terms of platelet count, spleen size, ALBI score, or liver elastography. However, the presence of oesophageal varices differed significantly ($p<0.001$).
Conclusions: Patients with PSVD commonly present with significant portal hypertension features, including thrombocytopenia, splenomegaly, and oesophageal varices. Elevated SSM, often surpassing the 40 kPa threshold observed in cirrhosis, together with a liver stiffness measurement incompatible with cirrhosis indicates a diagnosis of PSVD and may serve as a useful marker for screening oesophageal varices. Integrating platelet count into the assessment could further enhance screening strategies. Validation in larger cohorts is needed to confirm these findings, as well as the prognostic value of these elements on the development of complications.

- A08 -

DRUG-INDUCED LIVER INJURY IN BIOPSY-SCALED PRECISION-CUT LIVER SLICES. M. Lobo (1), N. Eysackers (1), A. Smout (1), S. Verhulst (1), N. Messaoudi (2), L. Van Grunsven (1) / [1] Vrije Universiteit Brussel (VUB), Jette, Belgium, Faculty of Medecine and Pharmacy, [2] UZ Brussel, Brussels, Belgium, Gastroenterology.

Introduction: Repeated consumption of certain drugs that can lead to hepatocyte damage, also known as drug-induced liver injury (DILI), is one of the major safety concerns for pharma companies, regulatory agencies and clinicians. An important challenge is the lack of methods to predict adverse effects of drug-drug interactions on the liver. While rodent models are used for pre-clinical tests, these are not up to par in predicting the DILI risk of a drug in humans. Among the many in vitro alternatives for in vivo DILI testing, human precision-cut liver slices (PCLS) have emerged as a promising ex-vivo model with great potential to faithfully replicate liver functionality. PCLS retains the liver's native microarchitecture and cellular diversity while offering a simpler preparation process than other 3D culture models. However, the usual diameter of PCLS cultures is rather large (5-8 mm) and thus large liver resections are needed to culture human PCLS which become scarce with the current evolution of robot-assisted surgery.
Aim: To develop biopsy-scaled (1mm) PCLS cultures for the evaluation of DILI.
Methods: First, healthy male BALB/c mice (Charles River) were used for baseline studies and in-house developed BALB/c-Tg(Pdgfrb-GFP)x strain for live imaging. Median and left lobes of euthanized mice are excised, cut in 250um thick slices using a Leica 1200S vibratome, punched using a 1mm or 3mm biopsy puncher (Kai® Medical) and cultured in 24 or 96-well plates. Samples are snap-frozen at different culture times and conditions. RNA extraction was performed using TRIzol®. qPCR was done using a QuantStudio™ 3 Real-Time PCR System (ThermoFisher). RNA sequencing library was prepared using the QuantSeq 3' mRNA-Seq method (Lexogen) and sequenced on a NovaSeq (Illumina). Whole slice immunostaining was carried out on formalin-fixed samples with fluorescently-labelled antibodies. Imaging was done using a Zeiss LSM® 800 confocal microscope and an EVOS M7000® microscope.
Results: Comparison of hepatocyte marker expression between 1mm and 3mm slices over 5 days suggests that a smaller slice diameter better preserves hepatocyte functionality in mouse PCLS cultures. GSEA analysis of RNAseq data of day 0 and day 5 slices revealed a high enrichment of ECM remodelling pathways and wound healing responses in day 5 slices. Using BALB/c-Tg(Pdgfrb-GFP) mice we could confirm hepatic stellate cell (HSC) activation over time demonstrated by an increase in the GFP signal. Exposure to a pro-inflammatory cocktail and TGFβ further increased the GFP signal showing the responsiveness of the cultures. Furthermore, the 1mm slices allowed paracetamol-driven liver damage observed both on RNA and immunostainings. We optimized the culture of PCLS in 96-well plates which facilitated the determination of IC50 concentrations of APAP and Omeprazole after 2 days of exposure. Part of our findings in mice could be replicated in human 1mm PCLS cultures.
Conclusions: PCLS of 1mm diameter from both human and mouse liver samples demonstrated good preservation of hepatocyte functionality in culture compared to larger slices. The use of BALB/c-Tg(Pdgfrb-GFP) transgenic mice facilitates the evaluation of DILI drugs as well as fibrosis-inducing agents. The 1 mm slices will allow for testing human liver biopsy-derived slice cultures for DILI as well as pro- and anti-fibrotic drugs and thus also hold promise for personalized medicine approaches.

- A09 -

18F-FDG PET/CT AS A RECURRENCE PROGNOSIS TOOL IN LIVER TRANSPLANTATION FOR MILAN OUT HEPATOCELLULAR CARCINOMA. K. Mombaerts (1), A. Lamproye (2), P. Lovinfosse (3), C. Lambrecht (4), C. Amicone (1), M. Vandermeulen (5), N. Meurisse (5), N. Gilbo (5), O. Warling (2), J. Delwaide (1), P. Honore (5), R. Hustinx (3), O. Detry (5) / [1] CHU Liege, Liège, Belgium, Dpt of Hepatogastroenterology, [2] CHU de Liège, Liège, Belgium, Dpt of Hepatogastroenterology, [3] CHU Liege, Liège, Belgium, Dpt of Nuclear Medicine and Oncological Imaging, [4] CHU de Liège, Liège, Belgium, Dpt of Abdominal Surgery and Transplantation, [5] CHU Liege, Liège, Belgium, Dpt of Abdominal Surgery and Transplantation.

