

Conclusion This data supports the previous findings that the BO lesion length of greater than 3 cm is associated with the presence of IM. Furthermore, the odds of having IM are significantly reduced in patients from the Indian sub-continent. Ethnicity should thus be taken into account in the future risk stratification of BO patients and requires further study.

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Disclosure of Interest None Declared.

PTU-176 IMPLEMENTATION OF OBJECTIVE ACTIVITY MONITORING TO SUPPLEMENT THE INTERPRETATION OF AMBULATORY OESOPHAGEAL PH INVESTIGATIONS

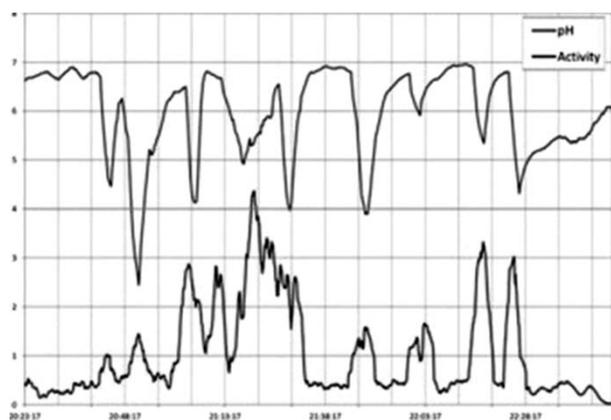
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Introduction Conventional catheter-based systems used for ambulatory oesophageal pH monitoring have been reported to affect patient behaviour. As physical activity has been associated with gastro-oesophageal reflux disease (GORD), there is a risk that abnormal behaviour will degrade the value of this diagnostic investigation and consequent management strategies. Our aim was to provide the reporting physician with objective peri-investigational changes in activity, and the means to assess the association between activity and pH during the test, using a wearable activity monitor.

Methods Trial registered at clinicaltrials.gov (NCT01507298) and ethics approved (11/LO/1981). Twenty patients listed for 24h pH monitoring underwent activity monitoring using a light-weight ear-worn accelerometer (e-AR sensor, Imperial College London) 2 days prior to, and during their investigation. PH was measured and recorded using a conventional naso-gastric catheter and waist worn receiver. Objectively measured activity levels, including subject-specific activity intensity quartiles, were calculated and compared over the 3 days. Physical activity was added to standard test outputs to supplement interpretation and diagnosis.

Results Average patient activity levels decreased by 26.5% during pH monitoring (Range -4.5–51.0%, $p = 0.036$). The amount of high intensity activities decreased by 24.4% (Range -4.0–75.6%, $p = 0.036$), and restful activity increased on average by



Abstract PTU-176 Figure 1

34% although this failed to reach statistical significance (-24.0–289.2%, $p = 0.161$). Some patients exhibited consistent associations between bouts of activity and acidic episodes (Figure 1).

Conclusion The results of this study support the previously reported reduction in activity during ambulatory oesophageal pH monitoring,^{1,2} with the added reliability of objective activity data. In the absence of more pervasive pH monitoring systems (e.g. wireless), quantifying activity changes in the setting of activity-induced reflux might facilitate recalibration of patient DeMeester scores and therefore more appropriate management of GORD.

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PTU-177 DUODENAL ADENOMAS: A REVIEW OF THEIR MANAGEMENT AND THE HIGH RISK OF CO-EXISTING COLON CANCER

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Introduction We reviewed the management of Duodenal adenomas at James Paget University Hospital, Great Yarmouth between 2001 and 2013.

Methods 20 patients were included in this study. A standardised proforma was completed for each case and the information was then collated.

Results A CT scan was performed in 13/20 patients. 3/20 had CT and Endoscopic Ultrasound. 4/20 had no imaging. 14/20 patients had Endoscopic Mucosal Resection (EMR). 5/20 had surgery. 1/20 case was monitored with annual surveillance OGDs. 11/14 patients had EMR within 6 months of diagnosis. Complete resection was achieved in 11/14. Argon Plasma Coagulation (APC) was used in 3/14.

The American Society of Gastroenterology guidelines¹ recommend routine insertion of prophylactic pancreatic stents for patients undergoing EMR of Ampullary adenomas. 6 of our patients had EMR for Ampullary adenoma and only 1 had a Pancreatic stent inserted. However none of these procedures were complicated by Pancreatitis. 4/14 patients had serious complications following EMR. 3 of these had bleeding from the EMR site while one had a large mucosal defect needing Endoclip application. The 30 day mortality was 0. The frequency of long term follow up was in compliance with the Spigelman scoring system.⁵ 4/14 patients had recurrent Duodenal adenomas after EMR.

Various studies have previously demonstrated a high incidence of co-existing Colorectal neoplasms in patients with sporadic Duodenal adenomas.^{2–4} The same was observed in our patients. Of the 17/20 patients who had Duodenal adenomas and intact colons, 11 had a colonoscopy. 3 were found to have Colon cancer, 4 had Colonic adenomas and 1 had hyperplastic polyps.

