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MANAGING DECOMPENSATED CIRRHOSIS – THE IMPORTANCE OF MULTIDISCIPLINARY ENGAGEMENT FOR MEETING HIGH QUALITY STANDARDS

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Background and Aims Decompensated cirrhosis represents a paramount landmark in the disease progression of a cirrhotic. The index presentation of a decompensating event, or any subsequent decompensating event, requires swift investigation and management which can be guided by the 'British Association for the Study of the Liver (BASL) Decompensated Cirrhosis Care Bundle'. Many of the care items listed require support from the wider multidisciplinary team, however knowledge and utility of this care bundle may be limited within these groups. This qualitative study set out to determine the beliefs on managing decompensated cirrhosis held by members of the multidisciplinary team in a tertiary liver transplant unit in central London.

Method A 10-point questionnaire mapped to individual care points within the BASL Decompensated Cirrhosis Care Bundle was created and distributed to members of the multidisciplinary team on a tertiary liver transplant unit. Following the questionnaire, interviews took place to discuss misconceptions/false beliefs regarding the care of decompensated cirrhosis and thematic analysis was performed. Post-hoc education was delivered where required.

Results A total of 15 participants (uptake 100%) filled in the questionnaire and were interviewed: 7 were registered nurses (RNs), 6 junior doctors, 1 dietician, and 1 pharmacist. Thematic analysis revealed that, particularly amongst RNs, advanced liver disease was felt to be a contraindication to thromboprophylaxis in hospital. Another common misbelief seen in all participants aside from specialist-grade doctors was transfusion targets for gastrointestinal hemorrhage with most respondents targeting >90 g/L. A universal theme which was extracted from the interviews was that active involvement from multidisciplinary members of the team in delivering the BASL Decompensated Care Bundle would achieve higher real-world uptake, and help allied health professionals more readily identify sub-optimal standards of care, and thereby improve outcomes for our decompensated cirrhosis population.

Conclusion The BASL Decompensated Cirrhosis Care Bundle should be delivered as front-line care with engagement from all members of the multidisciplinary team looking after these patients in order to deliver consistently high standards of care.

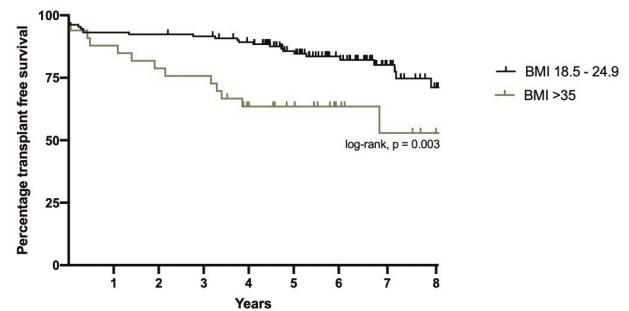
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IMPACT OF ESTIMATED DRY BODY MASS INDEX ON PATIENT SURVIVAL FOLLOWING LIVER TRANSPLANTATION

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Introduction Obesity is rising in the UK population and in liver transplant (LT) candidates. Studies examining the relationship between body mass index (BMI) and post-transplant mortality are inconsistent; it is well documented that low BMI is associated with adverse outcomes but the impact of obesity is unclear, partly due to the impact of fluid retention.



Abstract P44 Figure 1

Aim To evaluate the relationship between estimated dry BMI and survival following LT at a single LT centre.

Methods We undertook a retrospective analysis of 375 patients who underwent LT between January 2011 and March 2018. Anthropometric data was collected at transplant assessment and patients were followed up until death/re-transplant or censor (01/06/2020). Survival was compared using Kaplan-Meier curves and log rank test.

