen shows high significant increase in LESP, decrease in acid and bile reflux. No significant difference between open of laparoscopic funcoplication in LESP, acid and bile reflux.

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Conclusion: DGER in acid medium is more injurious to the esophagus than DGER in alkaline pH. The severity of esophageal injury does not correlate with the severity of acid or bile reflux but has a direct correlation with impaired distal esophageal motility. Medical treatment gives satisfactory control of symptoms and healing of esophageal lesion in 70% of DGER. The response to medical treatment does not depend on the severity of esophageal injury but depends on the severity of bile and acid reflux. Nissen fundoplication in refractory patients either open or laparoscopic was effective in control of heartburn in 95% of patients to 50% in mixed symptoms.

EMPLOYMENT AND QUALITY OF LIFE IN LIVER TRANSPLANT RECIPIENTS, LESSONS FROM US EXPERIENCE

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BACKGROUND/AIM: In the United States 6000 liver transplants are performed annually. Studying the US centers' experience and its cost, impact on society will be useful for growing LT programs in other countries like Egypt. Particular attention has been made to post transplant employment status transplant recipients as an indirect measure of society's ability to regain lost expense, and as a marker of a patient's mental and physical health. The aim of this study is to determine the factors affecting employment after liver transplantation. METHODS: Adult liver transplant recipients who were seen at UCLA's Liver Institute during a nine month period between August 2005 and April 2006 were administered two questionnaires: one regarding work history and insurance coverage, and the second a SF-36 (Short Form 36). Through multivariate analysis, factors significantly associated with employment were identified. RESULTS: The mean age of participants was 51 (standard deviation [SD] = ± 13.9). The majority (98/204) were transplanted for viral hepatitis. 98.5% reported having health insurance. 34% had disability coverage. Of 204 subjects, 163 (80%) worked prior to transplantation, and 64 (31%) worked post-transplant. Of those employed post-transplant, most (29%) returned to work greater than 24 months after transplantation. Eight recipients changed jobs after transplantation (12.5% of those employed) and 22% had a salary decrease. Only 4% had an increase in salary post-transplant. Thirteen participants reported having been denied employment secondary to their transplant. In multivariate analysis, higher post-transplant salary (OR=0.55, 95% confidence interval [CI] 0.45, 0.60, p<0.001), lack of disability prior to transplant (OR=0.49, 95% CI 0.30, 0.81, p<0.005), and ability to pay for transplant without insurance (OR=0.53, 95% CI 0.31, 0.89, p=0.017), and matriculation in school (OR=0.25, 95% CI 0.07, 0.89, p=0.032) were independently significantly associated with post-transplant employment. Employment prior to transplantation, age, type of insurance, etiology of the liver disease, and MELD scores were not

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significantly related to post-transplant employment. In addition, components of SF-36 survey were not associated with employment. CONCLUSION: Liver transplant recipients are more likely to work after transplantation if they have a higher post-transplant salary, did not require disability prior to transplantation, and were able to pay for transplantation without insurance. Mental and physical health status, and type of pre-transplant insurance did not affect employment after transplantation. This US experience will be useful to liver transplant units in countries like Egypt to assess the cost-effectiveness and work force of their LT programs.

INCIDENCE & PROGNOSTIC VALUE OF POSITIVE PERITONEAL LAVAGE IN COLORECTAL CARCINOMA

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This study was performed to evaluate the incidence and the potential prognostic value of free peritoneal cancer cells in 30 patients undergoing surgery for colorectal cancer. We tried to correlate their presence with clinicopathological variables and survival with a median follow up period of 24 months. Aspirated washings were assessed for malignancy using a combination of conventional cytology, immunocytochemistry by anti-CEA monoclonal antibody as well as by RT-PCR analysis using primers for CK 19. Using cytokeratin-19 reverse transcriptase polymerase chain reaction, 40% (12/30) of cases had shown positive malignant lavage. However,33% and 20% were positive as detected by anti-carcinoembryonic antigen immunocytochemistry and conventional cytological examination respectively. Peritoneal recurrence rate was significantly higher in patients with positive lavage ($p<0.05$). Survival rate was also decreased by 58% in those patients ($p<0.05$). Exfoliated cells were found to be related to several prognostic factors including: type of operation, Astler-coller staging system, histologic type, grade and depth of invasion of the primary tumour, number of regional lymph node metastasis, distant metastasis, vascular invasion and tumours with peritoneal carcinomatosis. We conclude that positive peritoneal lavage might serve as a new adverse prognostic marker that would be considered in managing colorectal carcinoma.

