P006

ACUTE ON CHRONIC LIVER FAILURE (ACLF) DURING COVID-19; SINGLE UK BASED HOSPITAL EXPERIENCE

¹Eyad Gadour*, ¹Dili Agu, ¹Mutwakel Musharaf, ¹Amro Askar, ¹Megan Dixon, ¹Abdalla Arabiyat, ¹Abdalla Hassan, ²Zeinab Hassan. ¹University Hospitals of Morecambe Bay NHS Foundation Trust, UK; ²Stockport Hospitals NHS Foundation Trust, UK

10.1136/gutjnl-2021-BASL.15

Introduction In patients with known liver disease, acute decompensation in association with organ failure due to acute liver insult is known as Acute on Chronic Liver Failure (ACLF).¹ We aim to identify and assess the presence of ACLF during the first COVID-19 wave and the main insulting agent. **Methodology** We retrospectively assessed all patients who had been admitted to our hospital with liver pathology between January 2020 to Jun 2020. Blood tests, radiological images, histological results, and endoscopy reports were electronically retrieved. Patients were divided using Child-Pugh liver cirrhosis scoring, MELD and UKELD.² Fisher's test, Chi-square and SPSS used in data analysis.

Results Total number of liver admissions 194 during the study period of 2020. 145 were males (74.74%) and 25.2% were females (n=49) with 156 patients above fifty years (80.41%) (p= 0.0028). Thirty-three of them had variceal bleeding (n=17) and sixty-two had normal gastroscopy (31.9%) whereas ninety-nine did not have gastroscopy (OR=1.61; 95%CI =1.9; 2.852, p= 0.0024). During the study period, 36.08% of the studied individuals had Child-Pugh score of (A and B) (n=70 each) with only fifty-four who had Child-Pugh (C) liver cirrhosis (n=54), p= 0.008. Acute on Chronic Liver Failure (ACLF) was identified in eight patients (4.12%), while ninety-one had decompensated liver disease (46.9%) and (51.4%) had compensated liver cirrhosis (OR=1.05; 95%CI=0.51; 3.05, p= 0.015). Although 96.9% had Alcoholic hepatitis (n=188) as the cause of ACLF, 3.1% had other causes (p= 0.0019). Interestingly, 7.7% had (MELD score higher than 40) (n=15) and 12.8% had UKELD score of more than 49 (n=25) (OR=2.90; 95% CI=3.99, p=.005).

Conclusion Few numbers of patients had ACLF during the first COVID-19 wave however majority of them had alcohol hepatitis as main trigger. We recommend a robust community education programme to help reducing this phenomenon especially during the stressful times.

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P007

A COMPREHENSIVE REVIEW OF DRUG-INDUCED LIVER INJURY IN COVID-19 PATIENTS; WHAT DO WE KNOW?

¹Eyad Gadour*, ²Zeinab Hassan, ¹Abdalla Hassan. ¹University Hospitals of Morecambe Bay NHS Foundation Trust, UK; ²Stockport Hospitals NHS Foundation Trust, UK

10.1136/gutjnl-2021-BASL.16

Introduction Liver impairment was seen in 60% of cases of COVID-19.¹ Drug induced Liver Injury in COVID-19 patients has not been thoroughly reviewed yet.² We aim to study this phenomenon and test the available data.

Methodology Comprehensive retrospective review was conducted to see the drug-induced liver damage due to COVID-

19. One author was assigned to do systematic search from the Advanced Cochrane library, and PubMed from all reported studies and data from December 2019 to December 2020. Search keywords were COVID-19 and liver, COVID-19 and liver injury, SARS-CoV-2 and liver, SARS-CoV-2, and liver injury. Results were checked and reviewed using SPSS version 27.

