benign gastric ulcers can potentially reduce the burden of FU-OGD.

Methods All patients with a first endoscopic diagnosis of gastric ulcer between January 2012 and September 2013 at this large teaching hospital were included. Patients with known gastric ulcers prior to study period or those referred for tertiary assessment were excluded. We defined neoplastic disease as histological evidence of gastric dysplasia or malignancy. Benign disease was defined as patients with complete ulcer healing, those with 2 sets of benign biopsies and no endoscopic suspicion of malignant disease, or in cases without FU-OGD one set of negative biopsies and at least 360 days cancer free survival. Patients with insufficient follow-up were excluded. We analysed the influence of demographic, endoscopic and histological factors on the likelihood of benign disease using chi-square test for categorical and t-test for continuous variables. Independence of variables was analysed using linear regression analysis.

Results Of 377 patients included 350 (92%) had benign disease. 19 patients were diagnosed with adenocarcinomas, 2 with dysplasia, 5 with lymphomas, and 1 with melanoma. Patient sex, indication for gastroscopy and helicobacter pylori status did not influence the likelihood of benign disease. Benign disease was significantly associated with ulcer location in the antrum ($p = 0.001$), endoscopic benign appearance ($p < 0.001$), non-cratered ulcer morphology ($p < 0.001$), benign histology on 1st biopsy ($p < 0.001$), younger age (64 vs 73 years, $p = 0.02$), lower number of ulcers (1.4 vs 2, $p < 0.001$) and smaller ulcer size (10 vs 28 mm, $p < 0.001$). After linear regression analysis only endoscopic benign appearance ($p = 0.03$), benign histology on 1st biopsy ($p < 0.001$), lower number of ulcers ($p < 0.001$) and smaller ulcer size ($p = 0.004$) were independent predictors of benign disease.

Conclusion We have demonstrated that several simple factors collected during index endoscopy and ulcer biopsy can predict benign disease. Risk stratification according to those factors could be used to re-examine the need for FU-OGD for all patients with gastric ulceration. If prospectively verified the described predictive factors could be used to identify low risk patients who do not require endoscopy. This may be a strategy to reduce the burden of FU-OGD.

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PTU-145 HOW COMMONLY IS UPPER GASTROINTESTINAL CANCER DIAGNOSED FOLLOWING AN ENDOSCOPY THAT DOES NOT REPORT CANCER (AN ANALYSIS OF 11 YEARS OF NATIONAL DATA IN ENGLAND)?

[1]D Cheung*, [2]F Evison, [3]P Patel, [1]N Trudgill. *[1]Department of Gastroenterology, Sandwell General Hospital, West Bromwich; [2]Health Informatics Department, Queen Elizabeth Hospital; [3]School of Cancer Sciences, University of Birmingham, Birmingham, UK*

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Introduction Oesophagogastroduodenoscopy (OGD) is the investigation of choice for excluding upper gastrointestinal cancer (UGIC). However, published studies suggest 14% of UGIC subjects had an OGD that failed to diagnose cancer in the 3 years prior to diagnosis (post gastroscopy UGIC (PGUGIC)). We have investigated the rate and risk factors for PGUGIC in a national data set in England.

Methods Hospital Episode Statistics (HES) collate information on all NHS hospital attendances in England. Subjects undergoing OGD without an UGIC diagnosis 6–36 months before subsequent diagnosis were identified as PGUGIC cases (definitely missed – OGD without UGIC diagnosis 6–12 months prior to UGIC diagnosis; probably missed – OGD without UGIC diagnosis 12–36 months prior to UGIC diagnosis) and subjects with no OGD 6–36 months before diagnosis served as controls. The influence of personal and institutional variables on PGUGIC were examined by multivariate logistic regression.

Results HES records from 2001–2012 were analysed including 5826932 OGD in 4163023 subjects. 132075 subjects were diagnosed with UGIC. 5659 (4.3%) definitely missed PGUGIC cases and 8518 (6.4%) probably missed PGUGIC cases were found. Gastritis/duodenitis (2512 subjects, 17.7%) and gastric ulcer (2117 subjects, 15.0%) were the most common coded findings in PGUGIC cases. Emergency OGD was negatively associated with PGUGIC compared with day case OGD (OR 0.70 (95% CI 0.67–0.73), $p < 0.001$). Female gender (1.19 (1.1–1.2), $p < 0.001$), South Asian (1.32 (1.2–1.6), $p < 0.001$) and Afro-Caribbean (1.26 (1.1–1.5), $p < 0.001$) ethnicity and comorbidities (liver disease (3.05, (2.3–4.1), $p < 0.001$), severe liver disease (3.01 (2.1–4.2), $p < 0.001$), peptic ulcer (1.98 (1.9–2.1), $p < 0.001$), pulmonary disease (1.17 (1.1–1.3), $p < 0.001$)) were associated with PGUGIC. Subjects with PGUGIC were less likely to undergo surgery (0.76 (0.7–0.8), $p < 0.001$) or chemotherapy (0.49 (0.47–0.51), $p < 0.001$) than controls, however, this did not affect overall survival, which was similar to controls. There was a fourfold variation in PGUGIC rates between units. Unit volume did not affect the rate of PGUGIC (lowest tertile volume compared with highest tertile 0.97 (0.9–1.1), $p = 0.5$). The annual rate of PGUGIC did not change over the study period.

