respond to Nitisinone in 1. In patients treated with Nitisinone who subsequently required OLT, treatment was started at a median age of 428 days compared to 52 days in those who have not required OLT (p=0.03). Survival following OLT was 4/6 (66.7%) pre- and 7/7 (100%) post-Nitisione. Early complications included acute rejection in 4, hepatic artery thrombosis in 1, biliary reconstruction in 1, redo portal vein anastomoses in 1, burst abdomen in 1 and primary non function in 1 patient. Late complications included chronic rejection in 3, hypertension in 3, post transplant lymphoproliferative disease in 2, de novo hepatitis in 2, pulmonary metastasis in 1 and renal failure in 1 patient. 3 patients required a second transplant. Mean calculated glomerular filtration rate decreased post OLT with no significant difference between the pre- and post-Nitisinone groups. Mean tubular reabsorption of phosphate remained within the normal range for both groups up to 5 years post OLT. With the non-responder to Nitisinone excluded, mean urinary protein:creatinine ratio normalised post OLT in the Nitisinone group and was significantly lower than the non-treated group in which it remained raised up to 5 years post OLT (p=0.0046). Quality of life following transplant is good with unrestricted diet in all.

Conclusion OLT remains an effective treatment for TT1 but since the introduction of Nitisinone the need for OLT has been reduced and the likelihood of requiring OLT is minimised if Nitisinone therapy is instigated early. Although mean cGFR remains reduced post OLT, prior treatment with Nitisinone may improve tubular function as evidenced by normal protein:creatinine ratios.

P92 PREDICTIVE FACTORS FOR EARLY CARDIAC EVENTS FOLLOWING LIVER TRANSPLANTATION

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Introduction Coronary artery disease (CAD) is associated with increased short-term morbidity and mortality following liver transplantation. As a result, the AASLD recommends that all high risk individuals should undergo CAD evaluation during transplant assessment. The AASLD defines high risk as age over 50 years, a clinical or family history of cardiac disease, known diabetes or a positive smoking history. However, whether such traditional risk factors for CAD are associated with an increased risk of post operative cardiac events in this setting remains unclear.

Aim To determine if the AASLD criteria for CAD evaluation identify patients at risk of an early CE post liver transplant.

Method Retrospective study of 252 consecutive patients who were assessed and subsequently underwent elective liver transplantation 01/2007–03/2010. Variables were recorded at time of transplant assessment. A CE was defined as myocardial infarction, cardiac arrest, cardiogenic pulmonary oedema or complete heart block (Lee *et al* 1999) by 90-days post transplant. ROC analysis was used to determine appropriate cut-off values.

Results 10 patients had a CE during the specified time period following transplantation. The CE patients were older (age, 59.3 vs 52.9 yrs, p=0.046) than the non CE patients but had similar gender (M:F, 2.3:1 vs 1.9:1, p=0.529) and ethnicity (white:asian:other, 7.6:1:0.3 vs 4:1:0, p=0.605). 216 patients (86.4%) fulfilled the AASLD criteria for CAD evaluation. The CE rate was 5.7% and 0% in patients who did and did not fulfil the criteria, respectively (p=0.225). When considered individually, known cardiac disease (CE 30.0%, non-CE 4.9%, p=0.017), but not smoking (CE 70.0%, non-CE 56.9%, p=0.317), age >50 yrs (CE 90.0%, non-CE 68.8%, p=0.140) or diabetes (CE 40.0%, non-CE 26.8%, p=0.230), was predictive of a CE. The variables that were associated with post transplant CE were age=57 yrs (p=0.010), hypertension (p=0.067), BMI=30 (p=0.052), hyponatraemia (p=0.005), diuretic therapy (p=0.001), MELD=16 (p=0.058) and UKELD=54 (p=0.002). On multivariate analysis, the variables associated with a CE were known cardiac disease (OR 11.1; 95%CI 1.5 to 85.3, p=0.020), age=57 yrs (7.5; 95% CI 1.3 to 42.0, p=0.022), hypertension (OR 4.5; 95%CI 0.9 to 23.0, p=0.072) and UKELD=54 (OR 33.4; 95% CI 3.8 to 291.8, p=0.002). The presence of =2 of these variables predicted a CE with a sensitivity of 90.0%, specificity of 82.7% and NPV of 99.4%.

Conclusion The AASLD criteria for CAD evaluation do not identify patients at risk of an early CE following liver transplantation. Alternative variables may be more appropriate for stratifying patients into low and high risk groups.

P93 THE COMPLEX PROCESS OF RISK ASSESSMENT IN LIVER TRANSPLANTATION: WHAT DO SECOND OPINIONS TELL US?

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Introduction Liver transplant (LT) assessment involves a targeted evaluation of risk and benefit for any individual patient. In the context of limited organ supply, some patients with co-morbidities or marginal indications are declined on initial assessment. It is considered good practice to offer such patients a second opinion.

Aim To assess the indications and outcomes in patients referred for a second opinion to our transplant programme.

Method All patients who had been fully assessed and not accepted for LT in other units were identified. A retrospective review of patient notes and interrogation of a prospectively maintained database from December 2000 to May 2008 was performed. Baseline characteristics, indications for LT and 2-year survival were analysed.

Results 24 patients were referred from other institutions after having been declined listing. Reasons for initial decline ranged from cardiovascular risk in 8/24 (33.3%), HCV recurrence 2/24 (8.3%), HIV co-infection 2/24 (8.3%), technical suitability 2/24 (8.3%), substance misuse issues 2/24 (8.3%), other co-morbidities 5/25 (20.8%) and HCC on previous imaging felt to be beyond Milan criteria in 3/24 (12.5%). All underwent full reassessment and multidisciplinary review.

Median age was 59 years (IQR 52–68 years), median MELD and UKELD at time of assessment were 17 (12–19) and 55 (51–60) respectively. 15/24 (63%) were male. Overall 16/24 (67%) were ultimately accepted for transplantation. For those again declined for transplantation, the reasons were confirmatory to those outlined at the referring hospital. Of those listed for LT 9/16 (56%) received a graft, 6 received cadaveric whole grafts, 3 received right lobe grafts (1 from a live donor, 1 non heart beating, 1 cadaveric split).

In those who received a transplant 1-year survival was 100%, 2-year survival 89%. Mortality on the waiting list was 31% (5/16) with 1 patient currently awaiting LT, 1 patient was subsequently transplanted back at their original transplant centre. Those who died on the waiting list had higher median age, MELD scores, UKELD scores and were more likely to be blood group O (4/5, 80%). However these were not statistically significant. The median length of stay post LT was higher in the group referred for a second opinion and then transplanted (29 days, IQR 21–55) as compared to our standard population (22 days, IQR 15–40).

Conclusion Patients meeting guidelines for LT should be listed according to need. Our series demonstrates that a second opinion for LT can be beneficial for selected individual patients. Outcomes in selected cases can be optimal, although these patients theoretically represent higher operative risk. Mortality was associated with waiting times and blood group. These data support the utility of the second opinion component of the transplant assessment process.