Introduction: As there is a lack of deceased liver donors, the liver allocation system of many countries has included a tight selection of the hepatocarcinoma (HCC) patients who may benefit the most from liver transplantation (LT) with the

lowest risk of recurrence. For years, this risk of HCC recurrence was related only to the size and the numbers of the HCC nodules. However, it is clear now that, if size and number matter, the biology of the HCC itself is also of great importance.

Aim: The aim of this study was to evaluate the prognostic value of 18F-fluorodeoxyglucose positron emission tomography coupled with computed tomography (18F-FDG PET/CT) in preLT assessment of patients with chronic liver disease and HCC.

Methods: This is a single-centre retrospective study on 115 HCC patients (mean age: 62 ± 7y) who benefited from 18F-FDG PET/CT before any bridge therapy and underwent LT between January 2010 and December 2021. Follow-up was ended on December 31, 2023. 18F-FDG PET/CT was considered positive when the ratio between the SUVmax of the tumour and the SUVmax of the liver parenchyma (RSUVmax) was > 1.15 (PET pos). RSUVmax was compared to other preLT prognostic factors, as Milan criteria (in/out), AFP score (≤ or > 2), Up-To- Seven score (in/out, and Metroticket 2.0 score. Overall survival and recurrence-free survivals were evaluated by Kaplan-Meier method. Comparisons of survival between prognostic factors were made using Cox regression.

Results: Among the 115 HCC patients, 32 patients (27.8%) were Milan out, 21 (18.3%) AFP score >2, and 11 (9.6%) Up-to-seven out at time of LT listing. RSUV max was >1.15 in 28 (24.7%) patients. Overall survival was 88.7% and 70.8% at 2 and 5 years, respectively. Recurrence-free survival (RFS) was 91.6% and 80.8% at 2 and 5 years, respectively. In recurrence-free survival analysis in the Milan out group, RSUVmax > 1.15 was the only predictive factor for recurrence in uni- and multivariate analyses. Interestingly, there was no 5-yr RFS difference between Milan in/PET neg, Milan in/PET pos and Milan out/PET neg patients (88%, 83% and 77% respectively), but RFS was significantly worse in Milan out/PET pos patients (20%).

Conclusions: FDG-PET/CT with an RSUVmax cut-off value of 1.15 is a strong prognostic factor for recurrence in Milan out patients. Milan out /PET neg HCC patients might have a good prognosis after LT. Further prospective studies should test whether 18F-FDG PET/CT) should be systematically included in the preLT assessment of Milan outpatients.

- A10 -

SARCOPENIA IN PATIENTS RECEIVING TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT IS INDEPENDENTLY ASSOCIATED WITH INCREASED RISK OF COMPLICATIONS AND MORTALITY.

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Introduction: Sarcopenia is an acknowledged risk factor for individuals with chronic liver disease, however, the influence on outcomes in patients receiving transjugular intrahepatic portosystemic shunt (TIPS) remains underexplored.

Aim: This study evaluates the association between sarcopenia and incidence of complications – including hepatic encephalopathy, ischemic hepatitis, cardiac decompensation, recurrence of ascites or variceal bleeding – and mortality post-TIPS. Additionally, it explores the evolution of muscle mass after TIPS placement.

Methods: A retrospective analysis was performed on patients who underwent TIPS for variceal bleeding (VB) or refractory ascites (RA) between 2011-2021 in the University Hospital of Leuven and had available cross-sectional imaging. Sarcopenia was assessed using transverse psoas muscle thickness (TPMT), normalized by patient height, at the level of the umbilicus and the level of vertebra L3. TPMT was measured at baseline, with a subset of 85 patients having a second TPMT after 1-2 years for assessment of evolution.

Results: Of the 175 patients, 57.7% underwent TIPS for RA and 42.3% for VB with a median follow-up of 453 days (IQR 76-1179). TPMT at L3 level could be assessed in all patients, while TPMT at umbilical level could not be measured in 28.6% due to anatomical limitations, therefore TPMT-L3 was used to define sarcopenia. Sarcopenia was present in 30.9% of patients at baseline. Sarcopenic patients exhibiting a higher prevalence of complications (74.1% vs. 57.9%, p=0.04) and one-year mortality (53.4% vs. 22.3%, p<0.001) post-TIPS, despite similar MELD scores, Child-Pugh scores and portosystemic gradients at baseline. Notably, 58.8% of patients showed an increase of >10% from baseline TPMT/length post-TIPS, with the greatest improvement observed in severely sarcopenic patients (+4.00 +/- 4.55 mm/m vs. -0.82 +/- 2.68 mm/m, p<0.001) and in those patients free from TIPS-related complications (+3.18 +/- 4.09 mm/m vs. +1.31 +/- 3.21 mm/m, p=0.022).

Conclusions: Sarcopenia increases the risk of complications and mortality following TIPS. Importantly, sarcopenia improves in patients receiving TIPS, with the highest gain in those with the lowest baseline TPMT pre-TIPS, particularly when they remain without complications. TPMT is a valuable tool for pre-TIPS risk assessment and post-procedural monitoring. These findings support the continued use of TIPS in patients with sarcopenia, with close surveillance to optimize outcomes and potentially maximize the benefits of improved muscle mass.