

**Method** Patients: 21 CHC children (11 boys, median age 12 yrs) treated with Peg-IFN2a+Ribavirin were divided in responders (R) (n=13), relapsers (Rel) (n=4) and non-responders (NR) (n=4). **Methods:** NPSE (fatigue/low mood/irritability/depression/insomnia) were assessed at each clinic visit, irrespective of age. In 15 children aged =11 yrs, NP symptom severity was evaluated at baseline, treatment week 12 (TW12), TW24, TW48 and 6 mths post therapy, using in-house questionnaires measuring degree of fatigue and social adjustment. Fatigue questionnaire: 13 questions (scored -50 to 100/question) assessing fatigue/motivation/concentration/memory/basic cognitive function (speech/word recollection). Social adjustment questionnaire: five questions (scored 0-8/question) measuring impact of therapy on school attendance/homework/social leisure activities/private leisure activities/ability to make friends.

**Results** 11 patients (52%) developed NPSEs, low mood and irritability being higher in NR and Rel than R (75% and 75% vs 38%, p=0.03). Children >12 yrs developed NPSEs more often than those younger (8/11 (73%) vs 3/10 (30%), p=0.04). In 15 patients aged = 11 yrs (median 13 yrs) there was no difference in severity of fatigue and social adjustment scales at baseline between R (n=9), NR (n=3) and Rel (n=3) (fatigue median score: 250, 250 and 275; median social adjustment scale: 5, 10 and 9). During therapy, fatigue severity increased similarly in all groups at TW12 (R: 625; Rel: 575; NR: 800), and tended to be higher in NR than Rel and R at TW24 and 48 (TW24: 1150 vs 700 and 725, p=0.06; TW48: 1000 vs 775 and 825, p=0.1). Six months after treatment, severity of fatigue returned to pre-treatment levels, but tended to remain higher in NR and Rel than in R (NR 400 vs Rel 325 vs R 250, p=0.09). Social adjustment scale increased in all patients during therapy, tending to be higher in Rel and NR than R at TW12 (R 15 vs Rel 20 vs NR 25, p=0.06), being higher in NR than in R and Rel at TW24 and 48 (TW24: R 20 vs Rel 30 vs NR 35, p=0.05; TW48: R 17.5 vs Rel 30 vs NR 35, p=0.04), remaining higher in NR and Rel than in R (NR 15 vs Rel 15 vs R 5, p=0.02) 6 months post therapy.

**Conclusion** Antiviral therapy-related NPSEs are associated with poor response in children with CHC.

**P82 THE USE OF DRY BLOOD SPOT TESTING FOR HEPATITIS C IN INJECTING DRUG USERS ATTENDING SUBSTANCE MISUSE SERVICES**

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**Introduction** Diagnosing hepatitis C virus (HCV) in current injecting drug users has often proved challenging. This is due to the individual's reluctance to attend hospital clinics, lack of testing in substance misuse services and poor venous access. Dry blood spot testing (DBST) has proven to be a robust and easy method of determining HCV status which can be carried out by staff working in Drug Services.

**Aim** The aim of this study was to evaluate the ease of use of DBST in clinical practice.

**Method** The study was carried out between August 2009 and April 2010. Staff within local substance misuse services were given appropriate training in the use of DBST. Testing for HCV was offered to individuals who accessed services during this period. A follow-up appointment was given for 2 weeks after testing and a referral to specialist services was offered to those individuals who tested positive.

**Results** A total of 361 individuals were tested during the study period. 65.1% (235/361) of the individuals tested were male, the age range was between 18 and 51 years. 73.1% (264/361) were negative

for HCV antibodies and 26.8% (97/361) were positive. 93.3% (337/361) attended a follow-up appointment for their results.

Of the 88 individuals who received their antibody positive results, all were offered referral to health services to provide further information and check HCV PCR. 6 are awaiting an appointment date and 17 have not attended any follow-up appointment.

79.2% (65/82) have attended a follow-up appointment at specialist services, the prison clinic or their GP to have blood checked for HCV PCR. Results available to date show that 60% (36/60) are PCR positive. Individuals who are PCR negative have been informed they do not require any further follow-up and all PCR positive people have been encouraged to attend drug treatment services and/or offered an appointment at specialist services for assessment of liver disease and treatment.