Conclusion The rate of PGUGIC up to 3 year prior to UGIC diagnosis was 10.7% in England between 2001 and 2012. PGUGIC was associated with an elective procedure, female gender, ethnicity and comorbidities. PGUGIC subjects were less likely to have surgery or chemotherapy, although there was no effect on overall survival. There were large variations in PGUGIC rates between units but no evidence of a volume effect.

Disclosure of Interest None Declared.

PTU-146 THE TRINITY OF GASTRIC EMPTYING SCINTIGRAPHY, 13C ACETATE GASTRIC EMPTYING BREATH TESTING, AND REAL TIME GASTRIC ULTRASONOGRAPHY INDICATES HIGH PREVALENCE OF GASTRIC MOTOR DYSFUNCTION IN FUNCTIONAL DYSPEPSIA

D Nastou*, E Owen, FM Jaboli, C Clayman. *Institute for Minimally Invasive Gastroenterology, Royal Free London NHS Foundation Trust, London, UK*

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Introduction Gastric motor physiology can be assessed by gastric emptying scintigraphy (GES), ^{13}C breath testing (GEBT) and real time gastric ultrasound (GUS). The aim of this study was to evaluate how commonly these tests are abnormal in patients with functional dyspepsia (FD).

Methods Twenty-seven patients fulfilling the Rome III criteria for FD were enrolled in the study. All patients had a normal upper GI endoscopy and underwent standard GES using ^{131}I-technetium labelled mashed potato. On a separate day, these patients underwent a combined liquid GEBT (four hour breath test protocol using 170 ml chocolate Ensure liquid substrate + 50 mg ^{13}C-acetate) and GUS (calculating antral area at the time of ingestion and 15 min after ingestion of the GEBT liquid test meal).

Results Eight of the 27 patients had one abnormal test, six had two and in five, all three tests were abnormal. In fifteen of the 27 patients with a normal GES (56%), eight had normal GEBT and GUS studies. Of the remaining seven patients, four had a normal GEBT and an abnormal GUS, two had normal GUS with an abnormal GEBT, and in one, both the GEBT and GUS were abnormal. GES was delayed in ten of the 27 patients (37%). In four of these, both GEBT and GUS were abnormal, three had delayed gastric emptying on GEBT with a normal GUS, two had delayed gastric emptying on GUS with normal GEBT, and in one patient, both GUS and GEBT were normal. GES was abnormally rapid in two patients (7%). In one patient, both GEBT and GUS indicated rapid gastric emptying and in the other, GUS revealed rapid gastric emptying with a normal GEBT. Assuming GES as the gold standard for diagnosing abnormal gastric emptying, GUS has a sensitivity and specificity for detecting a motor disorder of 66% and GEBT has a sensitivity of 66% and a specificity of 80%.

Conclusion In this group of FD patients, 70% had at least one abnormal test of gastric motor function. Whilst GES is regarded as the gold standard test, in seven patients with normal GES, the GEBT, GUS, or both, were abnormal. This discrepancy might reflect the day-to-day variability of gastric motor function testing or that each investigation measures a different component of gastric motor physiology. We conclude that in FD, adding GEBT and GUS to GES substantially increases the positive diagnostic yield and the heterogeneous patterns might indicate a variety of FD subtypes.

Disclosure of Interest None Declared.

PTU-147 VALIDATION OF UPDATED BARRETT'S OESOPHAGUS GUIDELINE RECOMMENDATIONS: COMPLICATIONS AND OUTCOMES OF AN 'ADEQUATE' CASE VOLUME AND THE FEASIBILITY OF SAME DAY DISCHARGE

E Taylor*, S Din, J Campbell, A Hopper. *Gastroenterology, Sheffield Teaching Hospitals, Sheffield, UK*

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Introduction Recent advances in the management of high grade dysplasia and early cancer in Barrett's oesophagus (BO) have led to updated guidelines recommending endoscopic resection (ER) as a first line option in selected cases. The complexity and complications of ER have prompted guidelines recommending at least 15 procedures annually per endoscopist to minimise complications. The reported complications of oesophageal perforation (<0.9%) and delayed bleeding (2–22%) may prompt routine overnight observation following resection. Our aim was to report complications and outcomes in a unit performing just above the recommended annual numbers of ER for BO.

