

the proximal jejunum and surgically removed. Both patients made a full recovery and were discharged home.

Conclusion Bouveret's syndrome is rare and accounts for 1–3% of gallstone ileus. We have now encountered two cases in our hospital recently. This may reflect the rise in our ageing population, as a major risk factor for developing this syndrome is age >70 years. Establishing the diagnosis early requires an awareness of this syndrome and prompt recognition of the signs. Contrast enhanced CT is the investigation of choice. In addition to this, a combined care approach between the gastroenterologists, surgeons and nutrition team is crucial to a successful outcome, hence our wish to present these cases.

Competing interests None declared.

REFERENCE

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PWE-149 GENE EXPRESSION IN OXALIPLATIN RELATED SINUSOIDAL OBSTRUCTION SYNDROME

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Introduction Sinusoidal Obstruction Syndrome (SOS) is associated with Oxaliplatin based chemotherapy in patients with colorectal liver metastases (CRLM) and is a cause of concern when undertaking major liver resection. The pathogenesis of SOS is poorly understood however a variety of candidate genes have been identified which may play a role in activating various molecular pathways involved. The aim of this study was to validate these gene expression changes in an independent cohort of patients.

Methods Patients undergoing liver resection for CRLM, were identified for inclusion and appropriate informed consent obtained. Full clinical information was recorded for each patient including pre-operative chemotherapy use. A biopsy of the non-tumour bearing liver was obtained, prior to parenchymal transection, and stored in RNAlater. Histopathology was reviewed to identify those with SOS. Hepatic gene expression was compared in chemotherapy naive patients (controls) with no evidence of underlying liver disease (n=10) and those who received pre-operative Oxaliplatin either with (n=13) or without (n=9) evidence of SOS by qRT-PCR. Mann–Whitney U test was used to assess statistical significance.

Results The interval between cessation of chemotherapy and surgery was similar for all patient groups (p=0.45). In contrast to previous studies we were unable to identify changes in extracellular matrix remodelling genes (MMP2, MMP9, TIMP1, TGFβ) thought to be involved in SOS. However there was up regulation of angiogenesis related VEGF-C (1.6-fold, p<0.05) along with the hypoxia induced HIF1α (1.98-fold; p<0.01) in those with SOS. It is suggested that SOS is associated with a pro-thrombotic tendency and in keeping with this there was a non-significant trend towards increased expression of vWF (2.5-fold; p=0.06). We also confirmed up-regulation of CCL20 in those with SOS (3.8-fold; p<0.05) which is chemotactic for colorectal cancer cells.

Conclusion We were able to confirm up-regulation of genes involved in angiogenesis, hypoxia and thrombogenesis in patients with SOS. It is likely that changes in extracellular matrix re-modelling genes occur early in the development of SOS and but have returned to baseline levels if there is a reasonable duration between stopping chemotherapy and surgical resection. Increased expression of CCL20 may account for the recently reported poorer disease specific survival in patients with SOS.

Competing interests None declared.

PWE-150 CHEMOTHERAPY ASSOCIATED LIVER INJURY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction Chemotherapy associated liver injury (CALI) has been associated with increased morbidity and mortality in patients undergoing major hepatectomy to treat colorectal liver metastases (CRLM). In addition a link has recently been made between CALI and poorer long term disease specific outcome. The aim of this review was to determine the pathological effect of specific chemotherapy regimens on the hepatic parenchyma as well as surgical morbidity, mortality and overall survival.

Methods A literature search of MEDLINE, EMBASE and the Cochrane Library identified 14 619 potentially relevant reports. Of these 37 full text reports which included patients only with CRLM and provided either histological data or patient outcome data were considered suitable for inclusion in this review. For each report data relating to study design characteristics, histological scoring of the liver parenchyma and peri-operative outcomes were extracted using a standardised proforma. Study quality was assessed using the Newcastle-Ottawa score for non-randomised studies and the grade of evidence assessed according to the Oxford centre for Evidence Based Medicine scale. A meta-analysis was performed utilising the random effects model of DerSimonian and Laird. Results are reported as RR (±95% CI). Statistical significance was set at p<0.05.

