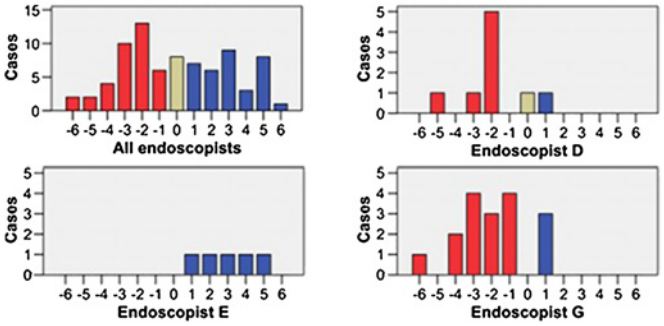
retrieved intact, where both endoscopic and measured sizes were recorded, and where the measured size was 5 to 15 mm were included. The direct measurement was subtracted from the visual estimate to give a size difference. The paired-sample t-test was used to test the null hypothesis that there was no difference between the mean sizes determined using the two methods for the group as a whole or for individual endoscopists.

Results In a total of 4285 procedures, 79 polyps met the criteria for inclusion. In 39 cases (49%), the difference between visual estimate and direct measurement was >2 mm. In ascertaining whether a polyp was above or below the 10 mm cut-off, visual estimate and direct measurement were discordant in 21 cases (27%). Despite these disparities, there was no overall tendency to over or underestimate polyp size for the group as a whole (mean difference 0.05 mm p=0.88). Of the 15 individual endoscopists, the two with the highest procedure counts both showed significant tendencies to underestimate polyp size, while a third showed significant overestimation.

Conclusion In clinical practice, visual estimation of polyp size is often inaccurate. Individual endoscopists may systematically over or underestimate polyp sizes. Direct measurement should be preferred in determining surveillance intervals.



Abstract PTU-204 Figure 1 Visual estimate—direct measurement (mm).

Abstract PTU-204 Table 1

Endoscopist	Polyp count	Mean difference (mm)	p Value
D	9	−1.9	0.01
E	5	3.0	0.01
G	17	−1.9	0.001

Competing interests None declared.

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PTU-205 PRE-MEDICATION WITH N-ACETYLCYSTEINE AND SIMETHICONE IMPROVES MUCOSAL VISUALISATION DURING GASTROSCOPY. A RANDOMISED, CONTROLLED, ENDOSCOPIST-BLINDED STUDY

doi:10.1136/gutjnl-2012-302514c.205

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Introduction The detection of early cancer during gastroscopy in the western world is poor. UK studies have demonstrated up to a 15% miss rate during diagnostic gastroscopy for early neoplasia. Early gastric cancer has a vastly superior survival rate and may be amenable to endoscopic resection. Diagnostic gastroscopy provides a unique opportunity to diagnose early gastric neoplasia, whatever the indication; however intraluminal mucus and saliva can obscure mucosal visualisation and potential detection of these lesions. The aim of this study was to investigate whether the use of a premedication solution containing the mucolytic agent N-acetylcysteine and the surfactant simethicone improves mucosal visualisation within an unselected UK diagnostic gastroscopy service.

Methods 75 consecutive patients were recruited from a single endoscopist's diagnostic gastroscopy list. These were randomised into three groups. 1: Standard control—clear fluids only for 6 h, NBM for 2 h. 2: Placebo control − standard control + 100 ml sterile water (given 20–30 min prior to gastroscopy). 3: Solution − standard control + 100 ml investigated solution (20–30 min prior). The endoscopist was blinded to patient preparation. Inadequate mucosal visualisation was measured by assessing fluid/mucus during gastroscopy that could not be suctioned and required flushing with water. The volume of flush, the site at which it was used and the procedure time were recorded.

