moderate CD, defined as CDAI ≤300 at Wk 4, were analysed. A Cox model was applied to analyse the association between Wk-4 CRP concentration and the probability of having a CD-related hospitalisation during the 52-wk double-blind period. Wk-4 CDAI score, Wk-4 steroid use, age, sex, weight, body mass index, and prior anti–tumour necrosis factor use were also adjusted in the model. Patients were censored if they switched to open-label adalimumab or dropped out. A receiver operating characteristic (ROC) curve was used to identify the optimal CRP cut-off point to best predict the 52-wk CD-related hospitalisation rate.

Results The analysis population included 214 patients randomised to placebo with Wk-4 CDAI ≤300. An elevated Wk-4 CRP concentration was associated with a greater chance of CD-related hospitalisation (HR=1.24; p=0.002). The ROC curve identified a CRP concentration =1.41 mg/dl as the dichotomising point (area under the curve=0.68; sensitivity=0.58; specificity=0.80). Risk of CD-related hospitalisation during the double-blind period was 3.4 times greater for patients with CRP concentrations ≥1.41 mg/dl at Wk 4 vs patients with CRP concentrations <1.41 mg/dl (p=0.015), with control for CDAI and other covariates.

Conclusion Early CRP concentration represents a moderate to good marker to predict CD-related hospitalisation for patients with moderately active CD given the same CDAI score. CRP concentration of 1.41 mg/dl was the optimal cut-off point for predicting long-term CD-related hospitalisation.

Competing interests J-F Colombel Consultant for: Abbott, Speaker bureau with: Abbott, W Sandborn Grant/Research Support from: Abbott, Consultant for: Abbott, E Louis Speaker bureau with: Abbott, Conflict with: Abbott, R Panaccione Grant/Research Support from: Abbott, Consultant for: Abbott, Speaker bureau with: Abbott, Conflict with: Abbott, R Thakkar Shareholder with: Abbott, Employee of: Abbott, M Castillo Shareholder with: Abbott, Employee of: Abbott, M Yang Shareholder with: Abbott, Employee of: Abbott, T Finney-Hayward Shareholder with: Abbott, Employee of: Abbott, J Chao Shareholder with: Abbott, Employee of: Abbott, P Mulani Shareholder with: Abbott, Employee of: Abbott.

REFERENCE

1. **Henriksen M**, *et al*. *Gut* 2008;**57**:1518–23.

PWE-261 HAVE YOU HEARD OF THE TRUELOVE AND WITTS CRITERIA? ACUTE SEVERE ULCERATIVE COLITIS MANAGEMENT BY FY1 DOCTORS

doi:10.1136/gutjnl-2012-302514d.261

V Chhaya,* Y Squire, N Siva, A Poullis. *Department of Gastroenterology, St Georges Hospital, London, UK*

Introduction Acute severe ulcerative colitis (UC) is a serious illness that requires prompt hospitalisation and is associated with significant morbidity. It requires intensive monitoring, specialist intervention and a multidisciplinary approach throughout the duration of the illness with timely and appropriate medical and surgical interventions to avoid complications. Our aim was to evaluate the Foundation Year 1 (FY1) doctor's knowledge and understanding of this potentially life threatening emergency.

Methods We approached FY1 doctors with an example case of acute severe UC and a questionnaire asking several questions regarding the diagnosis and management of acute severe UC 5 months into their training in 2011.

Results 48 FY1 doctors completed the questionnaire during a medical teaching session. Only 25% had heard of the Truelove and Witts criteria as a tool for assessing the severity of UC. When asked regarding the criteria, 77.08% recognised stool frequency as one, 72.91% heart rate, 62.5% temperature, 41.67% haemoglobin and 35.42% erythrocyte sedimentation rate (ESR) as part of it. 58.33% of those asked diagnosed the example case as an acute severe UC, however only 43.75% stated that they would request daily abdominal x-rays as part of their management plans. 62.5% of those asked knew intravenous corticosteroid therapy was mainstay of the initial treatment. 72.92% answered correctly regarding the use of thromboprophylaxis as standard therapy in the management of the condition and 79.17% said they would regularly check the serum potassium level during the course of the presentation.

Conclusion This study highlights the lack of knowledge and understanding of the diagnosis and management of acute severe UC by the FY1s. We would recommend a more structured approach to teaching regarding the condition at all levels of training during planned sessions. Protocols for admission and management of acute UC and local acute medicine hospital guidelines may aid education and bridge gaps in knowledge.

Competing interests None declared.