SURGICAL AND ENDOSCOPIC PALLIATIVE PROCEDURES FOR PATIENTS WITH ADVANCED PERIAMPULLARY TUMORS

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Pancreatic cancer is the fourth common cause of cancer-related deaths in western world *(Huguier and Mason 1999)*. Most patients with pancreatic cancer present late in their course and have either locally extensive or metastatic disease. *(Moossa and Gamagami 1995)*. The optimal palliation is crucial because patients with advanced disease have a limited life expectancy and because the symptoms of the progressive disease are often unbearable. *(Pretre et al 1992)*. This single center retrospective study aims to evaluate the results of surgical and endoscopic palliative procedures for patients with advanced periampullary tumors. Between January 1995 and December 2004, 945 patients with periampullary and pancreatic tumors were admitted and managed at gastroenterology Center, Mansoura, Egypt. Seven hundred twenty nine patients (729) witrh advanced disease were studied, 459 were males & 270 were females (ratio 1.7:1) and the mean age was 59.4±11.5 (range12-77) years. One hundred patients (10.6%) underwent palliative surgical biliary bypass with or without GJ, The median survival for this group was 7.4 months. Six hundred and twenty nine (66.6%) patients were not candidates for surgical resection. ERCP and endoscopic stenting was tried in all patients with success rate of 92.2%. 580 patients were successfully managed via ERCP and stent. For the remaining 49 patients PTD was possible in 47 (7.4%) while 2 (0.4%) patients were not fit for any palliative procedure due to LCF, ascitis and the poor general condition. The median survival for this group was 3.8 months. In the current study, patients with resected periampullary carcinomas (resection group had the longest median survival (19 months), whereas, patients who underwent palliation (surgical and endoscopic palliation groups) had markedly shorter median survival (7.4 and 3.8 months, respectively). These results reflect the proper selection of cases for each procedure and also, despite the non-randomization of this study, underscore the importance of resection of these aggressive tumors if possible.

TRIPHASIC CT SCAN OF EVALUATION OF HEPATIC FOCAL NODULAR HYPERPLASIA (FNH) AND HEPATOCELLULAR ADENOMA (HA)

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Hepatic focal nodular hyperplasia (FNH) and hepatocellular adenoma (HCA) are uncommon benign hepatic tumors that continue to present diagnostic and therapeutic challenges. Objective: to document the characteristic features of hepatic FNH and HCA on multiphasic helical computed tomography. Materials and methods: The clinical, pathologic and imaging findings were retrospectively analyzed in 21 patients (15 women and 6 men with mean age 42.5 years) with proved diagnosis of 41 FNH and HCA who were subjected to triphasic CT scanning. The final diagnosis of the lesions, based on surgery or biopsy, was FNH (n=30) in 16 patients and HCA (n=11) in 5 patients. The FNH lesions were assessed regarding the number, margins, homogeneity of enhancement and the presence of a central scar. HCA lesions were assessed regarding the number, margins, homogeneity (calcification, hemorrhage and necrosis), enhancement and capsule. Results: 30 FNH lesions were found in 16 patients; 11 had single lesion while 5 patients had multiple lesions. All the 30 lesions (100%) were hyperdense to liver on arterial phase of triphasic helical CT, enhanced homogenously in 29 lesions (96.7%), had a smooth surface in 27 lesions (90%) and 15 lesions (50%) had a central scar. In PVP imaging, 22 FNH (73.3%) appeared isoattenuating, whereas 8 lesions were hyperattenuating. After 10 minutes delay, 26 lesions were isoattenuating (86.7%). Eleven HCA were found in 5 patients. Lesions were single in 2 patients and multiple in 3 patients. All lesions were smooth and tumor capsule was found in 4 lesions (36.4%). Calcification, hemorrhage and necrosis were detected in 4 lesions (36.4%). Ten tumors (90.9%) displayed homogenous enhancement (excluding areas of hemorrhage, necrosis or calcification). All adenomas were hyperattenuating in HAP phase of triphasic CT. On PVP images, 5 adenomas were isoattenuating to normal liver (45.5%) and 4 adenomas appeared isoattenuating on delayed imaging (36.4%). Conclusion: triphasic spiral CT demonstrates characteristic features that may allow confident diagnosis of FNH and HCA and distinguish them from other hepatic masses. In typical presentation, neither biopsy nor further imaging is needed.