the ascitic fluid samples sent to our microbiology department. Case notes for these patients were reviewed and data were collected on patient demographics, aetiology of cirrhosis, use of blood products and human albumin solution (HAS) and volume of ascites drained.

Results 56 LVP were performed on 28 patients. 24 were male, age range 30 – 84 years (median 59 years). Alcohol was either the only or a contributory cause of cirrhosis in 25 (89%) of patients. None had hepatitis B or C virus infection.

5 patients received fresh frozen plasma (14 units in total) and 1 received octaplex® prior to LVP. The total cost was £1024.

8 patients had less than 5L ascites drained and received a total of 19 units of 20% HAS. 16 patients received more than 8g albumin per litre of ascites drained (a total of 31 unnecessary units). The total cost of this was £1400.

The potential cost saving per procedure was £49.47. However data on albumin administration was unavailable for 7 patients and this could be an underestimate.

Conclusion Alcohol is the predominant cause of cirrhosis requiring LVP in our population and working age men constitute the largest proportion. Significant cost savings can be made by avoiding unnecessary blood products and by avoiding excessive use of albumin or administering other fluids when less than 5 litres of ascites are drained. Trusts should ensure relevant protocols are in place.

Disclosure of Interest None Declared

REFERENCE

1. EASL clinical practise guidelines on the management of ascites, spontaneous bacterial peritonitis, and hepatorenal syndrome in cirrhosis. *Journal of hepatology* 2010; 53(3):397–417.

PTU-103 AUDIT INTO THE MANAGEMENT OF ACUTE VARICEAL BLEEDS AND THE ROLE OF TIPS

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[1]V Chhaya, [1]A Bevan, [1,*]F Stanley, [1]M Pollard, [1]S Clark. [1]*Gastroenterology, St Georges Hospital, London, UK*

Introduction The mortality associated with acute variceal bleeding is significant with a 70% risk of recurrent haemorrhage in survivors. Our aim was to assess the outcome from variceal bleeding at St George's Hospital over a one year period, to determine whether current clinical guidelines in the management of variceal bleeding are being adhered to, and to assess whether we are utilising the role for early TIPS (transjugular intrahepatic portosystemic shunt) in patients with variceal bleeding.

Methods A dataset of all adult patients admitted from 1/4/11 for a period of 12 months was obtained with a primary diagnosis code of K922 Gastrointestinal haemorrhage, unspecified (n = 378). Genuine cases were confirmed by reference to the Micromed endoscopy reporting tool, CEPOD emergency theatre lists, bereavement records and old inpatient lists for the Hepatology firm. Case notes were obtained for the final sample of 23 patients.

Results The main cause of variceal bleeding (65%) was alcoholic liver disease (ALD). 78% were rebleeds of which 83% were within the last 6 months. 61% of patients had features of decompensation (ascites 86%, renal dysfunction 29%). Only 4% of cases were Childs-Pugh A, with 61% of cases being Childs-Pugh B and 35% Childs-Pugh C. The predicted 3 month mortality according to the MELD (model for end stage liver disease) score was 6–19.6%. An average of 2 to 3 units of blood was transfused to 78% of patients and 60% of patients required either FPP, platelets or both. All patient received an endoscopy during their admission, of which 74% were carried out within 12 hours. Only 52% were intubated for procedure and 39% were admitted to ITU post procedure. 96% received antibiotics, 87% received terlipressin and 79% were discharged on propranolol. Only 35% of patients received sucralfate post banding.

Only 13% of patients had a TIPS procedure. A further 48% of our sample could have been considered for TIPS where no contra-indication was found (i.e hepatic encephalopathy not secondary to UGI bleeding or renal dysfunction). The average length of stay was 14 days and the 30 day mortality rate was 13%.

Conclusion The pharmacological management was generally good and our mortality rate of 13% was better than the quoted figures of 30% in the literature. However, we identified a possible 48% of the sample could have been considered for TIPS which is no longer considered rescue therapy alone with good evidence for its early use, with subsequent prevention of readmission from a variceal bleed.

We recommend early pharmacotherapy with terlipressin and antibiotics as soon as varices are suspected with early ITU involvement, airway protection at endoscopy and early TIPS in selected patients.

Disclosure of Interest None Declared.