General liver II

PWE-262 PREVALENCE OF HARMFUL, HAZARDOUS OR DEPENDENT DRINKING IN HOSPITAL INPATIENTS ON A SINGLE DAY USING AUDIT QUESTIONNAIRE

doi:10.1136/gutjnl-2012-302514d.262

M Ninkovic.* *Department of Gastroenterology, NHS, Peterborough, UK*

Introduction Deaths from alcoholic liver disease have increased dramatically. Currently, 24% of UK adults are said to drink in a harmful or hazardous manner. The government strategy to combat alcohol mortality (NICE PH24)[1] includes widespread screening using validated questionnaires such as AUDIT (Alcohol Use Disorders Identification Test).[2] Previous studies in hospitals have been with selected patients & and it is not clear how many patients in hospital are high risk drinkers. We performed a "snap shot" study of all inpatients at a single hospital on a single day using the AUDIT questionnaire to assess prevalence of high risk drinking and the feasibility of such widespread screening.

Methods All adult inpatients on a single day at Peterborough City Hospital were asked to participate. Two consultants, a nurse specialist and 30 clinical medical students used the AUDIT questionnaire to assess patients for harmful, hazardous or dependent drinking. The AUDIT questionnaire consists of 10 questions with a maximum score of 40. A score of 0–7 indicates low risk, 8–15 indicates harmful drinking, 16–19 indicates hazardous drinking and >20 indicates dependent drinking. Patients scoring >8 were then offered a brief intervention.

Results Of a total of 490 patients, AUDIT scores were obtained on 380 (78%); 110 (22%) could not be assessed because of confusion or illness. The age range was 17–99 years (mean 69). Scores ranged from 0/40 to 38/40. Of 380 inpatients who were assessed, 40 (10.5%) scored > or equal to 8/40 indicating harmful, hazardous or dependent drinking. 1.6% (6/380) scored >20 (dependent drinking), 7.4% (28/380) scored 16–19 (hazardous drinking) and 1.6% (6/380) scored 8–15 (harmful drinking). 89.5% (340/380) were low risk (score 0–7). Patients at risk (scoring 8 or above) were distributed across hospital wards and included 17% of females on the maternity ward, 13% on an orthopaedic ward and 12% on the respiratory ward.

Conclusion We have demonstrated that 10.5% of adult hospital inpatients are drinking in a harmful, hazardous or dependent manner. They were scattered throughout the hospital and not in any particular speciality. This prevalence is lower than the 24% in the UK population, perhaps due to the higher age of hospital patients. 22% of patients could not be assessed on the day of the study. However, our results suggest that the AUDIT questionnaire is a useful tool to identify patients at risk of alcohol related problems and is a feasible undertaking.

Competing interests None declared.

REFERENCES

1. *NICE Public Health Guidance 24:Alcohol-Use Disorders: Preventing Harmful Drinking*. 2010.
2. **Saunders JB**, Aasland OG, Babor TF, *et al.* Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption.11. *Addiction* 1993;**88**:791–804.

PWE-263 LIVER TO ABDOMINAL AREA RATIO: A NOVEL RADIOLOGY TEST FOR PROGNOSTICATION IN LIVER CIRRHOSIS

doi:10.1136/gutjnl-2012-302514d.263

M Joseph,* T J S Cross. *South West Liver Unit, Derriford Hospital, Plymouth, UK*

Introduction Prognostication in cirrhotic liver disease is difficult. There are several validated indices which are employed including: Child-Pugh score, MELD and UKELD. There is anecdotal data that liver size is important in determining patient survival and likelihood of re-compensation.

Aims To assess a ratio of liver area and abdominal area on cross-sectional imaging using CT to predict the likelihood of death or need for liver transplantation (LT) in patients with liver cirrhosis.

Methods A retrospective analysis of 280 patients referred to the South West Liver Unit. All patients with cirrhosis were included who had liver CT available. Patients with acute liver failure or hepatoma were excluded from the analysis. Using a webpacs system patient imaging were retrieved and the cross sectional image with the largest area of liver was identified. The liver to abdomen area ration (LAAR) was estimated from the hypothesised ellipses represented by the liver and abdomen using the formula Πab (where 'a' being half of the long axis and 'b' being half of the short axis). These values were compared against patient survival vs patient death/LT. Accuracy of LAAR in predicting the outcome was assessed using Mann–Whitney U test.

Results 280 patients were identified. Sex was available in 200 patients (61% male). Aetiology was available in 266 patients: ALD=103, HCV=32, NASH=10, PBC=10, PSC=13, HCC=31, ALF=12, Others=51. HCC and ALF patients were excluded from analysis. The median age 54.2 (46.6–61.1). Ascites was present in 79 of 127 patients (62%). Not all patients had a CT. LAAR was calculated in 108 patients, median 0.37 (0.3–0.43) and was shown to be predictive of death/LT (p=0.035). The presence of ascites did not predict survival (χ^2 2.5, p=0.12, OR 1.9 (95% CI 0.86 to 4.01)).

