Methods The aim of the study was to compare demographics, treatments and survival among hepatitis C virus (HCV/HCC) and NAFLD (NAFLD/HCC) cohort of patients. Data were collected from medical electronic case notes, imaging reports and HCC multidisciplinary meetings.

Results Among 292 patients, 212 patients (73%) had underlying HCV/HCC and 80 patients (27%) had NAFLD/HCC. The median age at diagnosis was significantly higher in NAFLD/HCC ($p < 0.001$). The majority (82%) were male. Body mass index (BMI) was significantly higher in NAFLD/HCC ($p < 0.001$). The majority were Caucasian (96%) in NAFLD/HCC, whilst the HCV/HCC cohort was significantly more ethnically diverse ($p < 0.001$). Diabetes mellitus was more common in NAFLD/HCC patients ($p < 0.001$).

The median alpha fetoprotein level in HCV/HCC patients were 32.0 compared to 12.0 in NAFLD/HCC ($p = 0.085$). Patients with HCV/HCC were significantly more likely to be transplanted during the study period than NAFLD/HCC (30% vs. 15%, $p = 0.010$). Both transarterial chemoembolization (TACE) and percutaneous ethanol injection (PEI) were significantly more likely to be used as a single treatment in NAFLD patients, compared to HCV patients ($p = 0.042$, $p = 0.021$). Sorafenib was used as the only treatment in 6% of HCV/HCC and 3% of NAFLD/HCC cohorts ($p = 0.364$). Post transplant survival appeared to be worse in HCV-HCC patients compared to NAFLD/HCC, although it did not reach statistical significance ($p = 0.081$). Overall five year survival rates were similar between the two groups regardless of any treatment therapies ($p = 0.424$).

Conclusion Despite the NAFLD/HCC being older and with higher metabolic risk factors, a significant proportion could undergo active therapy. Furthermore, patients with NAFLD/HCC selected for transplantation seemed to have better long term outcomes, possibly due to stricter selection for transplantation as well as variations in tumour biology between the two groups.

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Disclosure of Interest None Declared.

PTH-087 PERCEPTIONS OF LIVER DISEASE AMONGST THE NEPALI COMMUNITY; DESIGNING EFFECTIVE CASE-FINDING STRATEGIES TO TEST UK MIGRANT GROUPS FOR HBV AND HCV

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Introduction Identifying at-risk migrant groups for Hepatitis B and C (HBV and HCV) is well established. The UK Nepali community has grown rapidly since 2004, when settlement rights were given for ex-Gurkha servicemen and dependants. Given military associations, the Hampshire County now has the second largest Nepali population, with the Nepali now making up close to 10% of the population. Nepal sits between China and India, two countries with higher prevalence rates of HBV and HCV, but relatively little is known about prevalence in the Nepali community, with no published studies in the UK.

Methods To help design a culturally sensitive testing strategy for HBV and HCV (as advocated by NICE) we conducted focus groups sessions in the Nepali community. Nepali moderators guided sessions to study the beliefs, understanding and perceptions towards liver disease.

Results 32 Nepali members attended the focus group sessions, with groups divided by sex and age (< 30yrs, or > 30 yrs). A thematic analysis approach was used to analyse results.

Perceptions of Liver disease:

"It is not a communicable disease"

"In Nepal water is the main cause of hepatitis"

"Mainly alcoholic and smokers get this disease"

"I do not think people hate the person….it would not be considered as bad as leprosy disease"

Treatment options:

"In Nepal herbal medicine is better for jaundice….necessary to drink lot of water and fruits"

Knowledge and outreach:

"We need to know the function of liver. Then we understand the issue."

"Newspaper for the people who can read but for us who cannot read, radio and TV is better"

"What the doctor said, we trust on it"

Conclusion NICE guidelines advocate testing at-risk migrant groups for HBV and HCV at an early (asymptomatic) stage. Here, all groups identified liver disease with jaundice or symptoms. Different viewpoints were expressed based on age; younger Nepali members associating a greater stigma to liver disease and hepatitis. All groups expressed a sincere wish to gain greater knowledge about liver disease and to interact with primary care. The study also identified the functional illteracy of many Nepali, and the potential need to modify approaches away from written media.

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Disclosure of Interest None Declared.

PTH-088 NON INVASIVE MONITORING OF FATTY LIVERS IN MORBIDLY OBESE PATIENTS: PRELIMINARY EVALUATION WITH ACOUSTIC RADIATION FORCE IMPULSE IMAGING

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Introduction Liver biopsy remains the gold standard for diagnosing non-alcoholic steatohepatitis (NASH). But with a variability of 10–20% and a mortality rate of 0.01%, non invasive techniques of monitoring change in liver morphology have been sought after. Acoustic radiation force impulse imaging (ARFI) is a promising innovation that combines ultrasound imaging and elastography to measure liver stiffness which correlates well with liver fibrosis. Morbidly obese patients are at a risk of developing NASH or Non Alcoholic Fatty Liver Disease (NAFLD) and weight loss helps improve liver steatosis. Very low calorie diets

(VLCD) help in weight reduction and are known to shrink the liver. Our aim was to assess the role of ARFI in assessing and monitoring the change in liver architecture in a cohort of morbidly obese patients in response to VLCD.