**Conclusion** The study has shown DBST is easy to use and can be carried out without difficulty by staff within drug services. The offer of HCV testing was well received by this particular client group with over 90% of individuals returning for their results. Knowing HCV status also allowed staff to reiterate the appropriate harm reduction measures and encourage referral to services for drug treatment. 79% attended a follow-up appointment therefore suggesting that providing BBV testing is valuable in a group who are often envisaged as being too chaotic to engage with health services.

**P83 INTRAVENOUS DRUG USE: NOT A BARRIER TO ACHIEVING A SUSTAINED VIROLOGICAL**

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**Introduction** Chronic hepatitis C (CHC) is a leading cause of liver disease with a variable rate of progression to decompensated cirrhosis, hepatocellular carcinoma and death. It is a common infection among intravenous drug users (IDU). It can be cured by combination therapy of Pegylated interferon and Ribavirin. IDU patients are under represented in many treatment cohorts, this has been justified on grounds of safety and the fear that lowered treatment success would reduce the cost effectiveness of therapy.

**Aim** To ascertain in routine clinical practice the outcomes of treating individuals with HCV who are active IDU or are on substitution therapy such as methadone. The primary outcome measure was the rate of sustained virological response (SVR) in those from an IDU background compared to those infected by other aetiologies.

**Method** The HCV treatment database was retrospectively analysed for consecutively treated patients. The patients treated were divided in three groups based on the risk category for acquisition of Hepatitis C. Primary end point was SVR which was calculated on intention to treat basis in these groups. Similarly patients were not excluded because of co-infection with HBV and HIV or comorbidity such as haemophilia and chronic renal failure.

**Results** We assessed treatment outcome in 291 consecutively treated, predominately treatment naive patients who received Peg interferon and Ribavirin for HCV. They were predominately male (70.3%) in the economically productive age group with 10% of the patients having cirrhosis. Major genotype was three accounting for 53.9% followed by G1 at 36.7%. The overall SVR rate was 55.3%. The SVR rates achieved were; Non IDU 61.4%, Ex IDU 54.8%, and Active IDU 47.1% (p=n/s). In each of the three groups G1 patients obtained an SVR of ; Non IDU 52.7%, Ex IDU 30.7% and active IDU 35.4% (p=n/s). In the non G1 patients non IDU 65.1%, Ex IDU 76.7% and active IDU 53.5%. Ex IDU had a significantly better SVR than active IDU (p=0.02), other differences not significant.

**Conclusion** Our results demonstrate that with simple support SVR rates in the active drug user group can be achieved which are comparable with non IDU infected individuals. Intravenous drug use should not be seen as a barrier to treatment of individuals with HCV.

**P84** **LOW RATES OF NUCLEOS(T)IDE-ASSOCIATED ADVERSE EVENTS IN THE LONG-TERM EXPERIENCE WITH ENTECAVIR**

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**Introduction** In Phase III studies evaluating treatment of chronic hepatitis B (CHB), entecavir demonstrated superior efficacy compared to lamivudine and a comparable safety and tolerability profile. Long-term safety data from the rollover study ETV-901 are reviewed, focussing on adverse events (AEs) with a potential nucleos (t)ide association.

**Method** Long-term cumulative safety and tolerability results are based on investigator-reported AEs, regardless of causal relationship.

**Results** Median exposure to entecavir in ETV-901 was 168 weeks. Of the 1045 treated patients, 402 (38%) had received entecavir for =5 years at the time of analysis. Also, 488 (47%) patients had additional prior entecavir exposure from Phase II or III participation. Baseline characteristics were: mean age 41 years; 804 (77%) male, 539 (52%) Asian, and 480 (46%) Caucasian. The most common AEs (=10%) were upper respiratory tract infection, headache and nasopharyngitis. On-treatment alanine aminotransferase (ALT) flares were reported in 3% of patients. The cumulative rate of serious AEs was 15%. Discontinuations due to AEs were 1% (n=13), and generally (n=11) occurred during the first 2 years of ETV-901. Selected AEs with a potential nucleos(t)ide association are described below.

