management of refractory ascites. We conducted a retrospective analysis of a large series of patients undergoing TIPS insertion for this indication.

Aim The aims of this study were to describe the series of patients undergoing TIPS insertion for refractory ascites at the Royal Free Hospital particularly with regards to survival and procedural success.

Method A retrospective analysis of the Royal Free Hospital radiology database was conducted to identify all patients who underwent all TIPS procedures between January 1991 and January 2011. Patient records were used to subsequently identify those patients in whom refractory ascites was the principal indication for TIPS insertion and to characterise this patient cohort. Patients were excluded if hydrothorax was the primary indication for TIPS insertion. All patients underwent baseline EEG/echocardiography and cross sectional imaging as part of their pre-procedural work up. Patients were requiring regular paracentesis and were either diuretic insensitive or intolerant.

Results 1073 TIPS-related procedures were conducted at the Royal Free Hospital between January 1991 and January 2011. Of these, 159 patients underwent TIPS insertion for refractory ascites. Within this patients cohort, the underlying aetiology of cirrhosis was: alcohol 56.0% (89/159), hepatitis C 12.6% (20/159), cryptogenic 8.8%(14/159) and other causes 22.6% (36/159). 29% (46/159) of the patients were female, 71% (113/159) were male. The mean age at the time of TIPS insertion was 54.3 (±0.94) yrs. The mean pre-TIPS MELD score was 15.26 (±0.57) with a mean pre-TIPS EEG frequency of 7.51 Hz (±0.20). The mean post-procedural portal pressure gradient was 11.0 mm Hg (±0.57). Six month, 12 month and 2-year survival post-TIPS insertion was 78%, 50% and 50% respectively. At 6 months, 63% of patients had no or minimal ascites, 29% had moderate volume ascites and only 8% had persistent large volume ascites. At 12 months, 69% of patients had no or minimal ascites, 21% had moderate volume ascites and 10% had persistent ascites requiring paracentesis.

Conclusion In a carefully selected group of patients, TIPS is an effective intervention in the management of refractory ascites.

OP10 END-STAGE METHOTREXATE-ASSOCIATED CHRONIC LIVER DISEASE IN THE USA: INTERACTION OF DRUG, HOST AND ENVIRONMENTAL FACTORS

doi:10.1136/gutjnl-2011-300857b.10

M F Dawwas, G P Aithal. *Nottingham Digestive Diseases Centre: National Institute of Health Research Biomedical Research Unit, Nottingham University Hospitals NHS Trust, Nottingham, UK*

Introduction Methotrexate (MTX) is an effective and widely used immunosuppressant; however, long-term therapy has been associated with steatosis, progressive hepatic fibrosis and cirrhosis. Given the similarity of the histopathological features of methotrexate-associated chronic liver disease (MTX-CLD), non-alcoholic fatty liver disease (NAFLD) and alcoholic liver disease (ALD), we hypothesised that these diseases may share a common pathogenesis.

Method We analysed the diagnostic records of all individuals who have been listed for liver transplantation in the USA and reported to the Organ Procurement and Transplantation Network (OPTN) during the period 1 October 1987 and 22 May 2009 to identify those whose liver disease was deemed to have been, wholly or partly, caused by methotrexate (MTX-CLD). We compared the demographic, clinical and laboratory characteristics of adult individuals with MTX-CLD with those listed for ALD and NAFLD.

Results Among 148 639 unique listings for liver transplantation, we identified 105 individuals with MTX-CLD, and these were compared with individuals listed for ALD (n=17 592) and NAFLD (n=3259). Concurrent liver disease among individuals with MTX-CLD included ALD in 4.8%, NAFLD in 7.7%, hepatocellular carcinoma in 2.9%, hepatitis C infection in 1% and other drug-induced liver disease in 1%. Compared to the ALD group, those with MTX-CLD were older (median age 57 vs 51 years, $p<0.0001$), more likely to be Caucasian (91.4% vs 80.9%, $p<0.007$), female (46.2% vs 19.2%, $p<0.001$) and diabetic (36.8% vs 18.3%, $p<0.001$), and had a higher body mass index (median 28.2 vs 27.2 kg/m^2, $p<0.03$), but a lower median MELD score (14.5 vs 16, $p<0.007$). In contrast, compared to individuals with NAFLD, those with MTX-CLD were less likely to be diabetic (36.8% vs 47.7%, $p<0.05$) and had a lower median body mass index (28.2 vs 32.1 kg/m^2, $p<0.0001$), but a similar age, gender, ethnicity and MELD distribution. The prevalence of hypertension and vascular disease did not differ among the three groups, nor did their complications (ascites, encephalopathy, spontaneous bacterial peritonitis) profile.

Conclusion This is the largest analysis of end-stage MTX-CLD reported to date, demonstrating that it is a rare form of cirrhosis that has a distinct risk factor profile from those of ALD and, to a lesser extent, NAFLD. The severity of MTX hepatotoxicity may be potentiated by host (ethnicity) and environmental (diabetes, obesity) factors, ultimately leading to decompensated disease. A common pathogenic process may underlie MTX-CLD, ALD and NAFLD.

OP11 ARE SIMPLE NON-INVASIVE SCORING SYSTEMS FOR FIBROSIS RELIABLE IN PATIENTS WITH NAFLD AND NORMAL ALT LEVELS?

doi:10.1136/gutjnl-2011-300857b.11

[1]S McPherson, [2]Q Anstee, [3]E Henderson, [2]A Burt, [2]C Day. *[1]Liver Unit, Freeman Hospital, Newcastle upon Tyne; [2]Institute of Cellular Medicine Newcastle University; [3]Liver Unit Freeman Hospital Newcastle upon Tyne*

Introduction With a quarter of the UK population estimated to have some degree of NAFLD, there is a need for a robust and economical population based screen to identify individuals with advanced fibrosis. It is recognised that many patients with NAFLD have normal-range ALT levels. Non-invasive scoring systems may exclude advanced disease without the need for liver biopsy, however reliability of these tests in this population has not been determined.

Aim To assess performance of several simple non-invasive tests for fibrosis in patients with biopsy-proven NAFLD and normal ALT levels.

Method Patients who were reviewed in the Freeman Hospital fatty liver clinic between 1999 and 2009 were included. Liver biopsies were assessed using the Kleiner score. The AST/ALT ratio, BARD, FIB-4 and NAFLD fibrosis scores were calculated from blood tests taken within 6 months of liver biopsy.

Results 305 patients were included (70 with normal ALT [ALT <30 IU/l for females and ALT <45 IU/l for males] and 235 with raised ALT). 24% of subjects with normal ALT and 17% with raised ALT had advanced fibrosis (Kleiner stage 3–4). Patients with normal ALT were significantly younger ($p=0.004$) and had lower BMI ($p=0.03$) than those with raised ALT. The area under ROC curve (AUROC), sensitivity, specificity, positive and negative predictive values for a diagnosis of advanced fibrosis using each score is shown in Abstract OP11 table 1. In addition, the proportion of patients with a score below the cut-off who would avoid liver biopsy is displayed. The specificity of the AST/ALT ratio, BARD and NAFLD fibrosis scores for advanced fibrosis was low in patients with normal ALT, which would result in a high proportion of patients with mild disease having a liver biopsy. FIB-4 score performed best overall.