P216 COMBINATION OF QUANTITATIVE MRCP AND MRI DEMONSTRATES INCREASED PERIDUCTAL IRON-CORRECTED T1 IN PRIMARY SCLEROSING CHOLANGITIS

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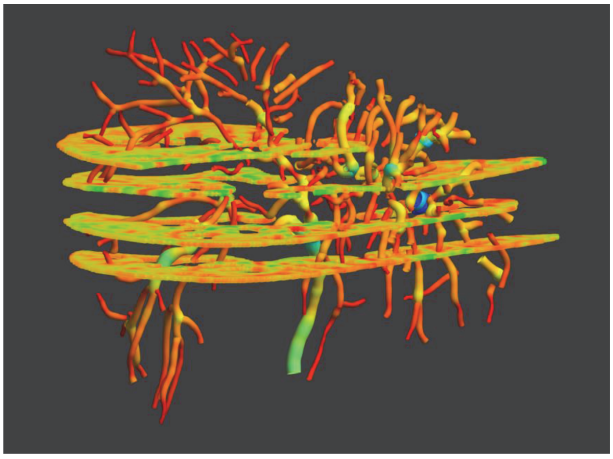
10.1136/gutjnl-2020-bsgcampus.291

Introduction Mean iron-corrected T1 (cT1) from multi-parametric liver MRI correlates well with histologically-assessed liver fibrosis and inflammation. One of the features of primary sclerosing cholangitis (PSC) is a characteristic 'onion skin' periductal fibrosis usually seen on histology. We evaluated whether a corresponding feature can be diagnosed macroscopically from quantitative MRI scans.

Methods 3D MRCP and axial liver T1 and T2* maps were acquired for patients with large-duct PSC and healthy volunteers. LiverMultiScan (Perspectum Diagnostics (PD), UK) was first used to generate four axial liver parenchyma maps with cT1 measurements at each voxel. Then, biliary data was analysed using MRCP+ (PD, UK) to build a parametric biliary tree model, and the two images were aligned as illustrated in figure 1. Periductal cT1 was quantified over fixed radial distances surrounding the bile ducts at 1 mm increments up to 10 mm. Region of interest (ROI) 1 was defined as the ring-shaped area between the circles with radius 2 and 5 mm. ROI 2 was the area between circles with radius 6 and 9 mm. Mean cT1 was measured in each ROI and compared to the mean cT1 for the whole axial segment (reference), using the Friedman test with Dunn's correction. Advanced fibrosis (≥F3) was defined as liver stiffness measurement (LSM; FibroScan (Echosens, France)) >9.6 kPa.

Results Seventy patients with PSC (67% male, median age 44 years, range: 18–76 and disease duration 7 years, range: 1–25) were recruited, as were 20 healthy volunteers matched for gender. There was a difference in mean cT1 over the three regions ($p<0.0001$) in PSC, but no such difference was seen in healthy volunteers. Pairwise comparisons in PSC showed mean cT1 in ROI 1 (784 ms) was higher than ROI 2 (768 ms; $p<0.0001$) and reference (770 ms; $p<0.0001$), but there was no difference between ROI 2 and reference ($p=0.13$). Importantly, the mean cT1 in ROI 1 was higher in PSC with advanced fibrosis on LSM (817 vs 771 ms, $p=0.0035$). A cut-off of 774 ms had an area under the curve (AUC) of 0.73 (95% CI 0.59–0.87, $p=0.0040$) to identify advanced fibrosis.

Conclusions Periductal cT1 in the ring of tissue 2–5 mm around the bile ducts is significantly higher than regions further from the bile ducts in PSC and may represent a macroscopic finding that correlates to the histologic 'onion skin' fibrosis. This demonstrates how quantitative MRI techniques can be used to assess features of disease that were previously seen only at histology.



