with those without, was 6.94 (95% CI 4.33 to 11.12). The OR for dyspepsia in weekly GORS remained significantly higher in all geographical regions studied, and across all diagnostic criteria used. The pooled degree of overlap between the two conditions was 25.9% (95% CI, 19.9%–32.4%), varying from 22% when the Bowel Disease Questionnaire was used to define weekly GORS, to 42.6% with the Mayo Reflux Questionnaire.

Conclusion The OR of dyspepsia in individuals with weekly GORS was seven-fold that of individuals without GORS, and that there is overlap between the two conditions in up to one-quarter of individuals. Reasons for this remain speculative, but may include shared pathophysiological mechanisms or residual confounding.

Disclosure of Interest None Declared

PTH-132 ANALYSIS OF GASTRIC PH BY ENDOFASTER IN COMBINATION WITH STANDARD CLINICAL PARAMETERS CAN PREDICT RESPONSE TO PPI IN PATIENTS WITH GASTRO-OESOPHAGEAL REFLUX DISEASE

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10.1136/gutjnl-2017-314472.531

Introduction Up to 30% of patients with gastro-oesophageal acid reflux treated with acid suppressing drugs have pathological oesophageal acid exposure and symptoms on their own are poor predictors. Endofaster allows real time pH analysis of gastric juice during endoscopy. We hypothesised that in patients on proton pump inhibitors (PPI) or H2 receptor antagonists (H2RA) the presence of an acidic gastric pH at the time of the endoscopy, alone or in combination with other clinical factors, could predict response to medical therapy.

Method This was a prospective cohort study. We recruited patients referred for OGD and on daily medical therapy with PPI or H2RA, with stable dose in the last 2 weeks. Patients who missed the last dose of medication prior to the OGD were excluded. Symptoms were assessed by validated questionnaire (GERD-Q). Single time-point reading of gastric pH was taken by Endofaster at OGD. Immediately after the endoscopy, patients received an ambulatory pH-impedance monitoring to assess 24 hour gastric and oesophageal acid exposure. Logistic regression was used to assess for relationships between 24 hour pH readings and other clinical parameters including gastric pH by Endofaster, endoscopic findings, dose of medications and symptom pattern.

Results Of the 84 patients recruited 22 were excluded due to insufficient gastric juice at the time of the OGD, failure of pH-impedance or voluntary suspension of the PPI/H2RA. 77% of the patients were on PPI alone and the others either on H2RA or the combination of the two. In keeping with the previous evidence, 30% of the patients had pathological levels of oesophageal acid exposure. Single time-point gastric pH by Endofaster correlated significantly with 24 hour gastric pH ($p=0.01$), however, it did not correlate significantly with 24 hour oesophageal acid exposure ($p=0.18$). The logistic regression analysis identified 5 clinico-endoscopic factors that combined were predictive of 24 hour oesophageal pH ($p=0.034$). Endofaster pH, severity of heartburn and frequent acid taste positively correlated with oesophageal acid exposure, while high dose of PPI and frequency of heartburn were negative predictors.

Conclusion These results indicate that in patients on acid suppressing therapy single time-point gastric pH in combination with other clinical factors can predict 24 hour acid exposure and aid clinical management.

Disclosure of Interest None Declared

PTH-133 ACHALASIA DESPITE NORMAL INTEGRATED RELAXATION PRESSURE WITH 5ML WATER SWALLOWS

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10.1136/gutjnl-2017-314472.532

Introduction Resistance to bolus flow across the lower esophageal sphincter (LES) is a hallmark of achalasia. Presently the gold standard of diagnosis is by high-resolution manometry (HRM) demonstration of raised integrated relaxation pressure (IRP) following ten 5 mL water swallows; however, this does not replicate normal swallowing behaviour. It has been demonstrated that the addition of adjunctive tests improves sensitivity of identifying relevant dysmotility. Such tests include multiple water swallows (MWS; 200 mL water drunk freely) and solid swallows. In addition, the timed barium esophagram (TBE) measures esophageal emptying. This study describes a cohort of patients who have been treated as having achalasia based on resistance to flow not exhibited with single water swallows.

Method Inclusion criteria were all patients between October 2014–2016 with normal mean and median IRP with 5 mL water swallows but considered to have achalasia due to resistance to flow demonstrated by pan-esophageal pressurisation (PEP) during MWS or solid swallows and/or a persistent column at 5 min during TBE. Outcome post-treatment was based on Eckardt score (ES).

Results 14 patients (9 male) fulfilled inclusion criteria. 7 were treatment-naïve and 7 treatment-experienced (3 myotomy, 4 dilatation). Mean resting LES pressure was 14.6 ± 7.4 mmHg. In all patients, mean and median IRP values for ten 5 mL water swallows were non-raised (mean 9.1 ± 4.3 and 8.7 ± 4.5 mmHg respectively). Of the 7 treatment-naïve patients, 5 demonstrated PEP on MWS, 3 on solid swallows and 6 had a positive TBE at 5 min. In treatment-experienced patients, 5 had PEP on MWS, 1 on solid swallows and all had a positive TBE. Of the 13 who had resistance to flow on TBE, 10 (77%) also had resistance demonstrated during MWS and/or solid swallows. Mean height of the 5 min column of barium at baseline was 16.5 ± 8.9 cm.

8 patients underwent therapy based on these findings; one POEM and 7 pneumatic dilatations. Median baseline ES was 7.5 (IQR 5–8). Median ES at minimum 3 months following treatment was 1 (IQR 0–2.5; $p<0.01$ cf. baseline). Similarly, there was significant improvement in TBE findings post-therapy (mean 5 min column height 3.5 ± 4.1 cm; $p=0.04$ cf. baseline).

Conclusion A normal IRP for water swallows does not preclude a diagnosis of achalasia. The addition of free drinking/solids during HRM or the TBE can identify pathology that might have been missed with standard 5 mL water swallows alone. Patients treated based on this algorithm exhibit excellent treatment outcomes, validating this approach.

Disclosure of Interest None Declared