Methods Data collection spanned 16 months (1/1/2016-30/4/2017) with 442 patients being identified from the Infoflex endoscopy database. Patients were enrolled if the main indication for upper gastrointestinal endoscopy was coded as 'Barrett's surveillance'. Review of histology reports, Infoflex accounts and clinical notes allowed acquisition of both 'Prague Classification' and 'Seattle Biopsy Protocol' data, alongside operator status (generalist or specialist). The relationship between type of endoscopy and compliance to techniques were assessed statistically through chi-squared independence testing.

Results From 442 cases (Mean 66.2 years (Range 24–88)), compliance to both 'Prague Classification' and 'Seattle Biopsy Protocol' were 73% (322/442) and 70% (309/442), respectively. Access to specialist endoscopy was improved at 41% compared to 26% (2014-2015). Furthermore, specialist endoscopy yielded superior adherence to both, 'Prague Classification' (87%, (157/181) v 63%, (165/261); $X^2=31.04$, $p<0.0001$) and 'Seattle Biopsy Protocol' (75%, (136/181) v 66%, (173/261); $X^2=4.09$, $p=0.0432$), compared with generalist counterparts.

Conclusions Specialist endoscopy improves adherence to BSG recommendations. The introduction of dedicated specialist lists at this large teaching hospital will help to optimise surveillance further. Ultimately, future work is necessary to help identify whether this specialist service carries value for both, BO screening and outcomes related to oesophageal dysplasia and OAC.

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PTU-057 LINX® MAGNETIC SPHINCTER AUGMENTATION: AZITHROMYCIN AND HIGH DOSE PROTON PUMP INHIBITORS CAN IDENTIFY REVERSIBLE OESOPHAGEAL HYPOMOTILITY

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Introduction Oesophageal hypomotility, which can accompany gastro-oesophageal reflux disease, is a contraindication to LINX® magnetic sphincter augmentation (Torax Medical). This device is employed in a minimally invasive anti-reflux procedure and involves implanting a bracelet of magnetic beads around the gastro-oesophageal junction to augment lower oesophageal sphincter function. The manufacturer has shown using oesophageal manometry, that a pressure of ≥ 28 mmHg is required to open the bracelet and allow normal swallowing. Consequently, for patients in whom the mean distal oesophageal amplitude (MDA) is < 28 mmHg, surgery is contra-indicated and this increasingly requested treatment option denied to patients. We took a group of patients being considered for LINX but with an MDA below the opening threshold of the device, or a mean distal contractile integral (DCI) of < 100 mmHg.cm.s, and tested if combined azithromycin (AZI) and proton pump inhibitor (PPI) therapy can improve contractility to the point that these patients could proceed with surgery.

Methods 18 patients (12 female, mean age 55.8) underwent a pre-LINX assessment with high resolution impedance manometry and were found to have hypomotility (MDA < 28 mmHg or DCI < 100 mmHg.cm.s). They were then given a four-week course of high dose twice daily PPI, combined with AZI 250 mg taken every other day. A repeat manometry study was then performed whilst on medication. Changes to the mean MDA of all subjects, the ratio of those with MDA below or above 28 mmHg, and the mean DCI, were assessed.

Results Data were assessed with Wilcoxon signed-rank and McNemar's tests. The MDA improved from a mean of 21.3 to 33.9 ($p<0.01$). The DCI improved from a mean of 40.7 to 217.1 ($p<0.01$). The ratio of those with MDA ≥ 28 mmHg improved from 1/18 to 11/18 ($p<0.01$).

Conclusion We summarise that using a pre-operative protocol of concomitant AZI and PPIs can significantly improve contractility in a proportion of patients with GORD. This protocol distinguishes these patients as having a reversible hypomotility, and therefore allows them to proceed to LINX implantation. Further investigation is required to evaluate whether this improvement is due to a change in reflux induced dysmotility, the prokinetic effects of AZI, or a combination of both.

PTU-058 RFA FOR DYSPLASTIC BARRETT'S OESOPHAGUS: 10-YEARS OF EXPERIENCE FROM THE EAST MIDLANDS

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Introduction Radiofrequency ablation (RFA) is the recommended therapy for flat high grade dysplasia (HGD) and residual Barrett's oesophagus (BO) after endoscopic mucosal resection (EMR) to reduce the risk of metachronous neoplasia. We aim to assess safety and effectiveness from the East Midlands Barrett's RFA database.

Methods Data was analysed on patients referred to Nottingham University Hospital for RFA therapy to treat dysplastic BO between 2008 and 2018. The main outcome measures included complete remission of dysplasia (CRD), complete remission of intestinal metaplasia (CRIM), recurrent rates of BO, HGD and adenocarcinoma, procedural complications, treatment failure rates and median follow up prior to discharge back to the referring hospital. RFA techniques involved the use of circumferential and focal ablation every three months until the BO was obliterated. Follow up endoscopy and biopsy of original BO length was performed 3 and 12 months after the last RFA session and annually thereafter unless there was evidence of recurrent disease.

Results 221 patients were included in the analysis. Median age was 67.72 (± 9.2) years, the male: female ratio was 4:1, median BO length was C2 (IQR:6) M6 (IQR:5), 59.8% had EMR prior to RFA. The proportion of patients having RFA with a previous histological diagnosis of LGD, HGD and intramucosal adenocarcinoma (IMC) was 22%, 44.8% and 32.2% respectively. The median number of RFA sessions was 3 (IQR:2). The rates of CRD and CRIM were 93.2% and 91.3%. Adjuvant ablation techniques were required in less than half of patients: APC 38% with median sessions of 1(1-4) and 1 excision biopsy session in 9.4% of patients. Severe

oesophagitis delayed treatment in 12.1% and hiatus hernia repair surgery was required in 1.3% of patients. Stricture rates were 5.4% requiring a median of 2 (IQR:6) dilatations and bleeding requiring hospital admission was 0.45%. RFA failed or was abandoned in 6.3% of patients. Metachronous lesions development during RFA treatment phase warranting further therapy in 14.9% patients: BO (2.7%) LGD (0.9%) HGD (5%) and IMC (6.3%). Metachronous lesions and BO developed after CRIM in 5% requiring further therapy and 0.9% developed invasive cancer. Median follow up post CRD/CRIM was 20.1 ($\pm$ 28.9) months. The survival rate over the 10-year study period was 94.6% with the majority of deaths due to unrelated disease.