PTU-104 SINGLE CENTRE MANAGEMENT OF PYOGENIC LIVER ABSCESSES: SURPRISINGLY POOR BUT MORTALITY STILL LOW

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[1]A Puri, [1]M Bhuva, [1,*]F Sampaziotis, [1]B Macfarlane. [1]*Gastroenterology, West Herts NHS Trust, Watford, UK*

Introduction Untreated, pyogenic liver abscesses have a mortality approaching 100%. Three admissions in a week sparked interest in the best management of this condition. Although common, no comprehensive management guidelines could be found, prompting further review into how well this condition was managed locally

Methods Retrospective analysis of all patients admitted to Watford Hospital between 2006 and 2011 with a diagnosis of pyogenic liver abscess. Data was collected to evaluate use of cultures, radiological intervention (aspiration or drain insertion), source of infection, investigation for cause, follow up and outcome

Results Fourty four admissions were identified: 39 patients with 5 re-admissions. Mean age was 62 yrs, 59% male, 41% female. Eleven patients were managed by the Gastro team.

Assumption of source was made on CT imaging results: 46% presumed portal translocation (most diverticular disease), 36% biliary, 18% unidentified. Blood cultures were taken in 24 patients (42% positive). Abscess aspirates were taken in 33 cases, sent for culture in 30 (50% positive). Presumed biliary or unidentified sources grew gramme negative organisms in 12/13 cases. Presumed portal sources grew gramme positives in 7/8 and anaerobes 1/8.

Abscess size was < 3 cm in 5 cases (incl. 2 readmissions). Four received anitbiotics (Abc) alone:resolution in 3/4, 1/4 no follow up. One was managed to resolution with Abc and aspiration. Mean length of stay was 11 days.

In 6 patients the abscess was 3–5 cm. In this group, 1 patient with malignancy died, 1 treated successfully with Abc alone. The remaining 4 were treated with Abc and aspiration: 1/4 resolution, 1/4 readmitted, 2/4 no follow up. Mean length of stay 15 days.

Thirty three patients had abscesses > 5 cm (incl. 3 readmissions). Nineteen were treated with Abc and drainage: 2/19 had underlying malignancy and died, 6/19 resolution, 3/19 readmitted, 7/19 no follow up, 1/19 referred to surgery. Of the remaining fourteen, 3/14 had Abc alone (2 resolved, 1 patient with two readmissions no follow up), 1/14 a readmission referred for surgery and 10/14 Abc and aspiration. Outcome in these ten: 1/10 mutiple aspiration, 2/10 drain insertion, 1/10 surgical referral, 1/10 readmitted, 1/10 partial response, 3/10 no follow up, 1/10 resolution. Mean length of stay in > 5 cm group : 27 days.

Overall in all patients: investigation for cause limited to 3 colonoscopies and 1 ERCP, follow up inadequate in 15 (38%), mortality 8%.
Conclusion Management of this serious condition was remarkably poor, with limited use of cultures, inconsistant radiologic intervention, no search for cause, and scanty follow up. Despite this confirmed mortality was just 8%.Guidelines for future management have been drawn up including recommendation that all patients are looked after by the Gastro team.
Disclosure of Interest None Declared

PTU-105 OUTCOME OF CIRRHOTIC PATIENTS ADMITTED TO INTENSIVE CARE UNITS AT HOSPITALS WITHOUT SPECIALIST LIVER SERVICES

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[1,*]G Beejooa, [1]R Oates, [2]L Loo, [3]N Mirza, [2]S Shah, [3]C Grimley, [4]G Watts, [2]N Prasad, [5]N Kochar, [1]A Al Rifai. *[1]Salford Royal NHS Foundation Trust, Manchester; [2]Royal Albert Edward Infirmary, Wigan, Manchester; [3]Royal Blackburn Hospital, Blackburn; [4]The University Hospital of South Manchester; [5]Central Manchester University Hospitals, Manchester, UK*

Introduction Patients with liver cirrhosis admitted to an ICU are believed to have a poor prognosis with high mortality despite significant use of resources. Most of the literature to date on this topic has been collected at hospitals with Specialist Liver Units and these results may not be representative of the outcome at general ICUs. A recent prospective study of cirrhotic patients admitted to a tertiary Liver ICU in the UK demonstrated an overall hospital mortality of 59%. The aim of this study was to determine the outcome of cirrhotic patients admitted to non-specialist ICUs.
Methods Data was retrospectively collected from four hospitals in the NW region of the UK without specialist liver ICUs. Patients were identified using the Intensive Care National Audit and Research Unit (ICNARC) database. 61 patients with liver cirrhosis admitted to a general ICU between January 2010 and January 2012 were included in this study.
Results Age range was 30 to 79 years (average 51 years). 80% of patients were male and alcohol was the commonest aetiology for liver cirrhosis (90%). The main reason for admission to ICU was for gastrointestinal bleeding (38%). 51% of patients had a Child Pugh score of C on admission to ICU. 46% of patients had a MELD score between 10 and 19 and 28% had a score between 20 and 29. 79% of patients required invasive ventilatory support, 49% required vasopressors and 21% needed renal replacement therapy. 51% developed further decompensation of their liver disease during their ICU stay. These included GI bleeding (21%), hepatic encephalopathy (15%), HRS (11%) and SBP (3%). 67% of patients had an ICU stay of < 5 days. A 49% inpatient mortality rate was observed in our study with sepsis and multi-organ failure being the most common causes of death.
Conclusion Patients with liver cirrhosis admitted to general ICUs have similar rates of mortality compared to those in tertiary liver ICUs. Therefore, admission to such units should not be deemed futile in cirrhotic patients and earlier admission may improve outcome.
Disclosure of Interest None Declared