Results No association could be demonstrated between the use of pre-operative chemotherapy and the development of hepatic steatosis >30%. The presence of steatohepatitis was associated with the use of pre-operative Irinotecan based chemotherapy (RR 3.45; 95% CI 1.12 to 10.62; p=0.03). Calculating the number needed to harm suggests that one in every 12 patients treated with Irinotecan based chemotherapy could be expected to develop steatohepatitis. Oxaliplatin based chemotherapy regimens are associated with grade 2 or greater sinusoidal injury (RR 4.36; 95% CI 1.12 to 10.62; p=0.03) with a number needed to harm of 8. The use of Bevacizumab alongside Oxaliplatin reduces the risk of grade 2 or greater sinusoidal injury.

Conclusion The use of pre-operative chemotherapy is associated with an increased risk of injury to the liver parenchyma in patients with CRLM. This injury occurs in a regimen specific manner with Irinotecan being associated with steatohepatitis whereas Oxaliplatin is associated with sinusoidal injury. This injury may have implications on the functional reserve of the liver following major hepatic resection.

Competing interests None declared.

PWE-151 EMERGENCY ERCP IN CRITICALLY ILL PATIENTS IS A SUCCESSFUL PROCEDURE

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Introduction Emergency ERCP may be required in patients with biliary sepsis who rapidly deteriorate with multi-organ dysfunction and cannot wait until the next available list. The majority of these patients require ventilatory and/or inotropic support and general anaesthesia for stabilisation. The data on the outcome of emergency ERCP in this patient cohort is limited. We sought to assess the frequency, indications, and clinical outcomes of emergency ERCPs.

Methods Records of cases undergoing ERCP between November 2008 and November 2011 were retrospectively reviewed. Only patients who were in the intensive care unit requiring ventilatory and/or inotropic support and general anaesthesia for stabilisation at the time of ERCP were included. Data collected included indications, co-morbidities, technical success and 30-day mortality.

Results A total of 2237 ERCPs were performed during this period, out of which 36 (2%) emergency ERCP's were performed in 32 patients. There were 15 males and 17 females. 27/32 patients (84%) had not had previous ERCP. The median age of patients was 79 years (range 42–89). ASA grade prior to the presenting illness was 1 in 6 (17%); 2 in 15 (42%); 3 in 15 (42%). All cases were performed under general anaesthesia in emergency theatre. 27/36 cases (75%) required inotropic support. Indications included cholangitis 28/36 (78%); acute pancreatitis with cholangitis 5/36 (14%); post-operative bile leak 3/36 (8%). Biliary cannulation was achieved in all cases (100%). Endoscopic findings included: common bile duct (CBD) stones in 26/36 (72%); bile leak in 3/36 (8%); CBD stricture in 2/36 (6%); Mirizzi's in 1/36 (3%); blocked plastic stent in 1/36 (3%) and post-sphincterotomy bleed with clot obstruction in 1/36 (3%). Sphincterotomy was performed in 25/36 (69%) cases. 23/36 (64%) patients had stent insertion and in 11/36 (30%) patients balloon trawl was sufficient to clear the ducts. A rapid reduction in bilirubin was observed within 24–48 h following ERCP (Pre ERCP bilirubin: median 104, range 9–553 mmol/l; post ERCP bilirubin: median 29.5 range 12–217 mmol/l $p < 0.001$ (Wilcoxon Signed rank test). 30-day mortality was 25% (8/32 patients) and the majority of these patients (6/8, 75%) died within 24 h of ERCP due to overwhelming sepsis. There was a single case of post sphincterotomy bleed that required a repeat procedure due to clot obstruction. There were no other procedure related complications. The median length of hospital stay was 21 days (range 2–49).

Conclusion Although the 30-day mortality remains high due to multi-organ dysfunction, ERCP is successful in majority of these patients and translates to a good outcome for this cohort of critically ill patients, in whom the prognosis is inevitably poor without an emergency ERCP.

Competing interests None declared.

PWE-152 PALLIATIVE BILIARY STENTING; NOT SO PALLIATIVE IN MANY CASES!!

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Introduction Palliative biliary stenting has been practiced widely to treat symptomatic patients with non-resectable pancreatic carcinoma and other forms of cancers obstructing the biliary system. We have undertaken this study to assess the outcome of this practice in these patients especially who are on end of life care and to assess whether biliary interventions on occasions cause or hasten death.