Conclusions This 10-year data demonstrates that RFA therapy is effective in achieving eradication of BO and dysplasia with a favourable safety profile.

PTU-059 EMR FOR EARLY BARRETT'S NEOPLASIA: 15-YEARS OF EXPERIENCE FROM A UK TERTIARY REFERRAL CENTRE

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Introduction Endoscopic mucosal resection (EMR) is a widely used therapy for visible dysplastic lesions associated with Barrett's oesophagus (BO) and intramucosal adenocarcinoma (IMC). This study evaluates the efficacy and safety of a single high-volume UK tertiary centre with 15-years experience.

Methods A retrospective review was conducted of patients referred to Nottingham University Hospital between 2004–2019 for EMR with dysplastic BO visible lesions or IMC. The main outcomes were endoscopic resection success rates, long-term recurrence rates, complications during the treatment phase, surgery rates, median follow up prior to discharge from tertiary centre and tumour related deaths.

Results A total of 309 lesions were resected in 212 patients, median age was 68.1 $\pm$ 9.4 years, the male: female ratio was 5:1. Median BO length was C2(IQR:6) M4(IQR6) and 76.2% of lesions were at the 12 to 6 o'clock position. The most common lesion was Paris IIa (63.4%) and the median size was 10 mm (3–70). Most procedures were done under intravenous sedation as a day-case with the ligate and cut technique (93.2%) and the Duetto® multi-band mucosectomy device (88%). APC was used in addition to EMR in 5.4% of cases. Complete resection rates were 95.5%. Prophylactic measures to prevent bleeding were undertaken in 11.3%. Significant complications requiring admission and further treatment was 3.8%: bleeding (2.3%) and perforation (0.3%) with a median length of stay of 1 day (1–8). Stricture rates were 2.6% requiring a median of 1 (IQR:1.75) dilatation. The most commonly resected histological grade was IMC (48.1%), high grade dysplasia (37%) and low grade dysplasia (6.5%). The majority of tumours were stage T1a (86.7%). 22% of patients with confirmed adenocarcinoma had an indication for surgery and over half of these underwent surgery. Post EMR 72.5% had additional therapy for the remaining BO. After a median follow up of 32 months (IQR 43.6) metachronous lesions developed in 10.7% of patients. 95% of these were successfully treated with endoscopic or surgical therapy. The survival rate over the study period was 85.7%, with cause of death

attributed to unrelated disease (11.3%) and oesophageal adenocarcinoma (2.8%).

Conclusions This real-world data demonstrates that EMR is a minimally invasive, safe and effective treatment for Barrett's neoplasia that can be delivered in a day-case setting. It allows accurate local staging with the option of surgery for locally advanced disease.

Gastroduodenum

Orals

OTU-15 INTERMITTENT ADMINISTRATION OF PPI IS NOT INFERIOR TO INFUSION FOLLOWING ACUTE NON-VARICEAL UPPER GASTROINTESTINAL BLEEDING

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Introduction Despite the ubiquitous use of PPI therapy following acute upper gastrointestinal bleeding, the optimal dose and method of administration remains controversial.

Aim To determine whether PPI therapy delivered intermittently was non-inferior to continuous infusion; with regard to rebleeding, mortality, need for surgery and length of hospital stay, in acute upper gastrointestinal bleeding.

Study design Systematic Review and Meta-analysis

Method The MEDLINE database was search with a pre-defined search strategy. RCTs were considered eligible if they included a group treated with a stat dose of PPI followed by 8 mg/hr infusion for 72 hours compared to a group treated with an intermittent PPI regimen, following endoscopy for acute upper gastrointestinal bleeding.

Abstracts were screened against eh eligibility criteria. Two reviewers trained in critical appraisal reviewed the full text articles, extracted data and applied the GRADE tool to assess for risk of bias.

Data was synthesised using Mantel-Haenszel fixed-effects method. Heterogeneity was assessed with the I² statistic and examined as per the study protocol. Non-inferiority margins were pre-defined as 0.962, 0.934 and 0.914 for re-bleeding, need for surgery and mortality respectively. This was determined as 20% the difference from the odds ratio to the lower bound of a 2-sided 95% CI taken from infusion versus placebo meta-analysis.

Results 26 RCTs were included (n=4368). Significant heterogeneity was found for the outcome measure length of hospital stay and was not resolved by sub-group analysis or the use of a random-effects model. The risk of rebleeding was lower in the intermittent administration group compared to infusion, although was not statistically significant at either 72 hours (OR 1.03 95%CI 0.77–1.37) or 30 days (OR 1.05 95%CI 0.85–1.29). This revealed non-inferiority as per the pre-defined margin. The risk of needing surgery was higher in the intermittent group (OR 0.87 95%CI 0.63–1.20), whilst this was not statistically significant it did not meet the strict margin set to determine non-inferiority. The risk of mortality also favoured intermittent administration (OR 1.13 95%CI 0.81–1.58) and showed non-inferiority.

The overall risk of bias was high in 5, undetermined in 6 and low in 15 of the RCTs.