Methods All patients undergoing ER for BO over 3 years were identified. All resections were performed with a mutiband ligation technique. Number of resections performed, size of resected specimens and stage of dysplasia/cancer in specimens were recorded. Complications of delayed bleeding, perforation, or dysphagia requiring dilation were also recorded.

Results In 3 years, 108 endoscopic resections were performed in 46 procedures (median resections per procedure=2; range 1–6). 3 patients underwent 2 separate procedures. Resected specimens ranged in size from 3–17 mm (mean 10mm, SD 2.77). Final histological diagnosis per procedure was: no dysplasia=6, low grade dysplasia=3, high grade dysplasia = 8, invasive cancer- T1a=9 T1b =13, T2=4. 2 ER specimens were not retrieved, 1 showed granular cell carcinoma. Immediate complications included 1 perforation (2.3%. 95% CI:0–13%) with successful closure at endoscopy. 2 procedures were abandoned due to immediate bleeding (4.6% 95% CI 4.2 to 16.0%) which was successfully treated at the time. Delayed bleeding occurred in 2 patients, (4.6% 95% CI 4.2 to 16.0%) requiring emergency OGD at 8 h and 11 days post procedure. The second required endotherapy and readmission for 7 nights. 7 patients developed post-ER dysphagia (15.9% 95% CI 7.6 to 29.7) requiring oesophageal dilation (median procedures = 2, range 1–5). There was no significant difference in the number of resections in patients who had perforation (1 ER) or bleeding (median 1 range 1–3) p = 0.56. Patients who developed symptomatic strictures had a significantly higher number of resections (median 4 range 1–6) p < 0.0001.

Conclusion Complication rates of Barrett's ER procedures in a unit performing an adequate number are comparable to published outcomes from high volume centres. Delayed bleeding is rare, occurring up to 7 days post procedure and is not more common within the first 24 h. Therefore, if no immediate complications occur, same day discharge is appropriate.

Disclosure of Interest None Declared.

PTU-148 HEALTHCARE COSTS AND QUALITY OF LIFE ASSOCIATED WITH ACUTE UPPER GASTROINTESTINAL BLEEDING IN THE UK

[1]E Stokes*, [1]H Campbell, [1]D Bargo, [2]M Murphy, [3]R Logan, [4]V Jairath on behalf of TRIGGER Investigators. *[1]Health Economics Research Centre, Nuffield Department of Population Health, University of Oxford, UK; [2]Transfusion Medicine, NHS Blood and Transplant, Oxford, UK; [3]University of Nottingham, Nottingham, UK; [4]Translational Gastroenterology Unit, Nuffield Department of Medicine, Oxford, UK*

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Introduction Acute upper gastrointestinal bleeding (AUGIB) accounts for over 70,000 hospital admissions in the UK annually. Its incidence is likely to rise due to an ageing population and increasing burden of liver disease. Data on the healthcare costs and health-related quality of life (HRQoL) associated with this condition are sparse.

Methods The TRIGGER trial is a cluster randomised feasibility trial evaluating restrictive versus liberal red cell transfusion for patients with AUGIB. The study collected data on resource use, costs and outcomes during hospitalisation and up to day 28 to explore the feasibility of gathering inputs required for a cost-effectiveness analysis. Resource use data were collected during the inpatient episode on the use of laboratory tests, medications, blood components, endoscopy and endoscopic therapy, clinical events including ischaemic/thromboembolic events and length of hospital stay (LOS) by ward type. Data were also collected on primary and secondary care resource use, as well as informal care/days off work, post-discharge to day 28. Resource use for each patient was multiplied by national unit costs to generate an estimate of the costs of AUGIB to 28 days. HRQoL was measured on a scale anchored at 0 (death) and 1 (full health), using the EuroQol EQ-5D-3L questionnaire at day 28.

Results 936 patients were enrolled into TRIGGER between August 2012 and March 2013 in 6 UK hospitals. Preliminary analyses show that the mean (standard error (SE)) cost of the inpatient episode was £1,914 (£78) per patient. LOS was a key cost driver; mean LOS was 5.4 days with an associated cost of £1431. Additional cost drivers included: (1) red cell transfusion, with a mean of 1.6 units transfused per patient at a cost of £197; (2) endoscopy, with mean of 0.8 endoscopies per patient