col, based on our experience in initiating Symkevi® in LT recipients, was to check tacrolimus levels at day 7 and day 14 after initiation and then again at day 28 along with liver function tests (LFTs).

Results Kaftrio® was initiated in 8 LT recipients. Of these patients, six were transplanted for CF-related liver disease (CFLD), one for CFLD and alpha one antitrypsin deficiency (α 1-ATD) and one for α 1-ATD alone. Four patients (50%) were male and the median age at Kaftrio® initiation was 30 years (range 24–42 years). All patients had stable LFTs and a tacrolimus level that was within the desired therapeutic range prior to initiation.

All 8 patients had stable LFTs following the initiation of Kaftrio® (table 1). There was a clinically significant rise in tacrolimus level in 4 patients (figure 1) and a tacrolimus dose reduction (of 20–37.5%) was required in these patients. The rise in tacrolimus levels was evident at day 7 and levels returned to therapeutic range within one week of dose adjustment. There was evidence of toxicity (defined as a rise in creatinine from baseline or neurological toxicity) in one patient, most likely secondary to the rise in tacrolimus levels (table 1).

Conclusion Our early experience suggests that it is safe to initiate Kaftrio® in LT recipients. As anticipated, close therapeutic drug monitoring (TDM) of tacrolimus is necessary. We are continuing to monitor these patients to confirm that there are no longer-term effects on liver graft function or tacrolimus levels. Based on the findings of this case series, we recommend LT recipients being initiated on Kaftrio® have weekly LFT and tacrolimus level monitoring for the first two weeks and then monthly for a further three months, until further data is available on the drug-drug interaction and its implications for tacrolimus dosing.

REFERENCES

1. Ramsey BW, Davies J, McElvaney NG, Tullis E, Bell SC, Dřevínek P, *et al*; for VX08-770-102 Study Group. A CFTR potentiator in patients with cystic fibrosis and the G551D mutation. *N Engl J Med* 2011;**365**:1663–1672.
2. NHS England, Commissioning Statement Ivacaftor, tezacaftor/ivacaftor, lumacaftor/ivacaftor and elxacaftor/tezacaftor/ivacaftor for licensed and off-label use in patients with cystic fibrosis who have named mutations, 10th May 2021.

P035

A CASE SERIES HIGHLIGHTING THE MEDICAL, PERSONAL AND FINANCIAL IMPACT OF PRESENTING WITH ACUTE PORTOMESENTERIC VEIN THROMBOSIS AT ROYAL FREE HOSPITAL

Sachan Maruthan*, Suji Kim, David Patch. *Royal Free Hospital NHS Trust, UK*

10.1136/gutjnl-2021-BASL.44

Background/Aim Acute portomesenteric vein thrombosis (PVT) follows an unpredictable disease course with varying severity and is associated with significant morbidity and mortality. Complications include intestinal ischaemia/infarction, multi-organ failure and death. Treatment objective is restoration of portomesenteric blood flow, with either anticoagulation or thrombolytic therapy. At Royal Free Hospital, systemic thrombolysis is used first line as part of a low dose thrombolysis protocol with multidisciplinary input from hepatology, haematology and interventional radiology. We present a case series of acute PVT and its management, outcome and the financial cost of treatment.

Methods All patients who presented/were transferred to Royal Free Hospital between January 2019 to April 2021 with acute PVT and underwent the low dose thrombolysis protocol were

identified from pharmacy dispensing records. Patient demographics, presentation, investigations, management, cost of treatment, complications and outcomes were collected through the electronic patient record and analysed through summary statistics.

Results 41 patients were identified, with an average age of 43 years. 26 patients had a known thrombotic risk factor or were subsequently found to have one. Only 5 patients had previous liver disease. Presenting symptoms included abdominal pain (n=39), nausea/vomiting (n=11), constipation (n=5) and diarrhoea (n=5). Systemic thrombolysis was given as initial treatment to 40 patients. All patients had continued symptoms despite initial therapeutic anticoagulation. 13 of these patients subsequently underwent a transjugular intrahepatic portosystemic shunt with subsequent catheter directed thrombolysis for 12 patients. 3 patients required mechanical thrombectomy due to lack of symptom resolution.

Post final treatment, 45% of patients had partial recanalization, 17.5% had complete recanalization whilst 37.5% of patients had no improvement in clot burden. Average duration of thrombolysis was 4.61 days. The cost incurred with the dispensing of alteplase came to an average of over £4657 for each patient.

