directive information appearing on virology result slips; the vast majority of patients found to be hepatitis B carriers in the community are not referred for appropriate follow-up. In-hospital referral rates are significantly better. This is consistent with a concerning survey of London GPs regarding knowledge of hepatitis and indications for referral (Taylor *et al Gut* 2009;**59**(Suppl1):PTU-072) and indicates the need for improving education in this area.

P74 CD161 EXPRESSING CD8+ T-CELLS; ELUSIVE PLAYERS IN VIRAL HEPATITIS

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Hepatitis B (HBV) and C (HCV) -specific CD8+ T-cells are characterised by expression of the NK receptor CD161. CD8+ T cells with high levels of CD161 (CD161++) make up a mean of 12% of CD8+ T-cells in healthy controls and have distinct properties; they express the gut and liver homing chemokine receptors CCR6 and CXCR6, cytokines IL-17, IFN-y and IL-22 and have narrow TCR Vb usage (predominantly Vb 7.2 and 13), linking them to the mucosal-associated invariant T-cells of the gut. In healthy controls ~40% of this CD161++ subset does not express the co-receptor CD8 alpha-beta (CD8ab), but the co-repressor CD8 alpha-alpha (CD8aa), yet share key functional and phenotypic features of the subset.

Aim We aimed to the study the distribution and phenotype of CD8ab and CD8aa subsets in chronic hepatitis C (cHCV) and hepatitis B (cHBV).

Method Flurochrome-labelled antibodies were used for multi-colour FACS analysis of lymphocytes in whole blood from 24 cHCV, 6 e-antigen (Ag) +ve HBV and 14 eAg−ve HBV patients and 19 healthy controls (HC). Liver infiltrating lymphocytes (LILs) (obtained from explant material; 4 HCV patients with paired PBMCs, eight alcoholic liver disease and 1 PBC) were included in the study. FACS data were analysed using FloJo software (Tree Star, Inc) and statistics were performed using PRISM (Graftpad software, Inc).

Results CD8aa cells are exclusive to the CD161++ subset in HCs, cHCV and cHBV. In cHCV and eAg−ve cHBV there is a significant reduction in the proportion of cells in the CD161++CD8+ subset compared to HCs ($p \leq 0.05$). Within the CD161++CD8+ subset there is a further reduction in the fraction of CD8aa cells in cHCV patients (18.5% vs 34.13%, p=0.0086) compared to HCs. No difference is observed in cHBV. CD8ab and CD8aa CD161+ populations are found within human LILs in HCV, ALD and PBC. The CD161+CD8aa cell subset constitute a mean of 9.9% of the total CD8+ LILs. Relative enrichment of CD161+CD8aa cells is seen in the liver of patients with cHCV compared to peripheral blood (p=0.0079). In eAg−ve cHBV a distinct CD8a+blow population can be identified within the CD161+ and CD161− subsets. These populations are not seen in HCs, eAg+ve HBV and HCV ($p<0.05$).

Conclusion CD161++ CD8+ T-cells are lost from the peripheral blood in cHCV and eAg−ve HBV. Maintenance of this subset in eAg +ve HBV may reflect immuno-tolerance to virus at this stage of infection. In chronic HCV there is a relative enrichment of the CD161+CD8+ subset in LILs, indicating recruitment to and retention in the liver. The role of these cells in health, immunity and disease outcome in viral hepatitis requires further study. The emergence of a CD161+/CD161-CD8a+blow subset in eAg−ve HBV may reflect activation or exhaustion of these cells; their phenotype and function requires investigation.

P75 INFLUENCE OF VITAMIN D SUPPLEMENTATION ON OUTCOME IN THE TREATMENT OF CHRONIC HEPATITIS C

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Introduction Vitamin D, acting as an immune modulator, has recently been shown to increase the sustained virological response (SVR) in genotype 1 patients.

Aim To retrospectively examine the outcome of patients treated in our institution using pegylated interferon and ribavirin, and compare the effects of treatment with a Vitamin D preparation.

Method All patients in our treatment database who have received treatment for Hepatitis C using Pegylated Interferon were identified. Only those patients who were greater than 6 months post treatment were included. Data collected included genotype, fibrosis score (Ishak) and if they were prescribed Vitamin D preparations, The primary outcome was to attain a SVR, defined as persistently negative HCV PCR status 6 months after cessation of anti viral therapy.

Results Data were available for 206 patients treated over a 3 year period. Total SVR by genotype was as follows, Genotype 1−39 % (n=44), Genotype 2−71 % (n=8), Genotype 3−72% (n=151) and Genotype 4−100% (n=3).

27.5 % (n=57) of our patients received Vitamin D supplementation with Calcichew D3 Forte (Shire Pharmaceuticals, Hampshire, UK) during the course of treatment, an observed SVR rate of 72 % was seen in those receiving supplementation compared to 64 % in those not supplemented (p=0.281).

When examining patients by genotype, no patients with genotype 1 received Vitamin D therapy. Of Genotype two patients 25 % (n=2) were treated with Vitamin D, achieving a 50 % SVR compared to 83.3% for those not treated with Vitamin D. 34 % of Genotype 3 patients received Vitamin D (n=52) achieving an SVR in 77% of cases, compared to those who did not receive supplementation (n=99) with an SVR of 71% (p=0.414).

From the subset of genotype three patients, the SVR for fibrosis scores <4 and 5/6 were 78% and 53 % respectively. When these groups were analysed considering Vitamin D supplementation those with fibrosis scores of <4 receiving supplementation achieved an SVR of 87% compared to 74% in those not (p=0.183). Patients with fibrosis scores of 5/6 achieved an SVR of 53 % in both supplemented and non-supplemented groups.

Outcomes were also analysed using fibrosis scores, as expected those with less significant fibrosis achieved SVR more frequently, no significant differences were detected when the data were analysed using treatment with Vitamin D as a variable.

Conclusion Our data show that Vitamin D supplementation could improve the SVR in Genotype three patients with mild/moderate fibrosis, this has not been reported so far. We suggest routine testing of vitamin D levels prior to combination therapy and replacement during treatment for chronic hepatitis C.

P76 LENTIVIRAL VECTORS CO-EXPRESSING HEPATITIS B CORE AND VFLIP INDUCE POTENT CD8 T-CELL AND ANTIBODY RESPONSES IN HLA-A2 TRANSGENIC MICE

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Introduction The failure to clear persistent Hepatitis B viral (HBV) infection is characterised by an insufficient CD8 T-cell response to