Conclusion LAAR is a simple, novel imaging based technique to assess prognosis in patients with cirrhosis. It confirms anecdotal data that liver size is important in assessing survival. It is more accurate in determining survival than the presence of ascites. LAAR could be incorporated into existing algorithms for patient selection for LT and in determining patient survival with cirrhosis. Its accuracy should be compared against Childs-Pugh, MELD and UKELD alone or in combination to evaluate its utility in clinical practice.

Competing interests None declared.

PWE-264 BLOOD LIPIDOMIC PROFILING OF HEPATOCELLULAR CARCINOMA IN HUMAN AND ANIMAL STUDIES IDENTIFIES LYSOPHOSPHATIDYLCHOLINE (24, 0, 0), A DISCRIMINATORY BIOMARKER

doi:10.1136/gutjnl-2012-302514d.264

[1]M I F Shariff,* [2]M R Lewis, [2]E J Want, [2]H C Keun, [3]F Mohamed, [3]R Jalan, [1]N G Ladep, [1]M M Crossey, [1]S A Khan, [2]E Holmes, [1]S D Taylor-Robinson. *[1]Liver Unit, Imperial College London, London, UK; [2]Department of Surgery and Cancer, Imperial College London, London, UK; [3]Department of Hepatology, University College London, London, UK*

Introduction The liver is a hub of lipid metabolism and previous studies have shown liver disease and hepatocellular carcinoma (HCC) to be associated with altered blood lipid profiles. The primary aim of this study was to examine the lipid profile of HCC in an animal model and to compare findings to changes observed in human populations in an attempt to identify novel lipid tumour biomarkers.

Methods Plasma samples were obtained from a Fisher rat model of HCC (n=7) and healthy controls (n=8). Serum and plasma samples were obtained from patients with HCC and cirrhosis from UK (n=3 and 4) and Nigerian (n=5 and 5) cohorts. All samples were analysed using ultra performance liquid chromatography mass spectrometry (UPLC-MS), optimised using in-house developed dichloromethane lipid extraction protocols. Data were processed using XCMS software followed by multivariate analysis to identify lipids most discriminatory between disease groups.

Results In the rat model, multivariate statistical modelling was robust in classifying animals with HCC from healthy controls. In the human studies, multivariate analyses of lipid profiles were less robust in distinguishing HCC from cirrhosis. Lysophosphatidylcholine (24, 0, 0) (LPC), a major cellular membrane component, was identified as most contributory to all multivariate models.

Conclusion Altered global lipid profiles were robust in discriminating HCC from healthy controls in a Fisher rat model, but less so in parallel human studies. Differences in LPC (24, 0, 0) were present in all studies, which may indicate heightened altered tumour cell turnover as a result of HCC growth. The increased plasma concentrations of LPC in HCC in both species suggests that this molecule may be a robust marker as a lipid tumour biomarker of HCC and requires further validation in lager studies with respect to disease classification and response to therapeutic intervention.

Competing interests None declared.

PWE-265 PLASMA METABOLITE PROFILING IN A RAT MODEL OF HEPATOCELLULAR CARCINOMA AND THE EFFECTS OF CO-ADMINISTERED ANTIBIOTICS

doi:10.1136/gutjnl-2012-302514d.265

[1]M I F Shariff,* [2]H C Keun, [2]O Beckonert, [3]F Mohamed, [3]R Jalan, [1]S A Khan, [2]E Holmes, [1]S D Taylor-Robinson. *[1]Liver Unit, Imperial College London, London, UK; [2]Department of Surgery and Cancer, Imperial College London, London, UK; [3]Department of Hepatology, University College London, London, UK*

Introduction The profiling of metabolites, small molecules representing the end points of cellular processes in biofluids, has allowed the detection of novel biomarkers of disease. There are several rat models of hepatocellular carcinoma (HCC), however, there have been no previous reports of ^{1}H NMR spectroscopy plasma metabolic profiling in animal models of HCC. Quinolone antibiotics, such as norfloxacin, are known to reduce the inflammatory component of liver fibrosis potentially reducing end-stage complications. The primary aim of this study was to identify blood metabolic profile biomarkers of HCC in a rat model of HCC and the secondary aim was to evaluate the effect of the norfloxacin on metabolic profiles.

Methods HCC was induced in 10 Fisher rats by administration of intra-peritoneal diethylnitrosamine (DEN) and oral *N*-nitrosomorpholine (NMOR) and plasma was collected upon sacrifice. Five rats were concomitantly administered oral norfloxacin. Six Fisher non-treated rats acted as healthy controls. Proton NMR spectra were acquired for all samples using a Bruker 600 MHz NMR system and results were analysed by visual comparison and multivariate analysis.

Results Proton NMR spectra from diseased rats displayed significant decreases in lipoproteins, unsaturated fatty acids, *N*-acetyl-glycoproteins, acetoacetate, and glucose ($p \leq 0.001$). Plasma citrate and formate levels were increased (p=0.02). Although animals treated with norfloxacin also developed tumours, background fibrosis and tumour nodularity was less marked than non-antibiotic treated