CA 19–9 >1000 U/l had surgery. Similarly only 3 (30%) with abnormal cytology were considered for surgery. Although most patients (n=9) who underwent surgery were symptomatic, 18/113 (16%) patients in the conservatively managed group also had symptoms related to the cystic tumours. The size of the cystic tumour in the surgical group, however, was significantly larger than that in the conservative group (4.9 cm vs 2.9 cm, $p<0.01$).

Conclusion Surgical decision making process in patients with pancreatic cystic lesions is complex with multiple factors influencing the choice of surgery. Our data indicate the limited role of pancreatic fluid analysis compared with symptoms and cyst size. Factors that guide and influence the need for surgical resection of pancreatic cystic tumours should be further evaluated.

Competing interests None declared.

REFERENCE

1. Khalid A, Brugge W. Practice guidelines for the diagnosis and management of neoplastic pancreatic cysts. *Am J Gastroenterol* 2007;**102**:2339–49.

PMO-141 FLAGELLIN-INDUCED IL-6 PRODUCTION IS SELECTIVELY IMPAIRED IN PATIENTS WITH CIRRHOSIS

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Introduction The innate immune response is an important determinant of progression in chronic inflammatory liver diseases such as alcoholic (ALD) and non-alcoholic fatty liver disease (NAFLD). Sepsis is a frequent cause of hepatic decompensation and some authors suggest a role for toll-like receptor (TLR) sensing of gut-derived pathogens (motile and gram-negative organisms) in disease progression. Paresis of the innate immune system has been described in patients with decompensated liver disease, but the function of TLRs in compensated disease has received scant attention. Our aim was to assess TLR responsiveness in patients with compensated ALD and NAFLD using a combinatorial experimental design, measuring LPS- and flagellin-induced TNF α and IL-6 production.

Methods Consenting adult outpatients with compensated ALD or NAFLD were recruited. Diagnoses were confirmed by casenote review. Exclusion criteria included alternative aetiologies, decompensated disease, other systemic immune-related illnesses, and immunosuppression (including steroids). Normal healthy volunteers without liver disease were also recruited. Monocytes isolated from peripheral blood mononuclear cells were stimulated with low dose LPS and flagellin. The production of TNF- α and IL-6 was assayed in supernatants and in patient sera by ELISA.

Results We included 28 patients and six normal controls. Patients with compensated cirrhosis have a selective defect in flagellin-induced IL-6 production (330 ± 117 pg/ml) compared to patients with non-cirrhotic ALD or NAFLD (896 ± 146 pg/ml; $p=0.01$) or healthy controls (764 ± 96 pg/ml). There were no differences in flagellin-induced TNF α nor in LPS-induced cytokine production. There were no differences between the three groups in serum concentrations of TNF, IL-6 and RANTES.

Conclusion Paresis of the innate immune response is not universal; there is selective impairment of TLR5-mediated IL-6 production in patients with compensated cirrhosis compared to non-cirrhotic patients. These data identify potential signalling pathways that may be involved in the progression of liver disease or in the susceptibility of patients with cirrhosis to bacterial infections.

Competing interests None declared.

PMO-142 EVIDENCE REFUTING THE TROJAN-HORSE HYPOTHESIS OF BRAIN SWELLING IN ACUTE LIVER FAILURE: L-TYPE GLUTAMINASE IS EXCLUSIVELY NEURONAL

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Introduction Astrocytic swelling is the characteristic feature of hyperammonemia and acute liver failure (ALF) which is thought to result from accumulation of glutamine due to the action of astrocytic glutamine synthetase (GS). It has been suggested that glutamine may not be a benign amino acid and may act as “Trojan horse” which leads to astrocytic apoptosis as it is metabolised by Glutaminase (GLN) yielding glutamate and ammonia. In vivo proof for this hypothesis is lacking. In health, GLN is mainly neuronal and generates glutamate and GABA. The aims of the study were to define the expression of the ammonia metabolising enzymes, GS and GLN in the brain of ALF animals.

Methods Two groups of CD1 mice were studied, sham: n=6; paracetamol (500 mg/kg IP): n=7. The animals were maintained normothermic and resuscitated with fluid and glucose and sacrificed at 8 h after injection of APAP or before development of coma. Arterial ammonia (COBAS) and frontal cortex brain water (dry weight technique) were measured. The brain sections were stained for GS and K and L-type GLN.

Results Arterial ammonia was significantly higher in the ALF group compared with controls (345 ± 32 vs 132 ± 11 $p=0.002$) and brain water did not reach significance (83.6 ± 2.3 vs 76.3 ± 2.6 $p=0.05$). GS protein expression was observed in the astrocytes in the dentate fascia in both groups and was not different but was also seen in the oligodendrocytes only in ALF group. L-type GLN was expressed only in the neurons and not in the astrocytes and was significantly higher in the ALF animals (++++) compared with controls (+). The most marked areas were the striatum and dentate fascia and interestingly the staining was mainly cytoplasmic. K-type GLN was not different between groups and limited to brain capillaries.

Conclusion Conclusion: The results of this study refute the Trojan-horse hypothesis and show for the first time increased protein expression of L-type GLN which is exclusively neuronal. From the pathophysiological perspective, this may function to generate excessive ammonia in the neuron thereby producing neuronal cell death.

L-glutaminase : sham vs APAP brain

Abstract PMO-142 Figure 1

Competing interests None declared.

