

standard, validated 10 observation right lobe ARFI technique. Within the study period, 82/108 chronic liver disease (CLD) patients (60 hospitalised and 48 outpatients) underwent both elastography and upper GI endoscopy. Standard US data collected included spleen size, portal vein Doppler flow velocity, direction and waveform, presence of collaterals, and platelet count.

Results Significant endoscopic PHT, defined as oesophageal/gastric varices and/or moderate to severe portal hypertensive gastropathy, was seen in 34/82 patients (41%). Median LS measured by shear velocity was significantly higher in the PHT group (2.9 vs 2.2 m/s, $p < 0.001$). A 10 point "SPVD" (spleen-platelets/portal vein Doppler) scoring system, devised to include all US parameters and platelet count, showed significantly higher median scores in PHT (3 vs 1, $p < 0.001$). Multiple logistic regression analysis demonstrated that both ARFI and SPVD score were independent predictors of PHT (OR, 95% CI 2.73, 1.22 to 6.13, $p = 0.02$; and 3.08, 1.89 to 5.02, $p < 0.001$, respectively). AUROC analysis showed that a best fit combination of ARFI+SPVD score showed the highest overall predictive value at 0.91, compared with ARFI or SPVD alone (0.72 and 0.87, respectively).

Conclusion In this retrospective "real world" study the addition of ARFI to standard US parameters using a combined scoring system achieved high (>90%) predictive value for the non-invasive detection of endoscopic PHT. A further prospective study, with refinement of US Doppler technique, is now in progress to confirm these promising results. Single session ARFI+US may accurately guide PHT diagnosis and selection for endoscopic surveillance in CLD.

Competing interests None declared.

PTU-026 PREVALENCE OF LIVER HISTOLOGICAL ABNORMALITIES IN TYPE 1 DIABETES AND THE LONG TERM CONSEQUENCES

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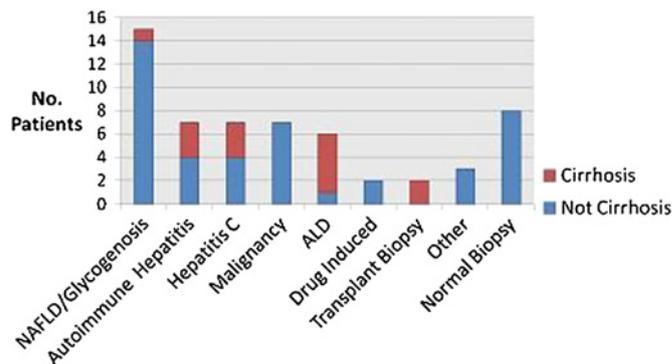
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Introduction Patients with type 1 diabetes have a higher prevalence of raised liver enzymes than the general population. Ultrasound diagnosis of non-alcoholic fatty liver disease has been reported to be common in type 1 diabetes despite associated insulin deficiency rather than insulin resistance. However, the histological spectrum of liver disease in type 1 diabetes and the natural history of chronic liver disease in this cohort is unknown. We describe the histological findings of patients with type 1 diabetes who had liver biopsy in a tertiary referral centre, and their long-term clinical outcome.

Methods The DIAMOND database, which contains longitudinal data for over 95% of type 1 diabetes patients from an overall catchment population of 750 000 in Nottingham, was crossmatched with the clinical pathology database to identify those who had undergone liver biopsy. Case notes were reviewed to obtain follow-up data, and identify liver and non-liver related outcomes.

Results Out of 2800 patients with Type 1 Diabetes, 57 patients underwent a total of 82 liver biopsies. Common indications for biopsy were abnormal liver enzymes (28 patients), malignancy (8), Hepatitis C staging (7) and clinical evidence of cirrhosis (3). On index biopsy, 86% had significant histological abnormalities (Abstract PTU-026 figure 1) and 10 patients (17.5%) had cirrhosis. During a total follow-up of 336.4 patient years (median 5.6 years), a further four patients developed cirrhosis, giving a cirrhosis prevalence of at least 500 per 100 000 population—this compares with an estimated UK cirrhosis prevalence of 76.3 per 100 000 population.¹ Portal hypertensive sequelae occurred in 11 patients (78.6%) with

cirrhosis and hepatocellular carcinoma in three patients. 22 patients (38.6%) died during follow-up. Crude death rate was 6539 per 100 000 person years, compared with national Type 1 Diabetes data² of 1878 per 100 000 person years.



Abstract PTU-026 Figure 1 Index liver biopsy diagnoses.

Conclusion Type 1 Diabetes is associated with significant liver histology abnormalities and a higher than expected occurrence of cirrhosis, portal hypertension and mortality. These findings have implications for long-term management of patients with Type 1 Diabetes.

Competing interests None declared.

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PTU-027 LIFETIME ALCOHOL CONSUMPTION IN HEAVY DRINKERS WITH AND WITHOUT LIVER DISEASE. 1: THRESHOLD EFFECT AND MALE-FEMALE DIFFERENCES

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Introduction It is unclear whether the risk of alcoholic liver disease (ALD) is related to amount of alcohol consumed (dose effect) or is independent of alcohol consumption above a given threshold (*J Hepatol* 2004;**41**:25). The perception that women are more susceptible to ALD than men is based partly on observations that alcohol consumption in women with ALD is less than that of men with ALD. We have previously (*Am J Gastro* 2008;**103**:3039) characterised two large cohorts of heavy drinkers (>60 Units/wk (M) or >40 Units/wk (F) for >5 years): patients with decompensated ALD and controls without serious liver disease on clinical, laboratory and ultrasound examination. Here, we aimed to compare total lifetime alcohol consumption (TLA) between these cohorts and to examine male-female differences in consumption.

Methods Subjects (328 patients, 233 male, mean age 48 yr and 237 heavy-drinking controls, 187 male, mean age 48 yr) completed a lifetime alcohol questionnaire. Total alcohol consumption was calculated and the predominant beverage group recorded, separately, at home and outside home, and during Monday-Thursday and Friday-Sunday. Data were summed over each stable drinking period in the subject's lifetime. For individual beverage analysis, we assumed that all alcohol consumed in a given circumstance was the