55% of patients had minor complications from thrombolysis: minor oozing, epistaxis and drop in fibrinogen levels. 2 patients developed major complications: variceal bleed and intracranial haemorrhage. 6 patients required surgical intervention due to non-response to medical therapy resulting in small bowel resection. 1 patient died within 24 hours of admission.

Conclusion Using the Royal Free thrombolysis protocol, 62.5% of our patients showed partial or complete recanalization. The study highlights the significant cost associated with just thrombolysis alone. The complexity of the patient population means that the optimal regime/pathway remains to be defined.

P036

IMPACT OF THE FIRST WAVE OF COVID-19 ON THE ERCP SERVICES IN A SINGLE SECONDARY ENDOSCOPY UNIT AT THE NORTH OF ENGLAND: A RETROSPECTIVE ANALYSIS OF THE ENDOSCOPY DATABASE AT ROYAL LANCASTER INFIRMARY

Eyad Gadour*, Okwudili Agu, Mutwakil Musharaf, Abdalla Hassan, Megan Dixon, Abdalla Arabiyat, Amr Askar, Siddrah Hafeez, Yousuf Shafiq, Julia Moradi. *University Hospitals of Morecambe Bay NHS Foundation Trust, UK*

10.1136/gutjnl-2021-BASL.45

Background British Society of Gastroenterology (BSG) recommended that the endoscopy units to perform ERCP during the COVID-19 pandemic for obstructive biliary pathologies in an emergency. We aim to assess the local performance of ERCP during the COVID-19 first wave at our local endoscopy centre.

Methods All ERCP procedures performed from January 2020 to Jun 2020 were retrospectively assessed and compared with procedures performed between January-Jun 2019 at Royal Lancaster Infirmary. Indications of ERCP, success rate, and complications were studied separately. Correlation analysis was conducted using Spearman's rank correlation coefficient. The binary logistic regression model was carried out to compute factors associated with successful ERCP. The significance is established when the two-sides P-value < 0.05. Statistical

analysis was performed using SPSS software version 25 for Windows (SPSS Inc., Chicago, IL, USA) (Corporation, 2017).

Results From 281 patients, 60.14% and 38.14% patients were presented for ERCP procedures before and after COVID-19 period respectively. Higher proportion of patients was presented with liver dysfunction before pandemic period as compared to pandemic period ($P<0.005$) and use of antibiotics was significantly higher in pandemic period ($P<0.05$). the success rate of ERCP procedure was higher before emergence of the pandemic and lesser during the COVID-19 first wave as 86.39% and 77.67% respectively but the results were insignificant ($P=0.07$). A statistically significant but negative correlation was observed between cholangitis and stent insertion with ERCP success and positive correlation between sphincterotomy and ERCP success as ($r=-0.129$, $P=0.030$), ($r=-0.172$, $P=0.004$) and ($r=0.232$, $P<0.001$) respectively. In binary logistic regression analysis, sphincterotomy ($\beta=2.800$, $P=0.028$) and stent insertion ($\beta=0.852$, $P=0.046$) were statistically significant predictors of ERCP outcomes. There was no statistically significant impact of cholangitis in the success of ERCP ($\beta=1.672$, $P=0.109$).

Conclusion COVID-19 pandemic significantly reduced ERCP procedures and success rate was also lowered due to restriction on endoscopic services in UK and all over the world. The endoscopic services can be resumed subject to specific SOPs to be followed in endoscopic units without affecting the safety of staff and patients.

P037 TRANSAMINITIS AND IRRITABLE BOWEL SYNDROME (IBS): A COMPREHENSIVE REVIEW

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

10.1136/gutjnl-2021-BASL46

Introduction We observed in literature that irritable bowel syndrome (IBS) may be linked with irregular parameters of metabolic system (MS) and liver function. For that reason, we are conducting this systematic review to comprehensively analyze the association of transaminitis (elevated ALT) with IBS.

Methodology This systematic review was designed by following methods described in the Cochrane Handbook for Systematic Reviews of Interventions. Published peer-reviewed journal articles were included. Data was extracted based on study designs Age, gender, author, date of publication or availability online, publication type, participants, gender (M/F) and types of IBS.

