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 = 0.083). 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.

REFERENCES

Disclosure of Interest None Declared.
Hepatitis B monotherapy with tenofovir or natural history of NAFLD: A study of 108 patients

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.

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, HBcAg 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 while 22 (88%) had achieved it on longer term treatment. 2 (8%) got HBeAg seroconversion 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 seroconversion 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.

Disclosure of Interest None Declared.

Natural history of NAFLD: A study of 108 patients with paired liver biopsies

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 patients with HCV, and 0.18 ± 0.26 stages/year in patients with NAFLD. The rate of fibrosis was significantly higher in patients with HCV, with a median rate of 0.3 stages/year compared to 0.06 stages/year in patients with NAFLD (p = 0.01). A number of factors were evaluated for their association with progression of fibrosis, including age, gender, BMI, diabetes, viral hepatitis, and alcohol intake. The only significant predictor of progression of fibrosis was the presence of HCV infection (odds ratio 2.5, 95% confidence interval 1.1–5.6, p = 0.02).

REFERENCES