Abstract P216 Figure 1 Alignment of the biliary tree model with four axial liver cT1 maps in a patient with PSC for quantification of periductal cT1

P217 PREVALENCE OF PROTON PUMP INHIBITOR PRESCRIBING IN PATIENTS WITH DECOMPENSATED LIVER DISEASE

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10.1136/gutjnl-2020-bsgcampus.292

Introduction Proton pump inhibitors (PPIs) are one of the most widely prescribed drugs in the world with benefits in patients with liver disease with peptic ulcer disease and reflux, however many patients are receiving a PPI without a clear indication. Observational studies have shown that the use of PPIs in patients with cirrhosis may be associated with increased risk for the development of spontaneous bacterial peritonitis (SBP) and hepatic encephalopathy (HE) in addition to more general adverse events e.g. bone fractures. The prevalence of PPI prescribing in patients admitted to a hepatology ward for a decompensation event was investigated, with PPI side effects and pharmacy intervention in relation to PPI prescribing also examined.

Methods Decompensated cirrhotic patients admitted between April -October 2019 were extracted from hospital databases and examined for PPI use; side effects associated with PPI use and changes to the PPI prescription were also identified.

Results 50 patients admitted with a decompensation event were studied; 35 were male with a median age of 58 (25–85). 74% had a background of alcoholic liver disease and 40% were child-pugh C. On admission, 58% (29/50) of patients were on a PPI, with a clear indication in 3. 85% (n=22) of patients on a PPI without a clear indication also had oesophageal varices. Where data is available 12/19

Abstract P217 Table 1

Side effect		No. of patients	On PPI n (%)	PPI indicated n (%)
HE	Y	20	14(70)	1(7)
	N	30	15(50)	2(13)
SBP	Y	4	3(75)	0
	N	46	26(56)	3(12)
Hyponatraemia	Y	19	14(74)	1(7)
	N	31	18(58)	2(11)
Hypomagnesemia	Y	4	3(75)	0
	N	46	26(56)	3(12)
Infection	Y	17	8(47)	1(12.5)
	N	33	21(63)	2(10)

patients were on a PPI for >1 year. The table 1 below highlights those patients prescribed a PPI and the presence of side effects associated long term PPI use.

During the admission 8 patients were deescalated off their PPI by the hepatology pharmacist and 8 were newly started on a PPI, 3 of whom had a clear indication; resulting in 58% of patients being discharged on a PPI.

Conclusions The use of PPIs in decompensated cirrhotic patients without a clear indication is demonstrated as an issue in a tertiary hepatology centre. Over 70% of patients with a history of HE or SBP are presently prescribed a PPI, with a lower prevalence in those patients without HE or SPB. Hepatology pharmacists are well placed to review PPI prescribing and initiate a de-escalation process.

P218 THE MANAGEMENT OF PRIMARY BILIARY CHOLANGITIS (PBC) ACROSS UK HOSPITALS: DOES CARE DIFFER?

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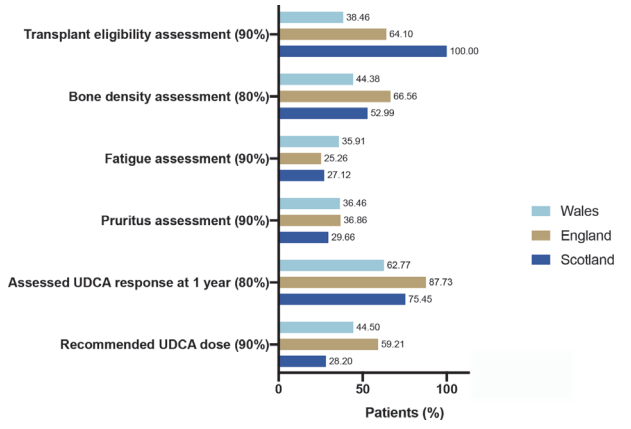
10.1136/gutjnl-2020-bsgcampus.293

Introduction Primary Biliary Cholangitis (PBC) is a progressive, autoimmune, cholestatic liver disease affecting approximately 15,000 individuals in the UK. Updated guidelines for the management of PBC were published by The European Association for the Study of the Liver (EASL) in 2017. We report on the first multicentre, national audit which assesses the quality of care and adherence to guidelines.