Results 114 patients (30%) had a dry BMI >30 , and 33 (9%) of these were >35 . We demonstrate a J-shaped curve relating dry BMI at assessment to post-transplant risk of death or re-transplantation. A BMI of over 35 was associated with a significant reduction in transplant-free survival ($p=0.003$, figure 1). The relative risk of death/re-transplant at 5 years in this group was 2.72 (95% CI 1.50 – 4.91; $p=0.0009$) when compared to patients with a BMI of 18.5–25. This relationship remained significant even after exclusion of patients with diabetes. Subcostal girth was significantly higher (97cm vs 101cm, $p=0.01$) in those who died or required re-transplant ($n=93$) than those who survived ($n=282$).

Conclusion Elevated dry BMI is associated with a significant increase in mortality post LT.

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PREOPERATIVE D-MELD AND D-UKELD SCORES AS PREDICTORS OF SURVIVAL AFTER LIVER TRANSPLANT

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Introduction D-MELD score, the product of donor age and preoperative MELD score, has been introduced as a potential predictive index of survival after orthotopic liver transplant (OLT). We created D-UKELD score, the product of donor age and preoperative UKELD score, estimated its role as a predictor of graft and patient survival post OLT and compared it with D-MELD score.

Methods We included 849 OLTs from donation after brain death (DBD) in our analysis (January 2008 – November 2019). Data were collected concerning donor and recipient characteristics, and transplant characteristics and outcomes. D-MELD and D-UKELD scores were also calculated.

Results Time-dependent receiver operating characteristic (ROC) analysis did not provide statistically significant area under the curve (AUC) at 1, 3 or 5 years post OLT concerning graft survival for either D-MELD or D-UKELD. It also did not yield statistically significant AUC at 3 or 5 years post OLT regarding patient survival. However, AUC was statistically

significant, although mediocre, at 1 year after OLT concerning patient survival for D-MELD (AUC: 0.615, 95% CI: 0.543–0.688) and D-UKELD (AUC: 0.594, 95% CI: 0.527–0.662). The optimal cut-off points from the ROC curves at 1 year after OLT were D-MELD>1012 and D-UKELD>2640 regarding patient survival. Recipients with D-MELD>1012 had worse patient survival within the first year ($p=0.00006$), which remained in the multivariable analysis (HR: 1.917, 95% CI: 1.06–3.465, $p=0.031$). Recipients with D-UKELD>2640 had worse patient survival within the first year as well ($p=0.006$), but this did not remain in the multivariable analysis (HR: 1.724, 95% CI: 0.952–3.121, $p=0.072$).

Conclusions D-MELD and D-UKELD scores have mediocre predictive ability in regards to 1-year patient survival post DBD OLT. D-MELD>1012 is independently associated with an almost double risk of death within the first year, but D-UKELD is not independently related to worse recipient survival.

P46 BLOOD LACTATE MAY BE SUPERIOR TO CHILD-PUGH SCORE FOR IDENTIFYING FUTILITY IN PATIENTS UNDERGOING SALVAGE TIPSS

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As per the recently published British Society of Gastroenterology guideline, salvage transjugular intrahepatic portosystemic stent-shunt (TIPSS) is not recommended where the Child-Pugh score is >13 because of futility; however data is sparse, and case series have largely predated the use of covered stents and the modern era of Intensive Care management.

Aim We sought to determine whether Child-Pugh score >13 is indeed a marker of futility in patients undergoing salvage TIPSS, and whether alternative markers are superior.

Methods This was a retrospective single centre study of 37 consecutive patients who underwent salvage TIPSS between 12/2014 and 03/2020. Salvage was defined as gastro-oesophageal variceal bleeding refractory to endoscopic and drug therapy.

Results The median preTIPSS Child-Pugh score was 11: 3%, 38% and 59% of patients were Child-Pugh class A, B and C, respectively. The absolute 6-week mortality rate was 32%; whilst 59% had died by 1-year post TIPSS.