Results Our electronic of multiple databases yielded a total of 519 preliminary studies; we then removed duplicate studies and left with 326 studies. After reviewing full text of these articles, a total of 83 studies were eliminated and lastly, three studies were selected for this systematic review for quantitative and qualitative analysis. All the enrolled subjects in included studies were diagnosed with IBS by Rome II and III criteria and among these sub-jects, 50.4% had IBS-D, 13.8% had IBS-C, 30.3% had IBS-M, and 3.5% had IBS-U. The prevalence of elevated alanine aminotransferase (ALT) with other liver enzymes (γ -GT levels and AST) in patients with irritable bowel syndrome whether their BMI were high or not (16.9% vs. 7.7%; $p=0.015$) and γ -GT (24.1% vs. 11.5%; $p=0.037$) Lee et al., 2016.¹ The IBS-D subtype was seen more commonly in patients whose alcohol intake were significantly high

however their study data showed no significant change in elevation of ALT. The upper limits normal values for serum liver enzymes were de-fined as forty-one international per liter in males and thirty-one international unit per liter in females for ALT. No significant relationships were observed between IBS status and elevated γ -GT (OR, 1.647; 95% CI, 0.784–3.461).¹

Conclusion The review study proposes a potential relation between elevated ALT levels, MS, and IBS, and this review might be the first review in IBS patients to observe the association of elevated ALT in IBS population. Although further additional trials with a large sample size will be require confirming these results. Furthermore, for assessing the efficacy of the manipulation of gut microbiota ran-domized controlled trials in a large population of IBS patients are needed to establish a causal-resultant relationship IBS and MS and liver damage.

REFERENCES

1. Lee SH, Kim KN, Kim KM, Joo NS. Irritable bowel syndrome may be associated with elevated alanine aminotransferase and metabolic syndrome. *Yonsei Med J* 2016;**57**(1):146–152.
2. Khayatizadeh SS, Esmailzadeh A, Saneei P, Keshteli AH, Adibi P. Dietary patterns and prevalence of irritable bowel syndrome in Iranian adults. *Neurogastroenterol Motil* 2016;**28**(12):1921–1933. doi:10.1111/nmo.12895

P038

THE METABOLIC SWITCH OF HEPATITIS C VIRUS-RELATED HEPATOCELLULAR CARCINOMA AFTER EPHRIN TYPE-A RECEPTOR 2 IS KNOCKED DOWN

^{1,2}Zijian Zhang*, ³Qi Zhou. ¹Department of General Surgery, The Seventh Affiliated Hospital, Sun Yat-sen University, Shenzhen, China; ²Digestive Medicine Center, The Seventh Affiliated Hospital, Sun Yat-sen University, Shenzhen, China; ³Department of General Surgery, Huiyao Hospital of the First Affiliated Hospital of Sun-Yat-sen University, Huizhou, China

10.1136/gutjnl-2021-BASL47

Purpose Hepatitis C virus (HCV) is a major pathogen of liver diseases, including hepatitis, liver cirrhosis, and hepatocellular carcinoma. Few strategies were applied in the prevention and treatment of Hepatitis C. More and more evidence shows that ephrin receptor A2 (EphA2) is a key factor in the HCV entrance into the liver cells. During our study of metabolic reconstruction of liver cancer cells, we found metabolic progress changed after knocking down the expression of EphA2. That means EphA2 participates not only in the migration, integrin-mediated adhesion, proliferation, and differentiation but also in the metabolic biological processes. We designed an EphA2+metabolic classifier that can distinguish different subtypes of HCV-related HCC which have different characteristics, prognoses, and treatments.

Method Utilizing the data from gene expression omnibus (GEO) and normal liver tissues of GTEx, we focus on the metabolic changes between wild-type HuH7 cells and EphA2-knocked down HuH7 cells. We ran the Gene set enrichment analysis (GSEA) and Gene set variation analysis (GSVA) on the differential expression genes (DEGs) calculated by several packages of R language. And we tried to find the different expression patterns in gene set levels, based on the metabolism-related gene sets. Data from HCV-related HCC in GEO were explored. Bioinformatics methods are used to analyze the genomics, transcriptomics, and clinical data.

Results After utilizing the data from HCV-related HCC of GEO and normal liver tissues of GTEx, 101 LLPS related genes were selected for further research. We ran the GSEA and GSVA, and we found three significantly changed gene sets