Results A Single-Centre Cross-Sectional Study, Cai Q, et al. 2020, 417 patients reported the association of raised liver tests with liver injury and severity of pneumonia. Abnormal liver tests including AST, ALT, and GGT were reported in 76.3% of patients and 21.5% acquired liver injury during admission. Liver enzymes were more prominently high during hospital stay over 3ULN (upper limit units), specifically ALT and GGT 37% and 41% (p = 0.006) respectively whereas AST and TBIL was raised up to 20% and 10% (p = 0.002). Retrospective case series of 113 deceased patients, Chen T, et al. 2020, analysed to understand the risk factors. All 113 deceased received treatment of Antiviral therapy Eighty-nine (79%), Glucocorticoid therapy Ninety-nine (88%), Antibiotics 105 (93%), Intravenous immunoglobulin therapy 39% (n=44), Interferon inhalation 22% (n=22), Oxygen treatment 113 (100%) including high flow nasal cannula 68% (n=77). Lopinavir and ritonavir were reportedly linked with COVID-19 associated liver injury whereas, in this retrospective analysis few deceased cases 89; 79% (p = 0.009) received monotherapy or combined treatment of oseltamivir, arbidol, or lopinavir and ritonavir.

Conclusion Lopinavir and ritonavir have been associated with liver injury development in COVID-19 patient. Elevated AST levels with the use of antifungals. Drug-induced liver injury in COVID-19 patients is a complex process and more critical research needs to be conducted.

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P008

HEPATOCELLULAR CARCINOMA SURVEILLANCE IN PATIENTS WITH LIVER CIRRHOSIS: ARE WE FOLLOWING THE GUIDELINES?

¹Eyad Gadour*, ¹Dili Agu, ¹Mutwakel Musharaf, ¹Amro Askar, ¹Megan Dixon, ¹Abdalla Arabiyat, ¹Abdalla Hassan, ²Zeinab Hassan. ¹University Hospitals of Morecambe Bay NHS Foundation Trust, UK; ²Stockport Hospitals NHS Foundation Trust, UK

10.1136/gutjnl-2021-BASL.17

Introduction The British Society of Gastroenterology (BSG) recommends, if HCC surveillance is offered, 6 monthly ultrasound-scan with serum AFP.¹ We aim to evaluate our screening practice in liver cirrhosis patients and compare it with the BSG guidelines.

Methodology Retrospectively, all patients with liver disease who admitted to gastroenterology ward between January 2020 and Jun 2020 at Royal Lancaster Infirmary were assessed. Stages of liver cirrhosis were taken into consideration with the presence of decompensated liver disease signs and the underlying cause of liver cirrhosis.² Data collected from Electronic-Patients Record included any blood test, ultrasound, and

endoscopy report. We analysed the data by using One-Way ANOVA on SPSS.

Results Total number of hepatology admissions during the study period was 183 patients with 65% (n=119) known to have liver cirrhosis. 74% were male (n=137) of total admissions and only forty-six female patients. Among individuals with liver cirrhosis, twenty-seven patients had Child-Pugh (A) liver cirrhosis with Fifty and forty-two had Child-Pugh (B) and (C) respectively. Admission with decompensated Alcoholic liver Cirrhosis was higher in male patients 69% (n=47) compare to female patients of only 30% (n=21) (p= 0.001). None of the patients had autoimmune or metabolic liver disease as main cause of cirrhosis (p= 0.0001). Oesophageal varices were diagnosed in thirty-one patients (26%) predominantly males (n=22). HCC surveillance with Ultrasound occurred in 85% (n=102) whereas only 73 patients (61.3%) had AFP checked. The ANOVA results suggest the HCC surveillance differs significantly between different stages of liver cirrhosis (Child-Pugh A, B and C) (F3,359 = 6.11, p= 0.003). Male patients had more robust HCC surveillance (M=37.61, SD=23.46, n=13) in comparison to Female patients with liver cirrhosis (M=13.38, SD = 8.60, n = 13). This was statistically significant, t (24) = 2.06, (p= 0.0009).

Conclusion More than two third of Hepatology admissions have liver cirrhosis, however, the study period was during the first COVID-19 wave, yet the adherence to the BSG in HCC surveillance guidelines was achieved in 85% and 61.3% with USS and AFP respectively. Significant improvement is required; hence, we recommend adding checklist and proforma to the patients' record as this may improve our practice.