Viral hepatitis

PMO-143 THE USE OF DRY BLOOD SPOT TESTING (DBS) FOR VIRAL HEPATITIS IN MOSQUES-A PILOT STUDY OF 3 SURREY CENTRES

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Introduction Chronic Viral Hepatitis (CVH) affects 0.5% of native UK population. However, endemicity varies world wide & previous studies show that ethnic minorities are likely to preserve the higher rates of their region of origin. The estimated prevalence of chronic HBV & HCV in Pakistan is >5% & the current UK Pakistani population is >1.2 million. The study aimed to (1) characterise HBV & HCV prevalence in a local Pakistani community within Surrey using DBS testing (2) test the hypothesis that 2nd generation immigrants (ie, those born in UK) retain this higher prevalence (3) promote awareness of viral hepatitis within this population.

Methods We approached community leaders of three Woking (Surrey, UK) mosques & prospectively arranged testing sessions over 10 months (2011–2012), which were advertised during religious gatherings. Following approval by the Local Ethical Board & formal consent, finger prick DBS were tested for HBsAg, HBcore antibody, antiHCV Ab, HCV (Genotype & RNA quantification). Volunteers filled out a questionnaire outlining risk factors for CVH. Subjects who were HBsAg and/or AntiHCV Ab were invited back to the Mosques for focused counselling & offered outpatient confirmatory testing including specialist Hepatology assessment & treatment as necessary.

Results A total of 219 subjects were tested (164M, 55F), age 18–81 yrs, mean age 45 yrs, median 44 yrs & modal age range 30–39 yrs. The mean total duration of stay in the UK prior to testing was 24 yrs; 195 cases (89%) were of Pakistani origin of which there were 176 1st & 19 2nd gen immigrants. Of those tested, 4(2F & 2M) were HBsAg+ve and four (all M) were antiHCV+ve with 3HCV RNA+ve (2Genotype 3a and 1, 3k). Definite risk factors for CVH transmission were not identified. Mean duration of stay in the UK for +ve cases was 13 yrs, all were 1st generation Pakistani (fibroscore <8 kPa, normal LFTS, two with prior family history and three were first degree relatives).

Conclusion DBS testing confirms that our local Pakistani community has retained CVH prevalence rates atleast seven times greater than that of the native UK population. Primary & secondary physicians need better awareness to engage & identify individuals in susceptible ethnic populations. This study has not picked up any cases of viral hepatitis in 2nd generation immigrants & further work is required to conclusively analyse this subset of the community. Our results suggest inequalities in health related to viral hepatitis in the Pakistani population & provide evidence for a wider UK study in this vulnerable group. Places of worship may act as focal testing points to improve screening uptake, management & potential treatment of viral hepatitis in at risk populations.

Competing interests None declared.

PMO-144 EXPERIENCE OF MANAGING PATIENTS WITH HEPATITIS C IN OUTREACH

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Introduction Subjects who acquire Hepatitis C (HCV) from injecting drug use (IDU) and attend drug rehabilitation programs are a “hard to reach” group and often don't access treatment for HCV. In our experience, their non-attendance at secondary care clinics is ~60%. In order to improve access to treatment for this group we established three outreach clinics at drug treatment centres in North of Tyne Region. Our aim was to review the outcomes for patients attending these outreach clinics.

Methods Retrospective review of patients referred to three outreach clinics: 1. Plummer Court (PC), an addiction psychiatry led drug and alcohol centre in Newcastle 2. Bridge View (BV), a GP led drug treatment centre in Newcastle 3. A GP surgery in Blyth, Northumberland associated with the Harm Reduction service. Data were collected on demographics, attendance rates and treatment outcomes.

Results A total of 133 patients were referred to the three clinics and 96 (72%) attended ≥1 appointment. Their demographic and clinical data are shown in Abstract PMO-144 table 1. Of the 96 seen, 75 (78%) had treatment workup, but 21 (22%) were deemed “not ready” for treatment due to on-going IDU, alcohol excess, psychiatric disease or unfavourable social circumstances. Of the 75 subjects who had treatment workup, 25 (33%) have since either failed to attend appointments, elected to delay treatment or had contra-indications (including two decompensated cirrhotics and two with hepatocellular carcinoma). 30 (40%) commenced treatment and 20 (27%) patients are waiting to start treatment. Of the 30 who started treatment, 11 (37%) completed treatment (five had sustained virological response, one relapsed and five awaiting post-treatment results), 13 (43%) are currently in treatment and 6 (20%) did not complete therapy (poor compliance or side effects).

Abstract PMO-144 Table 1

	PC	BV	GP
Clinic established	January 2008	October 2010	January 2011
Patients referred (n)	65	41	27
Patients attend ≥1 clinic	44	31	21
Non-attendance (%)	32%	24%	22%
Age (median + range)	36 (19–62)	36 (27–64)	37 (27–48)
HCV G1/4	57%	29%	45%
Methadone/subutex use	84%	100%	62%
Cirrhotics n (%)	7 (16%)	4 (11%)	1 (5%)
“Not ready” for treatment (%)	34%	10%	14%

Conclusion Outreach clinics in drug treatment centres substantially improved attendance rates of for patients with HCV and a history of substance misuse. More than 50% of subjects seen in outreach clinics commenced or are waiting to start HCV treatment. If adopted nationwide, this model of care may improve access to HCV treatment in “hard to reach” groups.

Competing interests None declared.

PMO-145 ETHNICITY HAS NO IMPACT ON SVR RATES IN PATIENTS WITH HCV GENOTYPE 3 TREATED WITH PEGYLATED INTERFERON AND RIBAVIRIN

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Introduction Chronic Hepatitis C affects over 170 million people world wide. Of the 4 main genotypes, genotype 3 is common in