Methods We retrospectively studied 160 consecutive patients who had ERCP (Endoscopic Retrograde Cholangiopancreatography) from October 2010 to October 2011 at Clinical Diagnostic Unit, Queen's Hospital, Romford, London. Data were collected using Scorpio data (GI reporting tool) on demographic variables, aetiology, type of cancer, Patients symptomatology pre and post procedure, Liver function tests (Cyberlab), complications secondary to ERCP, 30-day mortality post ERCP.

Results Of the 160 ERCP patients, 12 (7.5%) had 30-day mortality post ERCP. One patient could not be stented due to technical reasons. Of the 12 patients 11 had Metastatic Ca that is, Pancreas (5), Breast (2), Oesophagus (1), Cholangiocarcinoma (1), Lung (1), unknown primary (1). Of the cancer patients 6 (11) were male and 5

(11) were female with a mean age of 70.7 years. Seven of those patients had a presenting complaint of severe abdominal pain not fully controlled with opiates, all 11 (11) patients had varying degree of deranged liver function tests predominantly cholestatic picture, 3 (11) patients had SIRS (Systemic Inflammatory Response Syndrome). Technical failure to place the stent occurred in 1 patient. Post ERCP 6 (11) were symptomatically better on discharge, 4 (11) had worsening of their symptoms, Baseline bilirubin was 213 $\mu\text{mol/l}$ with 7 days post ERCP bloods showed improvement with mean bilirubin of 73 $\mu\text{mol/l}$ in four patients (11), ALP of 6 (11) and conversely rest of the patients showed worsening LFT's. 30 days mortality showed four patients died in hospital, two in hospice and five at home. All three patients with SIRS died within 1-week post ERCP.

Conclusion Malignant biliary obstruction has significant mortality. Identification of patients with SIRS is important as these patients have very high mortality and may not improve from ERCP and biliary interventions. Older age >65 years and more advanced disease were related with higher mortality despite interventions. This series suggest better selection of patients for biliary interventions in advanced metastatic cancers.

Competing interests None declared.

PWE-153 SINICALIDE CHOLESCINTIGRAPHY IN PATIENTS WITH SUSPECTED GALL-BLADDER DYSKINESIA: ASSESSMENT OF ALTERNATIVE FUNCTIONAL PARAMETERS AND POSSIBLE ROLE IN PATIENT SELECTION

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Introduction Gallbladder ejection fraction (GBEF) from sinicalide cholescintigraphy is frequently used as an index for referring patients with gallbladder dyskinesia for cholecystectomy. Many studies have reported the cut-off point used (GBEF $\leq 35\%$) to be arbitrary and a significant number of patients who undergo cholecystectomy on this criteria remain symptomatic even after surgery. The aim of this study is to examine alternative parameters for quantification of hepatobiliary scintigraphy.

Methods 81 patients who were investigated with sinicalide cholescintigraphy (including GBEF_{max} estimation) were reviewed at 6–18 months. GBEF at 10 min (GBEF₁₀), peak emptying rate, time to peak emptying rate and area under the curve (AUC) were calculated. These parameters were compared between the groups of patients remaining symptomatic and asymptomatic post-operatively and in those who did not undergo surgery. Student t test was used to compare group means.

Results 40/81 patients had abnormal GBEF_{max} ($\leq 35\%$). 31/40 patients underwent laparoscopic cholecystectomy along with 10/41 patients with a normal GBEF_{max}. 12/41 patients (29%) remained symptomatic post-operatively. There were significant differences between symptomatic and asymptomatic patients of the surgery group for GBEF₁₀ (13% vs 22%, $p=0.03$), peak emptying rate (-0.03 cpm^2 vs -0.05 cpm^2 , $p=0.01$) and AUC (0.88 counts vs 0.81 counts, $p=0.047$). These parameters were more "normal" in those patients who benefited from surgery. No significant differences were found between symptomatic and asymptomatic patients from the non-surgery group or patients with normal vs abnormal histology.

Conclusion Patients who remain symptomatic after laparoscopic cholecystectomy for gall bladder dyskinesia have more abnormal values in the above mentioned alternative parameters implying an inherent abnormality in biliary tract function. Hence we propose