Methods A cohort of non-diabetic morbidly obese patients at risk for NASH was selected for this study (clinical trial no: NCT01950052). Liver volume was estimated with the help of a standardised ultrasound protocol while liver fibrosis was analysed with ARFI. After randomisation, a very low calorie diet (800 kcal) was given to one group while the rest were controls. Four weeks later, ARFI was repeated and all patients underwent a laparoscopic roux-en-y gastric bypass. A liver biopsy was taken during surgery from the same liver segment as the ARFI measurements. The liver histology was evaluated according to the NASH Clinical Research Network Scoring System by two blinded pathologists. Steatosis, fibrosis and NAFLD activity scores were correlated with ARFI scores.

Results Liver volume shrank by 21.5% in the diet arm (n = 10) compared to 2% ($p < 0.05$) in the control arm (n = 14) in 4 weeks. The ARFI scores were similar in the diet and control group [median 2.92 (1.1–3.8) m/s vs. 3.22 (1.54–3.65) m/s, $p = 0.7$], $p = 0.7$] at recruitment and at the time of the biopsy 4 weeks later [2.16 (1.19–3.68) m/s vs. 2.83 (1.5–3.48) m/s, $p = 0.3$]. ARFI demonstrated a drop in values in the diet group ($p = 0.1$) but this was not significant. Similarly, liver biopsy at surgery confirmed a trend of lower levels of steatosis in the diet group (27 vs. 42%, $p = 0.12$). The ARFI scores did not correlate with the steatosis grade ($p = 0.8$), or NAFLD score ($p = 0.48$).

Conclusion Low calorie diets shrink liver volumes but ARFI could not detect any change in liver stiffness. ARFI does not appear to correlate with liver steatosis and may not be ideally suited for short term monitoring of successful treatment of NASH. However its role in long term monitoring needs further evaluation.

Disclosure of Interest None Declared.

PTH-089 HEPATITIS B MONOTHERAPY WITH TENOFOVIR OR ENTACAVIR: A UK SINGLE CENTRE EXPERIENCE

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Introduction Tenofovir (TDF) and Entacavir (ETV) are potent oral antiviral medication for chronic hepatitis B [1]. Our aim was to record effectiveness of these 2 widely used antivirals in achieving viral suppression, HBeAg seroconversion and HBsAg loss after an initial 12 months of treatment and to further assess long term results (from June 2007 to April 2013) in chronic hepatitis B patients in a single tertiary referral centre.

Methods We retrospectively collected data from hospital record from June 2007 to April 2013. We included chronic hepatitis B patients with high viral load (>2000 IU/ml), treatment naive and treatment experienced and who were on treatment for at least 12 months with either on tenofovir or entacavir. Treatment experienced patients were those who were switched from other antivirals to tenofovir or entacavir with high viral load.

Results 61 patients were treated with TDF monotherapy for a median of 29 months, 25 (41%) were HBeAg positive and 36 (59%) were HBeAg negative. In the HBsAg positive group 17 (68%) achieved virological response in 12 months time while 22 (88%) had achieved it on longer term treatment. 2 (8%) got HBeAg seroconvertion within 12 months whilst 4 (16%) seroconverted on longer term treatment. In the HBeAg negative group 29 (81%) achieved virological response after 12 months treatment whilst 34 (94%) achieved virological response on longer term treatment.

33 patients were treated with ETV monotherapy for a median of 38 months, 14 (42%) were HBeAg positive and 19(58%) were HBeAg negative. In the HBsAg positive group 7 (50%) achieved virological response after 12 months treatment whilst all 14 (100%) achieved virological response on longer term treatment. 1 (7%) got HBeAg seroconvertion in 12 months whilst 4 (29%) seroconverted on longer term treatment. In the HBeAg negative group 15 (79%) achieved virological response after 12 months time whilst all 19 (100%) had achieved it on longer term treatment.

None of the patients on either on ETV or TDF lost HBsAg.

Conclusion ETV and TDF are potent nucleos (t)ide analogues as first-line monotherapies for chronic hepatitis B. Due to the fact that ETV was licensed before TDF treatment durations are longer with this agent which is likely to explain the numerically superior long term results with ETV. It will require more patients and longer duration of treatment to allow a meaningful comparison of the two agents and to determine if HBsAg loss as described in the registration trials can be replicated in clinical practice.

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Disclosure of Interest None Declared.

PTH-090 NATURAL HISTORY OF NAFLD: A STUDY OF 108 PATIENTS WITH PAIRED LIVER BIOPSIES

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Introduction Non-alcoholic fatty liver disease (NAFLD) is the most common cause of liver disease in many countries. There remains considerable uncertainty about natural history and prognosis. Few studies, totalling <400 patients, have examined the evolution of steatosis/steatohepatitis and fibrosis of NAFLD in patients with paired biopsies. In general it is thought that fibrosis progression in patients with "NAFL" (steatosis +/- mild inflammation) is uncommon, whereas non-alcoholic steatohepatitis (NASH; steatosis + hepatocyte ballooning and inflammation) more frequently progresses. Our aim was to assess the histological severity of NAFLD in a cohort with serial liver biopsy data and to determine clinical factors that predict fibrosis progression.

Methods Patients with 2 liver biopsies >1 year apart were identified from the Newcastle Hospitals NAFLD clinic. Clinical and laboratory data were collected from the time of liver biopsy.

Results 108 patients (mean age 48 ± 12 years; 66% male; 48% diabetic) were identified with ≥2 liver biopsies (median interval 6.6 years, range 1.3–22.6). 81 (75%) patients had NASH and 27 patients with NAFL. Overall 45 (42%) patients had progression of fibrosis, 43 (40%) had no change in fibrosis, while 20 (18%) had fibrosis regression. The mean rate of fibrosis was 0.08 ± 0.25 stages/year overall, increasing to 0.29 ± 0.24 stages/year in