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

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**Introduction** Mean iron-corrected T1 (cT1) from multi-parametric T1 maps 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 cutoff 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.

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

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**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

<table>
<thead>
<tr>
<th>Side effect</th>
<th>No. of patients</th>
<th>On PPI n (%)</th>
<th>PPI indicated n (%)</th>
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<tbody>
<tr>
<td>HE</td>
<td>20</td>
<td>14(70)</td>
<td>1(7)</td>
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<tr>
<td>SBP</td>
<td>4</td>
<td>3(75)</td>
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<tr>
<td>Hyponatraemia</td>
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<tr>
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<td>3(12)</td>
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<tr>
<td>Infection</td>
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<td>8(47)</td>
<td>1(12.5)</td>
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<tr>
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<td>33</td>
<td>21(63)</td>
<td>2(10)</td>
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