PTU-106 PATIENT IMPACT OF INFLAMMATION IN PRIMARY BILIARY CIRRHOSIS (PBC): INFLAMMATORY CYTOKINE LEVELS ARE ELEVATED BUT UNRELATED TO FATIGUE SEVERITY

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[1,*]G Pells, [1]S Ducker, [1]J Palmer, [2]J Newton, [1]D Jones on behalf of The UK-PBC Consortium. *[1]Institute of Cellular Medicine, Newcastle University; [2]NIHR Biomedical Research Centre in Ageing & Chronic Disease, Newcastle-upon-Tyne, UK*

Introduction PBC is characterised by loss of small intrahepatic bile ducts, and in a significant proportion of patients by persistent fatigue. Genes regulating inflammatory pathways have been strongly associated with PBC in population-scale genetic studies, implicating inflammation in disease pathogenesis. Animal models of cholestasis, a biological process in PBC, have demonstrated fatigue-like behaviour appearing to result from responses to inflammatory cytokine release in the brain. Elevation of inflammatory cytokines has therefore, unsurprisingly, been postulated as an underlying mechanism for fatigue in PBC as well as other chronic inflammatory conditions. However, more recently data demonstrating that fatigue is not proportional to liver disease severity in PBC has questioned this presumed correlation between inflammation and fatigue. This study aimed to explore the serum cytokine profile in PBC compared to healthy controls, and to correlate this picture of inflammation status with fatigue severity.
Methods 68 patients from the Newcastle sector of the UK-PBC cohort and 9 healthy controls provided a morning peripheral blood sample and completed the PBC-40, a validated disease-specific quality of life measure with a fatigue domain. Sera were derived using standard protocols and stored at –80°C prior to multiplex cytokine quantification using the MSD platform.
Results PBC patients showed significant elevation of IFN-γ (median 2.4pg/ml[IQR 1.6–15.4] v control 0.7[0.2–1.5], $p < 0.0005$), IL-6 (1.0pg/ml[0.4–3.3] v 0.5[0–1.5],$p < 0.005$) and TNF-α (7.1pg/ml[5.5–10.5] v 4.3[3.6–5.9],$p < 0.001$). IL-1β was elevated in patients but fell short of significance (2.3 pg/ml [0.2–2.3] v 0.5[0.1–0.8],p = ns). Within the PBC group cytokine levels were compared between 21 patients reporting mild fatigue (established using published cut-offs for PBC-40 fatigue domain severity) and 24 patients with severe fatigue. No significant differences were seen between mildly and severely fatigued patients, and for three of the four pro-inflammatory cytokines (IFN-γ,IL-1β and TNF-α) levels were in fact lower in severely fatigued patients.
Conclusion Serum inflammatory cytokine levels are significantly elevated in PBC, in keeping with inflammation playing a key role in disease pathogenesis. Although the study protocol cannot exclude central nervous system-specific inflammatory mechanisms, no evidence was found to implicate inflammation in the pathogenesis or expression of fatigue in PBC, suggesting a further factor independent of inflammatory disease pathogenesis predisposes certain patients to fatigue.
Disclosure of Interest None Declared.

PTU-107 NAFLD IN PATIENTS WITH SEVERE ASTHMA

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[1,*]H Gordon, [1]P Patel, [1]J Hull, [1]K Nimako, [1]A Menzies-Gow. *[1]Department of Respiratory Medicine, Royal Brompton Hospital, London, UK*

Introduction NAFLD is a spectrum of liver disease that encompasses Nonalcoholic fatty liver (NAFL) and nonalcoholic steatohepatitis (NASH). The pathophysiology is not fully understood, but is believed to be a combination of insulin resistance leading to steatosis and subsequent oxidative injury. Known risk factors include obesity, diabetes and dyslipidaemia.

Severe asthma may entail frequent corticosteroid use and a sedentary lifestyle; both predispose to risk factors implicated in NAFLD. As such we hypothesised a link between asthma and NAFLD, and a possible under detection of NAFLD amongst patients with severe asthma.
Methods We audited the investigation and management of NAFLD amongst patients under the care of the Difficult Asthma Team at the Royal Brompton Hospital. We conducted a retrospective