MELD (0.73/0.79), UKELD (0.79/0.84), ACLF (0.75/0.78) and CLIF-SOFA (0.75/0.83).

Conclusions The evolution in CLIF-SOFA score between D2 and D5/7 is superior to evolution in other scores and scores assessed at single time points when predicting 90 day survival. The delta C-SOFA at D5 and D7 are comparable, thus delta C-SOFA D2-D5 may be used to guide therapeutic decisions.

Abstract PWE-081 Figure 1 a) CLIF-SOFA scores; b) CLIF-SOFA score evolution

PWE-082 GENETIC VARIANTS IN CYP2D6 AND THE PROPENSITY TO CHRONIC LIVER DISEASE IN MEN CHEWING KHAT

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Introduction The chewing of the leaves of *Catha edulis* (khat) is widespread in Africa, Arabia and in the wider diaspora. Khat has been implicated in the development of chronic liver disease (CLD) but the determinants of susceptibility to its toxic effects are unknown. Genetic factors may play a role. Khat is metabolised in the liver *via* cytochrome P450 CYP2D6; genetic variants associated with low or null function, which may result in khat accumulation, are possible candidates. In addition, variants in genes known to be associated with the development of other forms of CLD *viz*: PNPLA3:rs738409; TM6SF2:rs58542926 and MBOAT7:rs641738 could be implicated.

Methods The study was undertaken in Harar, Ethiopia where khat chewing is wide-spread and the proportion of patients with 'unexplained' CLD exceeds 50%. The cases comprised of 120 khat-exposed hospital attendees (83% men) with CLD; the controls comprised of 195 khat-exposed attendees without CLD (68% men). Genotyping for single nuclear polymorphisms (SNPs) in CYP2D6 (rs1065852; rs3892097; rs28371706; rs28371725; rs59421388; rs61736512), PNPLA3:rs738409; TM6SF2:rs58542926 and MBOAT7:rs641738 was undertaken using KASPar on a

RochLightCycler480. All genetic association tests were performed in PLINK v1.07.

Results Significant associations were found, in men, between the risk of developing khat-related CLD and CYP2D6:rs3892097 ($p=0.029$; odds ratio (OR)=2.61 [95% confidence interval (CI) 1.1–6.2]) and CYP2D6:rs1065852 ($p=0.039$; OR=2.42 [95% CI 1.1–5.6]). These two SNPs are in close linkage disequilibrium ($r^2=0.8$). The associations were not significant in women. No significant associations were identified between PNPLA3:rs738409, TM6SF2:rs58542926 and MBOAT7:rs641738 and either the overall or sex-specific risk of developing khat-related CLD.

Conclusions Carriage of rs3892097 and rs1065852 in CYP2D6 is associated with an increase in the risk of developing khat-related CLD. The male specificity of this association is unexplained; more extensive exploration of CYP2D6 variants in population at risk is warranted.

PWE-083 THE SPECIFICITY OF THE ELECTROENCEPHALOGRAM FOR DIAGNOSING HEPATIC ENCEPHALOPATHY IN PATIENTS WITH CONFOUNDING COMORBIDITIES

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Introduction Hepatic encephalopathy is a common complication of chronic liver disease; it is characterised by impairment in neuropsychiatric/neurophysiological performance. However, other chronic conditions such as renal failure, chronic pulmonary disease and diabetes are also associated with the development of metabolic encephalopathies and show similar abnormalities. Difficulties can, therefore, arise in determining the aetiology of cognitive impairment in patients with cirrhosis if they have these additional co-morbidities. The aim of this study was to evaluate the specificity of the tests used to diagnose hepatic encephalopathy in patients with cirrhosis.

Methods The study population comprised of clinically stable patients with: (i) cirrhosis ($n=52$); (ii) end-stage renal failure ($n=15$); (iii) chronic renal failure ($n=15$); and, (iv) poorly controlled type II diabetes mellitus. All participants were assessed in one sitting, under standardised conditions, with a comprehensive test battery including: electroencephalography (EEG); Critical Flicker Fusion Frequency (CFF); the Psychometric Hepatic Encephalopathy Score (PHES) test; and the computer-based Inhibitory Control Test (ICT), Stroop Test (EncephalApp) and Scan Package. Results were compared with appropriately age and sex -matched healthy volunteers ($n=53$) correcting for multiple testing.

Results Significant abnormalities were observed across all test systems in the four patient groups compared with healthy controls. However, EEG abnormalities were only observed in the patients with cirrhosis (table 1).

Conclusions The presence of co-morbidities may confound the assessment of cognitive function in patients with cirrhosis; the presence of EEG abnormalities would signal a major hepatic component.