Conclusion We recommend imaging for all polyps >1 cm. All patients should have EMR within 6 months of diagnosis. Only 1/6 patients who had EMR of ampullary lesions had a Pancreatic stent inserted. None developed Pancreatitis. 4/14 had serious complications following EMR. Long term follow up was in

compliance with Spigelman scoring system. 4/14 had recurrent Duodenal adenomas after EMR. 3 patients were found to have Colon cancer. So it is essential that all patients with Duodenal adenomas have a colonoscopy.

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PTU-178 CLINICAL UTILITY OF ENDOFASER® IN PATIENTS ON CHRONIC PPI THERAPY UNDERGOING UPPER GI ENDOSCOPY

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Introduction Patients undergoing upper GI endoscopy (OGD) are often on chronic PPI therapy for dyspeptic symptoms or gastro-oesophageal reflux disease (GORD). Continued PPI therapy at the time of the endoscopy can influence the outcome of H. pylori testing via rapid urease test (CLO) or even histology. In addition, complete response to PPI in patient with GORD and/or Barrett's oesophagus (BO) is often not fully predicted by the clinical history. We hypothesised that rapid testing of H. pylori status and gastric pH by Endofaster® could provide the physician with real-time information useful to influence patient management.

Methods This pilot feasibility study included 135 consecutive patients at a single centre who underwent OGD for BO surveillance/endothrapy (n = 95), screening for hereditary diffuse gastric cancer (n = 11) and evaluation of GORD/dyspepsia (n = 29). The pH and the H.pylori status were measured on 4 mL of gastric aspirate using the Endofaster®, which connects to the suction port of the gastroscope. If clinically indicated, CLO test or gastric biopsies were performed. Endofaster® results were matched with the history of PPI intake (PPI type and time of last dose) and results of CLO and gastric histology.

Results Overall, 109 patients were on chronic PPI treatment and of these 74% presented with gastric hypochloridia (pH >4) at Endofaster® analysis. Forty-nine patients reported PPI intake on

the same day of the OGD and 15% of these (n = 7) had acid gastric pH (<4). Fifty-nine patients had CLO test and 57 had gastric histology results available, while 26 patients had both. Only 1 patient was positive for H. pylori on histology, which was also positive at Endofaster®. Two patients had a positive CLO test, of which one was Endofaster® positive for H. pylori. Eleven patients were positive at the Endofaster® but not at CLO, of which 91% were on chronic PPI (n = 10).

Conclusion This feasibility study shows that a significant proportion of patients on chronic PPI therapy still have acidic gastric pH suggesting sub-optimal response to PPI. Endofaster® may detect H.pylori infection in patients on chronic PPI therapy, which are often false negatives when tested by CLO and histology. A prospective study matching Endofaster® data with gold standard tests for H. pylori status and gastro-oesophageal reflux are needed to conclude on the clinical implications of these findings.

Disclosure of Interest None Declared.

PTU-179 SOCIAL DEPRIVATION IN BARRETT'S OESOPHAGUS?

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Introduction Squamous oesophageal carcinoma is more prevalent in those with lower socio-economic status. Little is known about this for oesophageal adenocarcinoma (OAC). Anecdotally, OAC has been observed in higher socio-economic groups. Barrett's oesophagus (BO) is the only known precursor of OAC. This study investigates the association between BO and social deprivation using the 2010 Index of Multiple Deprivation (IMD).

Methods *Patients:* 1076 BO diagnosed in Rotherham, between April 1978 and August 2012. *IMD:* The Office for National Statistics (ONS) divides England into geographical areas each with a similar population size termed Lower Layer Super Output Areas (LSOA). The 2010 IMD comprising a combination of 38 separate indicators is assigned to each LSOA. Every residential postcode is assigned to a LSOA and thus an IMD. This was applied to the postcodes of Rotherham patients at time of BO diagnosis. IMD Quintiles were derived by dividing the distribution of all IMD scores in England into 5 equal categories. The 6257 residential postcodes for Rotherham and the 1076 BO patients were placed in the quintiles relevant to their IMD score. *Analysis:* Chi square goodness of fit tests were used to compare the observed

Abstract PTU-179 Table 1

IMD quintile descending order of deprivation	Rotherham postcodes* n = 6257	BO diagnosed = 2000 n = 490			BO diagnosed = 2001 n = 586		
		Observed (O)	Expected (E)	Ratio (O/E)	Observed (O)	Expected (E)	Ratio (O/E)
Most deprived	2282	188	178.7	1.05	199	213.7	0.93
2nd most deprived	1659	142	129.9	1.09	128	155.4	0.82
3rd most deprived	988	64	77.4	0.83	89	92.5	0.96
2nd least deprived	1049	71	82.2	0.86	133	98.2	1.35
Least deprived	279	25	21.8	1.14	37	26.1	1.41
<i>p value</i>				0.21			0.0001

* Each postcode includes ~20 households.