Abstracts

Abstract PTH-106 Figure 2

Abstract PTH-106 Figure 3

Conclusions Plasma S100A8/A9 is significantly elevated in ACLF, correlating strongly with activation of pro-inflammatory mediators and indices of disease severity, extra-hepatic organ failure and outcome. Our *in vitro* data indicate that this mediator promotes inflammation and represents a novel therapeutic target in ACLF.

PTH-107 CORRELATION BETWEEN NON-INVASIVE TESTS AND DIFFERENT STAGES OF LIVER FIBROSIS IN PATIENTS WITH NAFLD

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Introduction Non-alcoholic fatty liver disease (NAFLD) has become a major public health issue with an increasing prevalence worldwide. Accurate diagnosis and staging of the disease is important in determining the long-term management and follow-up of these patients. The aim of our study is to investigate the correlation between non-invasive tests and different stages of liver fibrosis in NAFLD.

Methods 905 patients with NAFLD underwent Fibroscan at Aberdeen Royal Infirmary from March 2013 to November 2016. 417 patients with liver stiffness measurement >7 kPa underwent electronic medical record reviews to identify patients who had liver biopsies within a year from the date of

their Fibroscan. 54 out of 417 patients underwent liver biopsies. 42 of the 54 patients were identified to have biopsy-proven NAFLD. The histological reports of the liver biopsies were reviewed and different stages of fibrosis were recorded. Liver fibrosis was classified as no fibrosis (F0), mild fibrosis (F1), moderate fibrosis (F2), severe/bridging fibrosis (F3) and cirrhosis (F4). Clinical, radiological and biochemical data of these patients were also analysed, provided they were within 1 year from the dates of liver biopsies.

Results Out of the 42 patients identified, the mean age was 56 (± 14) with a male preponderance (55%). 1 patient had no fibrosis (F0), 14 patients had mild fibrosis (F1), 1 patient had moderate fibrosis (F2), 14 patients had severe fibrosis (F3) and 12 patients had cirrhosis (F4). Correlation between different variables and stages of fibrosis were tested using the non-parametric Spearman's correlation coefficient. Data are summarised in the table 1 below and are expressed as median $\pm$ IQR.

Abstract PTH-107 Table 1

Variable	Fibrosis Stage			Correlation Coefficient (p- Value)
	F0-F1 (n=15)	F2-F3 (n=15)	F4 (n=12)	
Liver stiffness measurement (LSM) kPa	10.1 (± 5.8)	21.3 (± 5.5)	33.3 (± 13.7)	<0.001
NAFLD Score	-0.64 (± 2.67)	0.28 (± 1.65)	0.83 (± 1.01)	<0.001
APRI Score	0.6 (± 0.13)	1.13 (± 0.67)	0.99 (± 0.71)	0.212
Fibrosis-4 Score	1.26 (± 1.84)	2.66 (± 2.14)	3.04 (± 5.69)	0.002
UKELD Score	46 (± 2.5)	47 (± 2)	47.5 (± 3.25)	0.422

Conclusions Our study indicated that there were statistically significant positive correlations between LSM, NALFD score and FIB-4 score with different stages of fibrosis in patients with NAFLD. However, the correlations between AST to Platelet Ratio Index (APRI), United Kingdom Model for End-Stage Liver Disease (UKELD) score and different stages of fibrosis were not statistically significant. The difference may be due to the inclusion of clinical variables in the NAFLD score. The addition of LSM to the NAFLD score could potentially improve the diagnostic accuracy of fibrosis in NAFLD patients.

PTH-108 THE OUTCOME OF TRANSARTERIAL CHEMOEMBOLIZATION FOR LIVER CANCER PATIENTS IN ABERDEEN ROYAL INFIRMARY

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Introduction Hepatocellular carcinoma (HCC) is the 5th most common cancer worldwide, it often presents in advanced stages with limited treatment options, reflected in its poor prognosis. Transarterial chemoembolisation (TACE) is an

established palliative treatment for patients with advanced HCC, but outcomes vary. In this retrospective observation study, we assessed radiological response and survival outcome following TACE in a single large centre.

Methods Data was collected between October 2013 and December 2017 for all TACE procedures at Aberdeen Royal infirmary by access to MDT records and radiological data. Basic demographics, aetiology and severity of underlying liver disease, lesion characteristics (number and size) and Barcelona staging (BCLC) were all recorded. Scans were reviewed by two consultant radiologists and modified RECIST criteria used to assess the radiological response (complete response: disappearance of all target lesions; partial response: minimum 30% decrease in sum of the longest diameter of target lesions).

Results 31 patients underwent TACE procedure (1 excluded due to loss of follow up). Mean age 68.5 ± 7.33 , 76.6% were male and 29/31 White British. All procedures used doxorubicin loaded beads. The main aetiologies were non-alcoholic fatty liver disease 11 (36%), Alcohol-related liver disease 10 (33.3%), hepatitis C virus 5 (16.6%). 86.7% had underlying liver cirrhosis. BCLC staging of patients was 12 (40%) A, 17 (56.6%) B, 1 (3.4%) C. 8 patients (26.6%) had TACE as a bridge for transplant or tumour resection.