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P009

BIOLOGIC INDUCED HEPATOTOXICITY IN INFLAMMATORY BOWEL DISEASE (IBD); A SYSTEMATIC REVIEW AND META-ANALYSIS

¹Eyad Gadour*, ²Zeinab Hassan. ¹University Hospitals of Morecambe Bay NHS Foundation Trust, UK; ²Stockport Hospitals NHS Foundation Trust, UK

10.1136/gutjnl-2021-BASL.18

Introduction Hepatotoxicity and use of biologic drugs have historically been challenging in IBD.¹ We aim to study the prevalence of hepatotoxicity in adult patients using biologic medications.

Methodology With the guidelines described by PRISMA-P, a detailed search strategy for each electronic database were developed based on the one used for PubMed, Medline, and Embase. We include prospective and retrospective RCTs that assessed the efficacy and hepatotoxicity of biologics in IBD patients. Hepatotoxicity was defined as AST and/or ALT >2x upper limit of normal or cholestasis. We used Review Manager 5 (RevMan5) to analyse the data. We calculated the Odds ratio (OR) with a 95% confidence interval (CI). We assessed heterogeneity using the chi2 test and the I2 statistic.

Results We identified 862 records in total. After we had removed duplicates 564 records were left for review. Four

studies did not report on how participants were randomized to treatment groups or how allocation concealment was achieved, we rated these studies at unclear risk of bias for these domains.² All our included trials mentioned adverse effect of biologics on liver which are analysed statistically, and result is summarized in figure 1. They were no presence of any heterogeneity among studies by (Chi2= 2.21, df = 6, P = 0.90, and I2= 0%), when the whole seven studies were involved for analysis. Our meta-analysis was conducted on the fixed effects model, with the (0.770, 95% CI [-0.630, 0.957], and P = 0.02). Hepatotoxicity was not related to any TNF-α antagonist. Thiopurine induced liver injury occurred more frequently within the first months of treatment, 50% of cases within the first 3 months. Although, risk of hepatotoxicity above the third quartile (6-MMPR > 5,300) was 5 times that below the third quartile (11.4%vs 2.3%, P < 0.05).

Conclusion When hepatotoxicity occurred, the treatment was withdrawn in thirty one percent of patients, but an important percentage, forty-four was able to continue full dose of thiopurine once the dose was temporarily adjusted. This group of patients had a dose-dependent hepatotoxicity rather than an immunologic hepatitis.

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P010

END OF LIFE CARE IN PATIENTS WITH CIRRHOSIS: A DISTRICT GENERAL HOSPITAL PERSPECTIVE

Emma Saunbury*, Daniel Maggs. Royal United Hospitals NHS Foundation Trust, Bath, UK

10.1136/gutjnl-2021-BASL.19

End of life care (EOLC) refers to care given to patients with a prognosis of less than one year. Whilst cirrhosis-related death can be unforeseen, it typically concludes a prolonged declining clinical trajectory. Clinical encounters represent key opportunities for EOLC planning in this cohort, yet the limitations of current provision by gastroenterologists are increasingly recognised.¹ We reviewed our practice to identify areas for improvement.

This retrospective cohort study identified patients who died from sequelae of cirrhosis between 1st January 2018–31st December 2019 and had at least one non-terminal cirrhosis-related admission in their last year of life. Electronic records were interrogated for evidence of prognostication assessment, transplant candidacy and gastroenterology input. Discussions regarding end-stage liver disease (ESLD), EOLC and palliative care referral were reviewed.

52 patients were identified for analysis. In their last year of life, patients averaged 1.7 cirrhosis-related admissions and 69.2% had at least one outpatient clinic. 61.5% had no prognostication score documented, including 58.3% (7/12) of Child-Pugh C patients. Interestingly, only 23.6% met >2 poor-prognosis criteria prior to their terminal admission.¹

ESLD was discussed in a quarter of patients in advance of terminal admission, yet EOLC was subsequently broached in only 61.5% (8/13) of these cases. Just 33.3% of Child-Pugh