

redistribution of organ blood flow accounted for <10% of the increase in arterial levels. Decrease in ammonia release in the renal vein may be sufficient to compensate for the increase in arterial ammonia due to shunted flow in Child Pugh A and B, but is insufficient in stage C.

**Conclusion** Portosystemic shunting may be centrally involved in the generation of hyperammonaemia in liver cirrhosis. This can be partially attenuated by increased urinary ammonia excretion. In patients with cirrhosis, decreased hepatic functions and metabolic changes may further increase the arterial ammonia levels.

**Competing interests** None declared.

### PTU-011 A NEW CONCEPT TO EXTEND RESECTABILITY OF LIVER TUMOURS: TWO STAGE SURGICAL STRATEGY USING AN IN-SITU-SPLIT PROCEDURE

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**Introduction** Today only 20%–25% of colorectal liver metastasis are resectable at initial presentation, despite the progress made in liver surgery over the last 25 years.<sup>1</sup> The induction of liver hypertrophy by preoperative portal vein occlusion (Embolisation or Ligation) is the most used tool to prevent postoperative liver failure allows a Future Liver Remnant (FLR) growth of up to 20%–35% in 45 days.<sup>2</sup> For 1 year we have engaged a new method of achieving resectability in patients affected by extensive disease involving both lobes with insufficient future remnant liver volume (FRLV).<sup>3</sup>

**Methods** Between March and November 2011 six patients affected by liver tumours (4 colorectal liver metastasis (CRLM), 1 GIST-metastasis, 1 gallbladder carcinoma) were judged to be irresectable because of an insufficient RLV (<20%). Therefore all those patients were submitted to a two staged procedure: (1) Right portal vein ligation, in situ split procedure and additionally atypical resection of a metastasis in the FRL if needed. After CT controls with 3D reconstruction and volumetry (2) Extended right hemihepatectomy.<sup>3</sup>

**Results** Resectability was achieved in all patients around 2 weeks after step 1 (range 10–21 days). In five patients the FRL gained about 66% in volume (range 45%–95%); the patients were operated and discharged without complications. One Patient (gallbladder carcinoma)—despite good volumetry (42%)—suffered severe cholangitis postoperatively and died of consecutive liver failure 58 days after the second step operation.

**Conclusion** This method showed to be effective in patients initially judged to be irresectable. One possible explanation could be that the in-situ liver transection, causing disruption of intrahepatic portal collaterals, increases portal flow deprivation to the excluded segments and redistribution of hepatotrophic factors, accelerating future remnant liver growth. Patients with jaundice from biliary tract tumours seem not to be good candidates for this approach. The proposed new strategy has had value in extending resectability in patients suffering from extensive CRLM,<sup>3</sup> reducing the risk of postoperative liver failure, in our preliminary experience, more than other established methods.

**Competing interests** None declared.

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### PTU-012 THE IMPACT OF COMORBIDITY ON POST LIVER TRANSPLANT SURVIVAL AND RESOURCE UTILISATION IN PATIENTS TRANSPLANTED FOR ACUTE LIVER FAILURE UTILISING THE CHARLSON COMORBIDITY INDEX

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**Introduction** The presence of comorbidities negatively impact post liver transplant (LT) survival for those transplanted with chronic liver disease.

**Methods** assess the impact of comorbidities on survival in patients transplanted for acute liver failure (ALF).

**Results** 176 patients underwent LT for ALF over 9 years. Median follow-up was 92 months (range 35–142). Median age was 33 years (17–67) and 122 (69.3%) were females. Fifty-nine patients (33.5%) were transplanted for Paracetamol induced ALF. Ninety-six (54.6%) patients had  $\geq 1$  comorbidity. The commonest comorbidity was renal dysfunction in 84 (48%), pulmonary disease in 10 (6%), connective tissue disease in 5 (3%) and 2 (1%) had diabetes. Patients with  $\geq 1$  comorbidity had significantly increased 6 month (25% vs 13%,  $p=0.046$ ), 12 month (27% vs 13%,  $p=0.023$ ) and overall mortality (32% vs 17%,  $p=0.019$ ). Similar results were demonstrated for graft survival. Recipient age  $\geq 40$  years (OR=1.37, 95% CI 1.02 to 1.86,  $p=0.039$ ), the presence of comorbidity (OR=1.46, 95% CI 1.05 to 2.03,  $p=0.022$ ) and renal dysfunction (OR=1.62, 95% CI 1.18 to 2.23,  $p=0.003$ ) were associated with increased post LT mortality on univariate analysis. However, only the presence of comorbidity (OR=1.43, 95% CI 1.03 to 1.98,  $p=0.032$ ) and renal dysfunction (OR=1.59, 95% CI 1.15 to 2.19,  $p=0.004$ ) were independently associated with mortality. Other recipient related, donor, or graft variables were not associated with mortality. Patients with  $\geq 1$  comorbidity had significantly increased ICU length of stay (LoS) of 20 days (3 to 134) compared to those without comorbidities, 16 days (2–102),  $p=0.005$ .

**Conclusion** Pre-LT comorbidity as defined by the presence of  $\geq 1$  comorbidity, significantly impairs overall post-LT patient and graft survival in patients transplanted for ALF. Patients with  $\geq 1$  comorbidity had significantly increased ICU LoS which may suggest increased resource utilisation.

**Competing interests** None declared.

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### PTU-013 SINGLE USE OF ROMIPLOSTIM THROMBOPOIETIN ANALOGUE (TPO) IN SEVERE THROMBOCYTOPAENIA FOR OUTPATIENT PERCUTANEOUS LIVER BIOPSY IN PATIENTS WITH CHRONIC LIVER DISEASE (CLD): A RANDOMISED DOUBLE BLINDED PROSPECTIVE CLINICAL PILOT TRIAL

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**Introduction** Thrombocytopaenia is a common entity in CLD with or without cirrhosis. Liver biopsy is the gold standard for diagnosis and prognosis of CLD. Platelet count is imperative before percutaneous liver biopsy. Platelet transfusion requires over night hospitalisation with transfusion associated morbidities and cost burden.