particular they exhibit significantly lower cardiac muscle phosphocreatine-to-ATP ratio (measure of cardiac bioenergetic integrity) compared with control subjects. In other disease settings, such as cardiac failure, changes of this type have been associated with impaired cardiac function and increased risk of cardiac death.

Aim The objective of the present study was to examine whether these changes are reflected in systemic measurements of cardiopulmonary reserve determined by a non-invasive cardiopulmonary exercise test (CPET).

Method Consecutive PBC patients being assessed for liver transplantation underwent CPET. The test was conducted in a consistent environment and reviewed by a trained physician to determine objective measures of cardiorespiratory reserve. A control group of consecutive patients with primary sclerosing cholangitis (PSC), also being assessed for liver transplantation was also tested. We compared the results of CPET of all patients with a diagnosis of PBC with those with PSC. Patient demographics and MELD scores at assessment were also collected. A non-paired t test was used to determine group differences.

Results In total, 38 patients had a diagnosis of either PBC or PSC. Three patients (2 PBC and 1 PSC) did not exercise sufficiently to gather meaningful results and were excluded from the analysis. The PSC patients assessed for transplantation had significantly worse liver disease as assessed by the MELD score. However, all measures of cardiorespiratory reserve derived from CPX testing were significantly lower in the PBC group. There was no statistical difference between the two groups with respect to age, thus excluding age as the underlying factor in decreasing their fitness.

Conclusion In this cohort, patients with PBC, despite having lower MELD scores and equivalent age at transplantation assessment, had significantly impaired cardiorespiratory reserve, when compared to patients with PSC. The results add to the evidence that there is a specific PBC-related bioenergetic effect due to the immunology of PBC that is absent in PSC. This finding could have significant relevance on both future studies and treatment regimes to improve cardiovascular fitness.

Abstract P75 Table 1

	PBC	PSC	p Value
Number	24	11	
Age yrs mean (SD)	56.1 (8.9)	56.1 (12.9)	0.999
MELD mean (SD)	13.0 (6.60)	18.8 (4.15)	0.004
AT mean (SD)	10.7 (2.8)	13.3 (3.0)	0.017
Peak VO_2 mean (SD)	13.6 (3.4)	17.9 (4.7)	0.004
OEUS/kg mean (SD)	18.7 (4.5)	22.8 (4.5)	0.018
VO2/HR mean (SD)	7.6 (2.7)	9.7 (1.5)	0.022

P76 META-ANALYSIS OF PUBLISHED EVIDENCE SUPPORTS USE OF KING'S COLLEGE CRITERIA OVER MODEL FOR END STAGE LIVER DISEASE IN OUTCOME PREDICTION IN ACUTE LIVER FAILURE

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Introduction Outcome prediction is a cornerstone of the management of Acute Liver Failure (ALF) where Emergency Liver Transplantation (ELT) is indicated for predicted death. The King's College Criteria (KCC) for paracetamol overdose (POD) and non-POD ALF are the benchmark prognostic scores but recent reports have suggested the Modified End Stage Liver Disease (MELD) score could replace KCC.

Aim To meta-analyse and compare diagnostic performance for outcome prediction of KCC and MELD in ALF.

Method A systematic database search was performed and retrieved articles graded according to a pre-agreed proforma of methodological quality. Collated data were meta-analysed for summary sensitivity, specificity, Diagnostic OR, DOR meta-regression and ROC curve analysis. Pre-specified subgroup analysis was performed on the basis of methodological quality, the severity of hepatic encephalopathy (HE) of reported patients, and exclusion of those who underwent ELT.

Results 32 studies published between 1992 and 2009 with data on 3008 patients (2464 from KCC and 544 MELD) were available for production of 2×2 tables. Taking data where transplanted patients were excluded summary sensitivity for KCC was 63 (95% CI 60 to 66) %, specificity 91 (90 to 93) % and DOR 18 (8.9 to 37). Summary sensitivity for MELD was 82 (95% CI 77 to 86) %, specificity 65 (59to71) % and DOR 11 (5.3 to 23; RDOR 0.75 (0.18 to 3.13))). Despite different MELD cut-offs between studies no statistical evidence of threshold was found and the AUROC for MELD was 0.83 (SE 0.05) and 0.88 (0.03) for KCC. A lack of patient level data prevented statistical comparison between these areas. The DOR for KCC in POD ALF was 27 (9–83) and 13 (5–31) in non-POD ALF. Heterogeneity (using the I^2 statistic) in the DOR for MELD was 49% and 80% for KCC although this was not dependent on aetiology. The lower sensitivity for KCC could be overcome by dynamic application of the criteria.

Conclusion MELD is not superior to KCC on the basis of quantitative analysis of published evidence. While both scores may give complementary sensitivity and specificity (particularly in cases where bilirubin may have more prognostic value) the DOR and AUROC superiority of KCC suggest they should remain the preferred method of outcome prediction and listing decision for ELT in ALF, particularly in cases of POD-ALF.

P77 A PHARMACIST DELIVERED STRATIFIED CONVERSION PROTOCOL FROM HEPATITIS B IMMUNOGLOBULIN (HBIG) TO TENOFOVIR OR ENTECAVIR IS EFFICACIOUS, SAFE AND COST-EFFECTIVE FOR PREVENTION OF RECURRENCE OF HEPATITIS B VIRUS (HBV) IN LIVER TRANSPLANT (LT) RECIPIENTS

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Introduction The use of HBIG based prophylactic regimensto prevent recurrence of HBV in patients who have undergone LT is highly efficacious and well documented. However the long-term administration of HBIG can be time consuming, costly and inconvenient for the patient. With the advent of more potent oral anti-HBV agents the optimal long-term prophylactic strategy remains debatable.

Aim A prospective single centre experience of switching from an intra-muscular (IM) HBIG based regimen to monotherapy tenofovir (TDF) or entecavir (ETV) to prevent HBV recurrence post LT.

Method Patients receiving HBIG based prophylactic regimens were referred to a Pharmacist led clinic. Those with no serological evidence of HBV recurrence were considered for switch to monotherapy TDF or ETV. Decisions were based on clinical assessment and renal function, following an agreed stratified protocol. Data reported is an interim analysis 6 months post-switch. All results are presented as median.