There was no difference in Child-Pugh score (10 vs 11.5; median, $p=0.360$) or Child-Pugh grade (60% vs 58%, Child-Pugh C, $p=0.923$) when patients who did or did not survive to 6 weeks were compared. Six patients had a preTIPSS Child-Pugh score of >13: 3 died within 6-weeks; one was considered for transplantation but declined because of recidivism risk, dying at 251 days; one recovered and died unexpectedly at 131 days; and one is still alive at 684 days of followup.

There was no association between preTIPSS MELD (22 vs 16; median, $p=0.151$), APACHE II (17 vs 14; median, $p=0.151$), SOFA (10 vs 7; median, $p=0.124$) or CLIF-C ACLF (54 vs 50, median; $p=0.095$) scores preTIPSS and 6 week mortality. Amongst patients with ACLF, 43% did not survive beyond 6 weeks compared with 19% without ACLF ($p=0.121$).

Blood lactate immediately preTIPSS was higher in patients who died by 6-weeks (2.5 vs 1.5 mmol/l; median, $p=0.008$).

The 6-week mortality rate was 12%, 40% and 75% for patients with a lactate of <1.8, 1.8–2.5, and ≥ 2.6 mmol/l, respectively ($p=0.002$). Seven of 8 patients with a lactate ≥ 2.6 mmol/l had died by 1-year with a median time to death of 15 (range 1–52) days.

Conclusion Child-Pugh score >13 is not a definitive indicator of short term mortality in patients undergoing salvage TIPSS. Instead blood lactate may be a superior predictor of futility.

P47 OPTIMIZING NUTRITION IN PATIENTS WITH CIRRHOSIS MAY REDUCE HOSPITAL READMISSIONS IN MEDIUM AND HIGH RISK GROUPS: A QUALITY IMPROVEMENT PROJECT

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Introduction Malnutrition adversely affects prognosis in cirrhosis and is often recognized late. All cirrhotic patients should be screened for malnutrition yet this is variably performed. We evaluated the assessment and management of nutrition in cirrhosis by comparing local practice to EASL guidelines, and explored patient outcomes after a focused intervention.

Method Data was collected in 2 cycles. Cycle 1 retrospectively reviewed nutritional assessment of all patients admitted to gastroenterology during September–December 2018 with cirrhosis. An Inpatient Nutrition Proforma (INP) was introduced to record Child-Pugh (CP), anthropometrics, dietary intake, malnutrition risk and nutrition plan. Sarcopenia was assessed in high risk patients using handgrip strength (HGS). All CP-C and BMI <18.5 were high risk. Cycle 2 prospectively audited admissions after intervention (March–June 2019). Calorie-protein intake and HGS after intervention, readmissions and deaths were assessed at 4 months.

Results 47 and 31 patients were identified in cycle 1 and 2, respectively. A Malnutrition Universal Screening Tool (MUST) was completed in 81% of cycle 1 patients. 47% did not trigger a dietetic referral on MUST scoring (44% medium risk and 33% high risk for malnutrition). All cycle 2 patients had a dietetic referral via the INP (26% medium risk and 71% high risk for malnutrition) and received dietary education, with 77% requiring oral supplements and 10% nasogastric feeding. At follow-up, cycle 2 patients met higher caloric and protein requirements (average increase by 46% and 57%, respectively versus 26% and 31% in cycle 1). HGS was measured in 74% in cycle 2 and 2% in cycle 1. Average HGS was 15.9 kg (cycle 2) and improved by 9% on reassessment. There was a 12% reduction in hospital readmissions in cycle 2 compared to 7% increase in cycle 1 with similar mortality at 4 months.

Conclusion MUST inadequately identifies cirrhotic patients at risk of malnutrition. CP and BMI appear more accurate. A dedicated dietetic team and the INP enable early patient identification, thorough nutritional assessment and intervention, improving patient compliance and sarcopenia. Hospital readmission rates reduced over 4 months despite a higher proportion of high risk patients in cycle 2 compared to cycle 1. 12 month follow-up data will assess mortality more accurately. Our intervention forms a platform for wider service development in this area both in the inpatient setting and beyond.