Results All three groups showed no statistical difference for age, gender, priority or indication. The mean volume of flush required to obtain clear mucosa was significantly less in the *solution* group (12.1 ml (3.5–20.7)) compared to the *standard control* group (54.2 ml (39.2–69.2), p<0.00003) and the *placebo control* group (61.0 ml (44.6–77.4), p<0.00001). This significant difference was identified across all sites recorded in the upper GI tract, bar the OGJ where very little stubborn mucus was identified in all three groups. 61% of the *solution* group required no flushing at all, significantly more than the *standard control* group (13%, p<0.002) and the *placebo control* group (9%, p<0.0005). Mean procedure time was less in the *solution* group (8.5 min (7.1–9.9)) compared with the *standard control* (10.4 min (8.5–12.3), p<0.075) and *placebo control* groups (10.5 min (9.3–11.7), p<0.028). When patients on Barrett's surveillance are excluded this is more significant. *Solution* (7.2 min (6.2–8.2)) vs *standard control* (8.8 min (7.3–10.1), p<0.041) vs *placebo control* (10.2 min (8.6–11.8), p<0.0031).

Conclusion Premedication with NAC and simethicone is a low cost and well-tolerated method of dramatically improving visibility and procedure time during diagnostic gastroscopy. This simple intervention may improve detection of early gastric cancer.

Competing interests None declared.

PTU-206 STENT EXPULSION IN DIAGNOSTIC ERCP

doi:10.1136/gutjnl-2012-302514c.206

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Introduction Patients who have a high risk of developing pancreatic cancer (FPC) may have pre-malignant molecular changes and have been enrolled in a EUROPAC Study to conduct diagnostic ERCP for the collection of pancreatic juice.[1 2] These otherwise healthy patients have been identified as a higher risk group for ERCP-induced pancreatitis.[3] To reduce the incidence of post-ERCP pancreatitis a self-expelling plastic stent is routinely inserted into the pancreatic duct after ERCP. Stents have been shown to reduce pancreatitis in small cohorts but previous spontaneous intraluminal migration has been quoted at 67% for pancreatic stents.[4 5]

Methods Prospective observational study of 24 patients who underwent ERCP and secretin stimulated collection of pancreatic juice as part of the EUROPAC study. No pancreatic or biliary disease was present. In all patients a plastic stent was inserted (3 cm 5 Fr Zimmon, Cook Medical©) to avoid post-ERCP pancreatitis. Plain

abdominal x-ray was requested at 6 weeks post-ERCP to assess expulsion of the stent. Complications were recorded.

Results Of the 24 participants 16 were female. Abdominal x-rays were obtained in all patients at a median of 6 weeks (5—12 weeks) post-ERCP. Stents were retained in 2 (8.3%) patients. Spontaneous stent self-expulsion rate was therefore 91.7%. There were no other compliations. Hyperamylaseaemia occurred in 2 (8.3%) patients—unrelated to stent retention. Prior to routine stent insertion pancreatitis occurred in seven patients (46%), thus we have shown a reduction in ERCP-induced pancreatitis (p=0.003).

Conclusion In the absence of pancreatic and biliary disease stents will self-expel by 12 weeks. We have also shown that the deployment of small pancreatic stents is safe and well tolerated. Comparison with ERCP performed prior to routine stent placement has shown a significant reduction in the rate of pancreatitis. Both retained stents were removed without complication by a standard OGD.

Competing interests None declared.

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PTU-207 DETECTION OF DYSPLASIA ARISING IN BARRETT'S OESOPHAGUS IS ASSOCIATED WITH BETTER QUALITY ENDOSCOPIC TECHNIQUE

doi:10.1136/gutjnl-2012-302514c.207

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Introduction Barrett's columnar lined oesophagus (CLO) is the pre-malignant lesion to oesophageal adenocarcinoma (OAC). The presence of dysplasia, when diagnosed in surveillance programmes, is an important marker of risk of progression and an indication for endoscopic therapy. Barrett's surveillance should be undertaken with a minimum of four quadrant biopsies every 2 cm, with documentation of length of BE segment by Prague C/M criteria, yet adherence to this is variable. We aimed to assess the quality of Barrett's surveillance and effect on dysplasia detection.