Methods A retrospective audit of all adult patients with PBC was undertaken in 11 NHS trusts in England, Wales and Scotland between January 2017 and March 2020. Data on patient demographics, ursodeoxycholic acid (UCDA) dosing and key guideline recommendations was captured from medical records. Results from each trust were evaluated against national guidelines for target achievement and analysed using Chi-square analysis for variation in guideline adherence between trusts.

Results A total of 790 patients with a diagnosis of PBC were identified across 11 national health trusts. The mean age was 62.1 years (SD, 13.16) and the cohort was predominantly female (94.2%). The data demonstrated that the majority of trusts did not meet all of the recommended EASL standards, set at 80% or 90%. There were significant variations in the following standards across the trusts: optimal prescription of UDCA (range: 15.8% - 88.8%) and assessment of biochemical response at one year (range: 53.3% - 100%), assessment of bone density (range: 22.2% - 77.4%), assessment of clinical symptoms (pruritus and fatigue) (range: 12.2% - 80%) (all $p<0.0001$), and assessment of transplant eligibility in high-risk patients (range: 0% - 100%) ($p=0.0297$). When comparing countries, significant variation in performance was observed between England, Wales and Scotland (figure 1). Tertiary centres were found to perform significantly better than secondary centres.



Abstract 218 Figure 1 Comparison of PBC care between the studied trusts in England, Wales, Scotland

Conclusions This is the first UK-wide PBC audit that provides a unique insight into the care received by PBC patients across the UK. Our findings identify a gap in the care of patients with PBC and suggest the need for an intervention to improve guideline adherence. This has important implications in improving symptom control, preventing end stage liver disease and accessing novel therapies. These findings have been used to develop a PBC Review tool and we recommend its incorporation into clinical practice. As the first audit of its kind, it will be refined for a wide-scale re-audit.

P219 NON-CIRRHOTIC, NON-MALIGNANT ACUTE PORTAL VEIN THROMBOSIS – SHOULD WE BE DOING MORE?

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10.1136/gutjnl-2020-bsgcampus.294

Introduction For cases of non-cirrhotic, non-malignant acute portal vein thrombosis (aPVT) guidance (European Association for the Study of the Liver Clinical Practice Guidelines: vascular diseases of the liver. *J Hepatol*ogy, 2016) advises treatment with low molecular weight heparin (LMWH), screening for prothrombotic conditions, anticoagulation for at least 6 months and repeat CT imaging at 6–12 months to assess recanalisation. Thrombolysis and/or interventional radiology may also be considered in the acute management.

We audited the management of these cases in our centre to inform the development of an aPVT treatment pathway.

Methods A retrospective search of PACS was done for inpatient CT scans from 2013–2018 where the report contained any of: 'portal vein thrombosis', 'mesenteric vein thrombosis', 'portomesenteric vein thrombosis' or acronyms: 'PVT', 'SMVT', 'PMVT'.

Cases of chronic PVT, cirrhosis or malignancy were excluded. Electronic notes were examined to identify underlying aetiology at diagnosis and how the aPVT was managed.

Results 98 cases of aPVT were identified over the 5-year period. 35 were excluded due to malignancy (22) and cirrhosis (13).

The remaining 63 cases were true non-cirrhotic, non-malignant aPVT. Pancreatitis was the commonest aetiology (32%) followed by intra-abdominal infection (24%), post abdominal surgery (19%), unprovoked (16%) and other (9%).

9 patients died before discharge and a further 3 died within 6 months of diagnosis. None underwent thrombolysis or interventional radiology treatment. Only 21% (n=13) had evidence of a thrombophilia screen.

59% (n=37) of cases were anticoagulated of which 50% had LMWH with bridging to warfarin, 44% LWMH only and