A CT scan 6 weeks post-procedure showed 7 patients (23.3%) complete response while 19 patients (63.3%) had partial response, only 4 patients (13%) had no response. Of the 11 patients with a single tumour lesion <5 cm, 8 (72.7%) had complete response and 3 (27.3%) partial response. During the median follow up time of 17 months (1–41), 8/30 patients had progression of the same liver lesion (33.3%) while 11 (36.3%) developed new liver lesions, and 5 (16.6%) distant metastasis. 11 (36.3%) patients died during the follow up period, 3 (27.3%) had a small initial tumour lesion. Mortality rates at BCLC stage A was 5/12 (41.6%) and B 5/17 (29.4%). Of the 8 using TACE as a bridge to curative treatment, 3 underwent liver transplant, 2 remain active on transplant list, 1 underwent surgical resection and 2 were removed from the list. There were no major complications noted post TACE procedures.

Conclusions TACE helps to improve the survival and down-stage HCC to allow curative treatment options. Only a small number had no radiological response to TACE. Those with initial BCLC B appeared to have a better survival, likely due to smaller numbers in stage A group. Those with a single tumour lesion less than 5 cm showed the best radiological response rate and survival.

PTH-109 IS THE SOARING PREVALENCE OF NAFLD FLYING UNDER THE RADAR OF HOSPITAL STAFF?

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Introduction Non-alcoholic fatty liver disease (NAFLD) affects 25% of the population and is a frequent manifestation of the metabolic syndrome (MetS), therefore patients may be seen by healthcare professionals (HCP) in a variety of non-specialist secondary care teams. Awareness of the significance of NAFLD as a MetS co-factor, ability to offer basic lifestyle advice and recognise that specialist referral may be required is critical to optimising MetS care.

Methods A questionnaire study was conducted to examine non-specialist HCP knowledge of NAFLD in our large

teaching hospital. Questionnaires were distributed at random to medical (n=20) and nursing staff (n=36) in several wards and clinics. Questions explored understanding of NAFLD risk factors, assessment and management.

Results Respondents were predominantly female (n=40), with median age 35 (range 20–60). Most (51/56; 91.1%) had heard of NAFLD but significantly fewer nurses were aware of non-alcoholic steato-hepatitis (NASH) than medics (47% vs 100%; $p<0.001$). Most (55/56; 98.2%) recognised that steatosis could cause liver damage, although serious complications were poorly appreciated including risk of liver cancer (32/56; 57.1%) and cirrhosis (45/56; 80.4%), with nurses significantly less aware of cirrhosis risk than medics (72.2% vs 95%; $p=0.04$). Awareness of MetS features as NAFLD risk factors varied; whilst most identified overweight/obesity (96.4%), significantly fewer recognised type 2 diabetes (T2DM) (76.8%; $p<0.001$) or hypertension (48.2%; $p<0.001$). Symptom knowledge was poor with nobody recognising NAFLD may be asymptomatic, and many thinking even early disease would be heralded by jaundice (24/56; 42.9%) or ascites (18/56; 32.1%). The majority understood need for ultrasound (52/56; 92.9%) and liver function tests (43/56; 76.8%) for diagnosis but importance of risk stratification was under-appreciated; just 62.5% would calculate BMI and 57.1% would test for T2DM. Although most (42/56; 75%) said NAFLD was preventable, 7/56 (12.5%) did not know that weight loss could reverse NAFLD, and just 19/56 (33.9%) identified the correct targets to offer appropriate weight loss advice. Knowledge of how to lose weight was also limited, with 12.5% recommending rapid weight loss, and only 32.1% (18/56) aware of the Mediterranean diet.

Conclusions There was a lack of recognition that early NAFLD may be asymptomatic despite causing harm, and limited understanding of the impact of MetS and lifestyle factors on both causation and treatment. Since patients with NAFLD are frequently encountered by non-specialists and are at high risk of morbidity, HCP NAFLD education should be improved to ensure that those presenting to other teams are advised appropriately and referred for liver risk assessment.

PTH-110 'SAVE MY LIVER DOC, USE THE CARE BUNDLE!'

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Introduction The first 24 hours is the most crucial timeframe for reducing morbidity and mortality in patients with decompensated liver cirrhosis and the use of the Cirrhosis Care Bundle in the first 24 hour has been shown to improve clinical outcomes in several tertiary centres across the UK. Our aim was to introduce the Cirrhosis Care bundle on the Medical Acute Unit (MAU) to improve the care of patients with decompensated liver cirrhosis.

Methods Two prospective audit cycles were conducted between Nov 2016 to April 2017. In each cycle, we prospectively reviewed all patients admitted with decompensated liver cirrhosis on the MAU. The first audit cycle was conducted between Nov to Dec 2016. Following which, several teaching sessions were organised to educate the MAU staff and doctors on the Cirrhosis Care bundle, one of which was delivered by Consultant gastroenterologist. Paper copies of the Cirrhosis Care bundle were also made available in the MAU. Second