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P047

NUTRITION IN DECOMPENSATED LIVER DISEASE: A REGIONAL TRAINEE-LED AUDIT INVESTIGATING MALNUTRITION AND THE IMPACT OF NUTRITIONAL INTERVENTIONS FOLLOWING ADMISSION WITH DECOMPENSATED CHRONIC LIVER DISEASE

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Introduction Malnutrition results in prolonged inpatient stay, high readmission rates and poor clinical outcome.^{1–3} Malnutrition in cirrhosis is a poor prognostic factor.⁴ Assessing nutritional status is problematic as traditional methods of assessment are inaccurate.⁵ Decompensated cirrhosis (DC) patients often require nutritional support but optimal timing of intervention and outcomes are unclear.^{6–7} A regional audit assessing the prevalence of malnutrition in DC, nutritional management, impact on length of stay, readmission and mortality was conducted.

Method All adults admitted with DC from 1–30 November 2019 to four acute xxxx hospital Trusts were retrospectively identified from coding. Malnutrition was assessed by MUST and Royal Free Hospital–Nutritional Prioritisation Tool (RFH–NPT) screening tools.⁸

Results 47 patients were identified. Patient demographics, liver disease aetiology, baseline biochemical, disease severity, nutritional assessment and mortality were collected (table 1). Prevalence of malnutrition was 76.6% (CI 62–87.6%) which was independent of age or aetiology of liver disease but was associated with disease severity. There were higher rates of screening on gastroenterology wards ($p=0.012$) compared to other wards. Nutritional supplementation was prescribed in 27 (60%) patients, 78% of which was oral supplementation. Median length of hospitalisation was 9 (2–62) days. This was longer in those prescribed nutritional supplements (median 11:7 days). Those prescribed supplements were more likely to have more severe liver disease (MELD 20:15; $p=0.006$). Readmission rates at 1 month were similar in those prescribed nutritional supplements than those not (35% vs 36%). Mortality was higher in malnourished patients ($p=0.03$) and in the group of patients prescribed nutritional supplements versus not at 1, 3 and 6 months.

Conclusions Malnutrition is widespread in DC being present in 76.6% of this cohort as compared to 30% in hospitalised patients. Malnutrition was independently associated with early readmission and mortality. The RFH–NPT was significantly

Abstract P047 Table 1 Patient demographics, liver disease aetiology, baseline biochemical data, disease severity, nutritional assessment and patient mortality (n=47)

Parameter	
Male:female n (%)	26:21 (55:45)
Age in years (median (range))	62 (16–86)
Liver disease aetiology n (%)	
Alcohol related liver disease (ARLD)	22 (47)
Non-alcoholic fatty liver disease (NAFLD)	12 (26)
Viral	8 (17)
Autoimmune	3 (6)
Other	2 (4)
Disease severity:	
Child Pugh n (%)	A – 4 (8), B – 22 (47), C – 21 (45)
MELD (median (range))	20 (6–32)
Patient management	
Patients admitted to Gastroenterology ward n (%)	36 (77)
Nutritional assessment	
Malnourished by MUST n (%)	26 (55)
Malnourished by RFH–NPA n (%)	36 (77)
Malnourished n (%) by Child Pugh	A – 2 (50), B – 16 (72), C – 18 (86)
Patients screened for malnutrition (Gastro ward) n (%)	30 (83)
Patients screened for malnutrition (Non-Gastro ward) n (%)	5 (45)
Time to nutritional/dietetic assessment (median (range))	4 (1–14)
Patients receiving dietician review (Gastro ward) n (%)	19 (52)
Patients receiving dietician review (Non-Gastro ward) n (%)	4 (45)
Patient mortality	
No nutritional supplements prescribed at 1,3 and 6 months n (%)	3 (18), 4 (24), 6 (35)
Nutritional supplements prescribed at 1,3 and 6 months n (%)	10 (33), 14 (47), 14 (47)

more sensitive for detecting malnutrition in cirrhosis compared to MUST. Though screening was better on Gastroenterology wards, it is of concern that this was incomplete for many patients nor was a dietician review accomplished in all malnourished patients. Our results indicate that initial in-patient nutritional interventions do not appear to impact on early readmission or early mortality. A larger multi-centre audit would be required to evaluate the impact of specific nutritional interventions on longer-term outcomes. We propose early management of malnutrition at all possible clinical interactions with specialty dietician involvement. Both primary and secondary care guidance could be adapted to achieve this.

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P048

GEOGRAPHIC VARIABILITY IN RATES OF INTENSIVE CARE UNIT ADMISSION IN PATIENTS WITH CHRONIC LIVER DISEASE AND CRITICAL COVID-19: INTERNATIONAL REGISTRY DATA

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Background and Aims The COVID-19 pandemic has provided a unique opportunity to evaluate global intensive care unit (ICU) admission practices for a common indication. Patients with chronic liver disease (CLD) and cirrhosis may also have limited or variable access to ICU. We aimed to describe international ICU admission rates and outcomes in patients with CLD and critical COVID-19.

Methods Data were combined from two international registries (SECURE-Liver and COVID-Hep) for patients with CLD and COVID-19 which was deemed severe enough to require ICU by the reporting clinician. Rates of ICU admission or decline, and respective outcomes were compared by country.

Results Between 25th March 2020 and 3rd February 2021, 319 patients with CLD and COVID-19 from 27 countries were judged to require ICU. The proportion of patients ultimately accepted to ICU varied according to country (figure

1A), although mortality following ICU admission was similar by country (figure 1B). Factors associated with being declined ICU admission included advancing age, cirrhosis, alcohol related liver disease, and UK origin. To explore national differences further, we compared cases from the USA and UK, the two greatest contributing countries. Rates of ICU admission differed significantly between the USA and UK [77/79 (95%) vs. 22/77 (29%); $p < 0.001$]. However, there were no differences in mortality in those admitted to ICU (42/75 [56%] vs. 10/22 [45%]; $p = 0.468$; figure 1B), or after receiving invasive ventilation (29/59 [49%] vs. 9/17 [53%]; $p = 1.000$). There were also no differences in age, sex, Charlson Comorbidity Index, or baseline liver disease severity between countries, both in those requiring and admitted to ICU. This included comparable rates of cirrhosis (53/79 [67%] vs. 56/77 [72%]; $p = 0.723$). Only four USA patients were declined ICU admission of whom 2 (50%) died, whereas 55 UK patients were declined ICU admission of whom 51 (93%) died. In both USA and UK cohorts, the reason for not admitting patients to ICU was due to this being deemed inappropriate by the responsible clinician, except for one case in both countries where no ICU bed was available. Notably, information relating to patient wishes, long-term outcomes in survivors, and granular detail regarding organ support requirements were not available.

Conclusion Patients with CLD and critical COVID-19 were over 3-times more likely to be admitted to ICU in the USA than the UK despite having similar baseline characteristics. However, the rates of mortality following ICU admission were comparable between the two countries. The differing thresholds for escalation to ICU but similar post admission outcomes warrants further discussion.

P049

DECOMPENSATED LIVER DISEASE: A QUALITY IMPROVEMENT PROJECT

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Decompensated liver disease is considered a medical emergency with an associated high morbidity and mortality (10–20%)¹. It is a common presentation to hospital with multi-

Abstract P048 Figure 1