oesophageal balloon distention. During fMRI, 480 T2* weighted images per slice (40 × 3 mm slices, 0.3 interslice gap, TE 30 ms, TR 2500 ms, flip angle 80°, matrix size 642, sum of images per scan = 19,200) were captured to illustrate blood oxygen level dependent (BOLD) contrast during the different experimental events. The effects of extraversion on fMRI response during these events were subsequently determined using ANOVA brain activation mapping analyses within XBAM, a statistical package of image processing and statistical inference.

Results There was a diversity of extraversion scores (range 6–22), which did not influence pain threshold or rating. High extraversion was associated with significantly greater activity in the left cuneus (Brodmann Area (BA) 18) during rest ($p < 0.001$) and the right insula (BA13) during both anticipation ($p < 0.0002$) and pain ($p < 0.0008$). Low extraversion was associated with significantly greater brain activity in numerous regions during pain anticipation, including the bilateral precuneus (BA31), bilateral lingual gyrus (BA18) and the right inferior temporal gyrus ($p < 0.0001$).

Conclusion Our results suggest that the brain processing of pain is influenced by the personality dimension of extraversion and therefore like other personality dimensions such as neuroticism, extraversion should be controlled for in brain imaging studies of pain in health and disease.

Disclosure of Interest None Declared.

OC-067 ENHANCED PERCEPTION OF PROXIMAL GASTRO-OESOPHAGEAL REFLUX: IMPAIRED MUCOSAL INTEGRITY OR DISTINCT SENSORY INNERVATION?

P Woodland*, C Lee, R Aktar, E Mthunzi, LA Blackshaw, SL Preston, D Sifrim. *Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, UK*

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Introduction In patients with GORD, including refractory disease, reflux events reaching the proximal oesophagus are more likely to be perceived than those only reaching the distal oesophagus. There is also experimental data suggesting an increased sensitivity of the proximal oesophagus relative to the distal. As such, the proximal oesophagus is likely to be highly significant in the pathogenesis of GORD symptoms. Reasons for this proximal oesophageal sensitivity are not clear, but may include reflux volume, impairment in mucosal integrity or changes in sensory innervation. It has recently been shown that distal mucosal integrity (its ability to perform a protective barrier function) is more vulnerable to acid exposure in GORD than in controls. The integrity of the proximal oesophagus has not been tested. To our knowledge, there are no studies evaluating mucosal afferent innervation of the distal and proximal oesophagus. We **aimed** to compare mucosal integrity and afferent nerve distribution in the proximal and distal oesophagus in patients with heartburn without oesophagitis.

Methods In 23 patients with heartburn and 10 healthy volunteers baseline proximal and distal oesophageal impedance was measured *in vivo*. Oesophageal mucosal biopsies from the distal and proximal oesophagus were taken and baseline transepithelial electrical resistance (TER) was measured in Ussing chambers. Biopsies were examined immunohistochemically for presence and location of calcitonin gene-related peptide (CGRP) immunoreactive nerve fibres.

Results Baseline impedance was higher in the proximal than in the distal oesophagus in healthy volunteers (2935 ± 204 Ω vs. 2234 ± 290 Ω, $p < 0.05$) and in patients (2949 ± 183Ω vs.1945 ± 235Ω, $p < 0.001$). However, baseline TER was not significantly different between proximal and distal oesophagus, or between patients with heartburn and healthy volunteers. Mucosal CGRP-immunoreactive nerves were located more superficially in the proximal oesophagus compared to the distal oesophagus in healthy controls (12.3 ± 0.9 vs. 23.8 ± 1.2 cells from lumen, $p < 0.001$) and in patients (5.7 ± 0.7 vs. 22.2 ± 2.7 cells from lumen, $p < 0.0001$). Moreover, these nerves were located closer to the lumen in patients with heartburn compared to asymptomatic controls (5.7 ± 0.7 vs. 12.3 ± 0.9, $p < 0.001$).

Conclusion The baseline mucosal integrity of the proximal oesophagus is not more impaired than that of the distal, nor is it more impaired in patients with heartburn symptoms versus healthy controls.

Increased sensitivity of the proximal oesophagus in GORD may instead be associated with a more superficial location of mucosal afferent nerves. Topical protection of the proximal oesophageal mucosa is a potential treatment strategy to reduce this sensitivity.

Disclosure of Interest None Declared.

OC-068 THE IMPACT OF ENDOSCOPIC THERAPY ON PATIENT-PERCEIVED OUTCOME AND QUALITY OF LIFE IN SPHINCTER OF ODDI DYSFUNCTION

B Paranandi*, VTF Cheung, D Joshi, GH El-Sayed, GJ Johnson, SP Pereira, GJ Webster, MH Chapman. *Pancreaticobiliary Medicine, University College London Hospitals, London, UK*

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Introduction Biliary Sphincter of Oddi dysfunction (SOD) is a benign but often debilitating condition. Significant improvement in pain following endoscopic sphincterotomy or sphincteroplasty (ES) in patients with Type 1 SOD, is excellent. Symptomatic improvement in patients with type 2 or 3 SOD is less favourable (reported 50–70% and 30–50% respectively). We aim to determine the impact of ES, on pain symptoms and global quality of life (QOL) in these groups, which has not previously been well defined.

Methods An ERCP database and electronic clinic lists (from September 2011 to 2013) were analysed to identify all cases of suspected SOD. Patients underwent a telephone questionnaire. The Glasgow Benefit Inventory (GBI), which assesses multiple physical, emotional and social parameters, was used to quantify global post-interventional QOL benefit. Total GBI scores can range from -100 (maximal negative benefit) to +100 (maximal positive benefit).

Results 163 new patients with suspected biliary SOD were identified of whom 89 underwent ERCP. 3 patients were excluded due to an alternative diagnosis at ERCP. The remaining cohort was predominantly Female (87%) and

Abstract OC-068 Table 1

	Median GBI Scores (Post- ES)		
Response to ESF	**SOD subtype**		
	SOD1	SOD2	SOD3
No improvement	–19.4	–31	–63
Initial response then relapse	8.3	8.3	–19
Sustained response	44	31	29