Abstract P102 Table 1 Results

HCC patients	Number	Radioisotope bone scan		True positive
		Performed	Positive	
Assessed	216	131 (60%)	25 (12%)	1 (0.5%)
Listed	203	125 (61%)	22 (11%)	1
Transplanted	148	89 (60%)	12 (8%)	0
Not transplanted	55	36 (65%)	10 (18%)	1
Not listed	13	6	3	0

Amongst patients listed for transplant, 22 (11%) cases had abnormal bone scans with 12 cases in transplanted group showing false positive results for reasons including degenerative changes, healing traumatic fractures and tracer uptake in gynaecomastia. One patient had a scan with high suspicion for bony secondaries. This patient initially listed for transplant was removed from the list due to active substance misuse, and subsequently became too ill before bony abnormalities could be confirmed. The recurrence rates of HCC were 12.5 % in transplanted patients who underwent bone scans and 9% in those transplanted without a bone scan.

Conclusion Bone scans were not performed as rigorously as expected with 40% of listed patients with no prior radioisotope imaging. However there were no significant differences in recurrence rates in those that did and did not have bones scans. In a population of patients assessed for liver transplant with cross sectional imaging indicating HCC to be within transplant criteria bone scans had a false positive rate of 18% (24/131). The result of bone scanning did not influence the decision to list with only 1 patient exhibiting feature of bony metastases. This patient was subsequently removed from the list for other reasons.

P103 CLINICAL UTILITY OF MYOCARDIAL PERFUSION IMAGING IN LIVER TRANSPLANT ASSESSMENT PATIENTS

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J Leithead, K Kandiah, R Steeds, J W Ferguson. *Liver Unit, Queen Elizabeth Hospital, Birmingham, UK*

Introduction Coronary artery disease (CAD) is associated with increased short-term morbidity and mortality following liver transplantation. As a result, the AASLD recommends that high risk individuals should undergo CAD evaluation during transplant assessment. However, CAD is often subclinical in these patients and remains a diagnostic challenge. Myocardial perfusion imaging (MPI) is a sensitive predictor of CAD in non liver populations but its clinical utility in this setting remains unclear.

Aim To determine if routine MPI in "high risk" liver transplant assessment patients influences the listing decision, and to determine if a positive MPI identifies patients at risk of an early cardiac event (CE) post transplant.

Method Retrospective study of 623 patients assessed for elective liver transplantation 01/2007–03/2010. The local criteria for CAD evaluation with MPI are; known or history suggestive of CAD, diabetes, smoking history, and peripheral/carotid vascular disease. 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.

Results One hundred and six patients (17%) underwent MPI. 7, 96 and 3 patients had a positive, low risk and indeterminate scan, respectively. The mode of cardiac stress induction did not influence the likelihood of a positive MPI (adenosine 5/76, dobutamine 0/7, exercise 2/20, p=0.657). The only patient factor predictive of a positive scan was known CAD (OR 24.2;95% CI 4.1 to 143.0, p<0.001). The frequency of positive MPI was similar in those who were and were not listed for transplantation (6.9% vs 6.5%, p=0.647). Of the 31 patients not listed, MPI influenced the decision making process in 1 individual. Two hundred and fifty two of the 384 listed patients were transplanted by 03/2010. The patients who had undergone MPI (no:40) were older (58.2 vs 52.6 years, p=0.001) than the non MPI patients, were more likely to be male (80.0 vs 60.8%, p=0.021), and were more likely to have CAD (22.5 vs 1.9%, p<0.001), diabetes (72.5 vs 18.4%, p<0.001), NAFLD (22.5 vs 3.3%, p<0.001), hypertension (32.5 vs 11.4%. p=0.001), and a smoking history (75.0 vs 55.2%, p=0.023). 10 patients (4.7%) had a CE during the specified time period following transplantation. The CE rate (8.8 vs 3.9%, p=0.198) and 3-month mortality rate (10.8 vs 7.7%, p=0.361) were similar for patients who did and did not undergo MPI. Amongst MPI patients a positive scan predicted a CE with a sensitivity of 33.3%, specificity of 90.3% and NPV of 93.3%, and mortality with a sensitivity of 0%, specificity of 87.9% and NPV of 87.9%.

Conclusion MPI is not a clinically useful tool in patients undergoing liver transplant assessment.

P104 SERUM FERRITIN CONCENTRATION MAY PREDICT WAITING LIST MORTALITY BUT NOT INDEPENDENT OF MODEL FOR END-STAGE LIVER DISEASE SCORE: EVALUATION OF A COHORT OF 422 PATIENTS

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M Al-Freah, M Al-Freah, M Foxton, W Bernal, G Auzinger, V Aluvihare, A Suddle, K Agarwal, N Heaton, J Wendon, J O'Grady, M Heneghan. *King's College Hospital, London, UK*

Introduction Recent data suggest that serum ferritin (SF) concentration predicts mortality in patients awaiting liver transplantation (LT).

Aim To test SF concentration as a predictor of waiting list (WL) mortality.

Method Retrospective analysis of all patients assessed at our centre for LT over a 4-year period.

Results Patients with acute liver failure (138), amyloid (15), multiple organ transplants (14) and re transplantation (18) were excluded. Of the remaining 422 listed patients for LT, 45 died on the wait list (11%), 26 (6%) were de-listed and 350 (83%) transplanted. Men comprised 64%. SF was analyzed as a continuous and categorical variable. Patients were classified into 3-groups according to assessment SF (<200, 200–400 and >400 ug/l), (Walker et al Hepatology 2010;15:1683). There was a significant difference in gender distribution (p=0001), listing model for end-stage liver disease (MELD) (p=0.0001), etiology of cirrhosis (p=0001) between groups, with alcoholic cirrhosis and HCV representing 45% and 35% respectively of SF >400ug/l group. Univariate analysis demonstrated age at listing (HR 0.97, p=0.013), listing MELD (HR 0.86, p=0.0001), listing Na (HR 1.10, p=0.0001), SF (HR 1.0,p=0.002), SF 200-400 (HR2.86, p=0.001) as predictors of WL mortality; whilst SF>400 was insignificant (HR 2.14,p=0.078). On multivariate analysis, only MELD score (p=00001), age at listing (p=0.002) and serum Na (0.011) were significant predictors of listing outcome. Serum Ferritin analyzed as continuous or categorical variable failed to predict WL mortality. ROC curve analysis showed AUROC for MELD of 0.73 whilst that for SF of 0.65. This analysis determined a cut-off for SF of 266ug/l as significant predictor of WL mortality. Interestingly, SF 200–400 (HR 3.9, p=0.002) and SF >266 ug/l (as determined by ROC curve analysis, HR 2.9, p=0.006) were significant indicators of 1-year post-LT survival. However, age, gender, presence of HCC, MELD score and Na level at transplant failed to predict 1-year post-LT survival.

Conclusion Although SF may appear to predict listing outcome, it failed to do so independent of established predictors of outcome such as age, MELD and serum Na in this cohort. However, SF