Abstract P84 Table 1 Results

Investigator-reported adverse events (all grades; unrelated and related to entecavir)*	Median exposure 168 weeks N = 1045, n (%)
Elevated lipase†	21 (2)
Pancreatitis	3 (<1)
Blood creatinine increase	8 (<1)
Hypophosphataemia†	5 (<1)
Creatine phosphokinase increase†	2 (<1)
Myalgia	50 (5)
Muscular weakness	4 (<1)
Neuropathy-related adverse events (hypo-, hyper-, paraesthesia, polyneuropathy)	39 (4)
Lactate increase† or bicarbonate decrease	6 (<1)

\*Multiple adverse events per individual patient are possible.

†No prospective testing for laboratory parameter (reactive only).

**Conclusion** Entecavir is a safe and well-tolerated treatment for patients with CHB and compensated liver disease. Long-term administration of entecavir was associated with low rates of serious AEs, discontinuations due to AEs and ALT flares. Spontaneous reports of AEs potentially associated with nucleos(t)ide use occurred at low rates.

**P85** **COGNITIVE SYMPTOMS IN CHRONIC HEPATITIS C INFECTION ARE ASSOCIATED WITH IMPAIRED COGNITIVE TEST PERFORMANCE BUT ARE UNRELATED TO PERIPHERAL MARKERS OF CELLULAR IMMUNE ACTIVATION**

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**Introduction** Patients with hepatitis C virus (HCV) infection frequently complain of "brain fog" and impaired cognitive performance is well described in some patients. A direct virological effect of HCV on the CNS and a central effect of peripheral inflammation have both been hypothesised as mechanisms.

**Aim** We aimed to determine whether cognitive symptoms are associated with markers of peripheral immune activation and objectively measured cognitive impairment.

**Method** 53 HCV patients with mild liver disease and 19 healthy controls, matched for age, sex, education and ethnicity, underwent computer-based cognitive testing (United BioSource, UK). The Medical Outcomes Survey Cognitive Function Scale (MOSCOG) was used to assess cognitive symptoms. The Fatigue Impact Scale (FIS) and Beck Depression Inventory (BDI) were also employed. Serum neopterin was measured by ELISA, beta-2-microglobulin by nephelometric assay.

**Results** 19 (36%) HCV patients had MOSCOG<75 and formed the symptomatic group and were compared to asymptomatic patients and healthy controls using ANOVA/Kruskal-Wallis tests as appropriate. Symptomatic HCV patients demonstrated significantly worse performance on memory (p=0.013) and attention tests (p=0.008) compared to asymptomatic patients and controls. Neopterin and beta-2-microglobulin levels were higher in HCV patients as a whole (p=0.002) but there were no significant differences between symptomatic and asymptomatic cases. In addition there were no differences in age, gender, ethnicity, education, alcohol intake, history of injection drug use, viral load, genotype and ALT between groups. Symptomatic patients reported worse scores on the BDI and FIS compared to asymptomatic patients (p<0.001) but there were no associations with neopterin and beta-2-microglobulin levels.

**Conclusion** In summary, important cognitive symptoms in over 1/3 of patients were associated with impaired performance on objective cognitive testing but were unrelated to markers of immune activation. It is unclear whether depression is a primary cause or occurs together with impaired cognition as a result of a direct effect of HCV on the brain.

**P86** **DOES GENOTYPE PREDICT RESPONSE TO TREATMENT IN CHILDREN PERINATALLY INFECTED WITH HEPATITIS B VIRUS**

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**Introduction** Hepatitis B Virus (HBV) genotype is now thought to correlate to outcome and response to treatment.

**Aim** To compare viral genotype with treatment response in children infected perinatally with HBV, who had been treated with subcutaneous Interferon alpha2b (IFN) with or without Prednisolone priming (Pred/IFN), oral antiviral drugs (Lamivudine or Adefovir).

**Method** All children who took part in the clinical trials in this unit since 1990 were included. The hepatitis B genotypes were determined using a commercial line probe assay (InnoLipa), which was validated against direct sequencing.

**Results** 70 children were recruited to clinical trials, 68 of whom had genotype analysis. 5 children had more than one course of therapy: The genotype results correlated with the geographical origin of the