Methods Prospective database of patients undergoing Barrett's surveillance over 3 year period at tertiary referral upper GI centre. Patients with a previous diagnosis of dysplasia/OAC were excluded. Endoscopists were separated into two groups; Group A—endoscopist has newly diagnosed patient with dysplasia over study period; Group B—endoscopist has not diagnosed patient with dysplasia at any time point. Analysis was by independent t-tests for continuous variables and chi-squared tests for categorical variables.

Results 395 patients with Barrett's CLO underwent endoscopy between 2007 and 2010. Of these 23/395 were diagnosed with dysplasia/OAC by group A endoscopists (n=14) vs none in Group B (n=32). Results are shown in Abstract PTU-207 table 1. There was no significant difference in patient's age, sex or length of Barrett's mucosa between the two groups. There was a significant difference in adherence to Seattle protocol four quadrant biopsies every 2 cm between the two groups. The detection rate of Specialised Intestinal Metaplasia (SIM) and documentation of length of Barrett's mucosa by Prague criteria were significantly higher in group A than group B. The use of High Resolution Endoscopy was similar between both groups.

Abstract PTU-207 Table 1 Study outcomes

	Group A (n=232)	Group B (n=163)	p Value
Age (±SD)	60.7 years (±13.8)	61.3 years (±15.1)	0.65
Sex (Male)	78% (181)	73% (119)	0.28
Length (±SEM)	3.3 cm (±0.17)	3.5 cm (±0.23)	0.38
Mean number biopsies per 2 cm	2.88 (±0.11)	2.32 (±0.13)	0.001
SIM detection	70% (163)	60% (97)	0.035
Prague documentation	12% (28)	4% (7)	0.007

Conclusion This study demonstrates that endoscopists who detect dysplasia arising in Barrett's CLO are more likely to undertake high quality Barrett's surveillance as evidenced by higher rates of SIM, adherence to Seattle protocol biopsy and documentation of length of Barrett's mucosa by Prague classification. This lends support to the argument that Barrett's surveillance should be centralised and undertaken on dedicated lists by trained endoscopists with a specialist interest, in order to maximise dysplasia detection rates. A prospective study is warranted.

Competing interests None declared.

PTU-208 LAPAROSCOPIC ASSISTED ENDOSCOPIC MUCOSAL RESECTION (LAP-EMR)

doi:10.1136/gutjnl-2012-302514c.208

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Introduction Successful colonic endoscopic mucosal resection (EMR) may be limited by several factors such as lesion size, position, access and complexity. We present a series of cases performed by Lap-EMR, which has the potential to overcome these difficulties, safely extending the application of EMR.

Methods Cases were identified from a prospectively held database recording patient demographics, polyp details, procedural complications and follow-up outcomes.

Results 13 patients (62% male) underwent Lap-EMR between September 2008 and 2011. Median patient age 64 years old. Median polyp size 35 mm (range 12—60 mm). 85% of lesions were located within the right colon and 31% at either the hepatic or splenic flexures. Three patients required laparoscopic resection either due to lesion extension into the appendix (n=2) or failure to lift with submucosal injection (n=1), where histology revealed a focus of adenocarcinoma. One patient underwent a laparoscopic right hemicolectomy due to post-polypectomy haemorrhage. No other peri-operative complications occured. The median post-operative hospital stay was 2 days (range 1—19 days). Small residual adenoma was identified in 3 out of 6 patients that have undergone 3-month follow-up to date, successfully treated with argon photocoagulation. No adenoma was identifed in these patients at follow-up 1 year later.

Conclusion Lap-EMR is safe and effective in treating lesions that would otherwise require segmental colonic resection. It provides the option of localised laparoscopic resection, which is of particular benefit for lesions visible at the appendiceal orifice where suitability for resection can be difficult to assess at diagnostic colonoscopy.

Competing interests None declared.