information regarding presenting symptoms, response to pharmacological treatment, requirement for nasojejunal feeding or surgical jejunostomy and subsequent tertiary referral for consideration of gastric neurostimulation. Patients were nominally split into those with prolonged and significantly prolonged GET. Specific clinical features and subsequent response to treatment were compared. Characteristics common to both groups were identified and outcomes of atypical treatment strategies noted.

Results The cohort (n=21, 18 female, 3 male, ages 18–74) was categorised on the basis of GET (Measured on nuclear study. Prolonged: n=13, GET<130 min. Significantly prolonged: n=8, GET>130 min). Whereas prevalence of most presenting symptoms was similar between groups weight loss and constipation were seen only in the significantly prolonged group (50% in both instances). Significant clinical improvement with oral domperidone and metoclopramide was disappointingly unusual, however was slightly more common in the prolonged group (43% vs 25%). GET was not a useful predictor of treatment response. Of four patients requiring jejunal feeding and tertiary referral for neurostimulation, two had only marginal prolongation in GET. Of four patients started on the 5HT4 agonist prucalopride for concomitant constipation, three noticed incidental improvement in gastroparetic symptoms. One patient reported improvement following Chinese acupuncture.

Conclusion The case series illustrates inherent difficulties in diagnosing and managing gastroparesis. It notes certain clinical features, such as weight loss and constipation, which may relate to more significant prolongations in GET. In isolation GET appeared to be a poor marker of disease severity and was not useful in reliably predicting treatment response or requirement for subsequent tertiary referral. Observations of symptomatic improvement with prucalopride, a drug currently unlicensed for this indication, suggest further study into its wider therapeutic use should be afforded.

Competing interests B Hudson: None declared, F Fayyaz: None declared, R Makins Conflict with: This author has previously acted as an advisor for shire pharmaceuticals.

PWE-046 THE DEVELOPMENT OF HUMAN ESOPHAGEAL PAIN HYPERSENSITIVITY IS ASSOCIATED WITH ANXIETY AND SYMPATHETIC NERVOUS SYSTEM ACTIVATION

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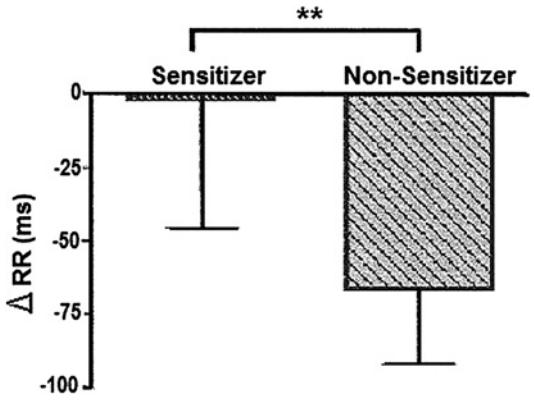
Introduction Experimental acid infusion in the distal oesophagus leads to secondary hyperalgesia in the proximal oesophagus in most healthy subjects but 30% remain resistant. The factors that mediate differences in sensitisation to acid are unclear and their study may help to understand risk factors for esophageal hypersensitivity in gastro-esophageal reflux disease. We aimed to determine the psychophysiological factors which predict the development of esophageal pain hypersensitivity (EPH) to acid infusion in healthy subjects.

Methods 52 healthy volunteers (mean age 29 yrs, range 19–49 yrs; 33 male) underwent psychological profiling for, anxiety, depression and personality type. Baseline pain thresholds (PT) to proximal esophageal electrical stimulation were measured before hydrochloric acid infusion (0.15 M) in the distal oesophagus for 30 min. This was followed by esophageal pain threshold measurements using visual analogue scales to electrical stimulation in the proximal, unexposed oesophagus at 30, 60 and 90 min. Parasympathetic (Cardiac Vagal Tone—CVT) and Sympathetic Nervous System (RR interval) responses were monitored throughout the study. Volunteers were classified as sensitisers if the proximal PT fell ≥6 mA after esophageal acidification.

Results Four subjects dropped out, 35 subjects (73%) sensitised to acid, and 13 subjects (27%) did not sensitise. There was no difference in the age, sex or in personality domains between sensitisers and non-sensitisers ($p>0.05$). Spielberg trait anxiety comparison indicated a trend, $p=0.08$ for sensitisers to be more anxious than non-sensitisers. At baseline there was no difference in CVT and RR interval between the two groups. During acid infusion the key difference in autonomic nerves system response was that in the sensitisers the RR interval was shorter in sensitisers than non-sensitisers (sensitisers: Δ1.7 SE±48.9 vs non-sensitisers: Δ66.1 SE±25.65. ΔRR interval difference 64.4 ms (SE ±37.3) $p=0.002$). Trait anxiety demonstrated a negative correlation with the RR interval $r=-0.35$ ($p=0.04$).

Conclusion There was a trend for sensitisers to be more anxious and at baseline there were no differences in the PNS and SNS parameters between the two groups. During acid infusion, the sensitisers had a lower RR interval than non-sensitisers suggesting a higher heart rate and therefore SNS tone. Trait anxiety showed a negative correlation with the RR interval suggesting those with higher anxiety had higher heart rate. Our results suggest that higher anxiety and SNS activation has a pro nociceptive effect on the development of post-acid infusion esophageal sensitisation. This may explain why individuals with anxiety or stress at the time of visceral injury or inflammation are more likely to go onto develop EPH.



Abstract PWE-046 Figure 1 Mean difference in ΔRR interval. **64.468 ms (SE ±37.305) p=0.0029.

Competing interests None declared.

PWE-047 FULL THICKNESS SMALL BOWEL BIOPSY IN GUT DYSMOTILITY. CASE SERIES OF EIGHT PATIENTS ILLUSTRATING THE BENEFITS AS A DIAGNOSTIC TOOL

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Introduction Full thickness small bowel biopsies offer the opportunity to make a definitive diagnosis in patients with gastrointestinal dysmotility. However, our experience suggests that standard histological reporting may fail to achieve this diagnosis. This study compares local diagnoses to those of a national expert.

Methods We retrospectively reviewed eight sequential patients with symptomatic gastrointestinal dysmotility who were reviewed at a tertiary centre having had locally reported full thickness small bowel biopsies. Local histological reports were compared to those of a national expert. Patient notes were reviewed to determine the clinical impact of achieving a definitive diagnosis. Some patients were questioned regarding the impact of their definitive diagnosis.