PWE-038 SIGNIFICANCE OF INCIDENTAL GASTROINTESTINAL LESION ON PET SCAN

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Introduction CT PET scan with fluorine-18 (F-18) fluorodeoxyglucose (FDG), is a increasingly common investigation in the evaluation and management of several malignant and non-malignant conditions. [1–3]. The usefulness of this technique in diagnosing incidental gastrointestinal lesions in literature is scanty. The purpose of this study was to assess the usefulness of PET scan in detecting incidental significant gastrointestinal disease.

Methods 696 PET scans were undertaken in Doncaster and Bassetlaw NHS Trust from 2009 to 2012. The principal indications were malignancy (lung 57%, GI tract 16%, head and neck 7%, haematological 4%, breast 2%) and nonmalignant 11%, unknown indication 3%. Of these, 44 cases (males 61%, median age 70) of incidental increased focal FDG uptake in gastrointestinal tract were detected. All patients underwent endoscopic procedure (Gastroscopy 10, Flexible sigmoidoscopy 10 and colonoscopy 24).

Results 21 of 44 (48%) had polyps (malignant n = 3, tubulovillous adenoma n = 11, hyperplastic n = 6, not retrieved n = 1). Other pathologies included vascular lesions, inflammation, and diverticular disease. 11 patients had a false positive PET scan. The overall correlation between PET scanning and Endoscopic findings were found to be 75%.

Conclusion PET scan is a valuable tool in localising incidental gastrointestinal pathology and a positive incidental finding merits further follow up endoscopy. The technique detected 6% new gastrointestinal lesions of which nearly half were polyps and two-thirds of these were malignant or adenomatous.

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Disclosure of Interest None Declared.

PWE-039 BURIED TREASURE: DEVELOPING AN ACCURATE, LOW COST ASSESSMENT OF FLEXIBLE SIGMOIDOSCOPY COMPLETION USING A HAND-HELD METAL DETECTOR

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Introduction Flexible sigmoidoscopy (FS) is a validated screening test to reduce the incidence of colorectal cancer. Bowel Scope screening is due to be implemented in the UK by 2016. There is variability in FS performance between operators; internal colonoscopic markings are unreliable for colonoscope position. Three dimensional magnetic imaging systems eg Scopeguide™ (Olympus) (SG) represent real time instrument position but are not widely available. Hand-held metal detectors (HHMD) can easily localise metal objects within the body. We assessed use of HHMD to confirm flexible endoscopic tip placement at the splenic flexure (SF).

Methods Adult subjects undergoing outpatient FS/colonoscopy were eligible. When examination was judged complete to the SF, an independent observer placed the HHMD at the left 10th intercostal space, anterior-axillary line (corresponding to the internal fixation of the colon at the SF). A positive result was recorded if the HHMD beeped. Position was then assessed by SG. If SF could not be reached, the patient was excluded. We evaluated 3 HHMD from different manufacturers. Patient experience was also studied. Ethical review NREC no. 13/LO/1065.

Results 44 subjects were recruited consecutively: mean age 64 years (range 17–74), 50% male (n = 22), mean BMI 27 kg/m^2 (range 20–41). Endoscopic confirmation of position at SF showed concordance with Scopeguide™ in 95% (42/44). Subjects 1–6 were examined using BDS200 (Black and Decker) HHMD. Despite promising results on training models, this proved insensitive in humans and was abandoned. For subjects 7–30 (n = 24) studied with GMS120 (Bosch), positive reading at the correct anatomical marking was recorded in 88% of examinations with SG validation. Of the 3 failures, 2 had a BMI of >30 kg/m^2. Use of an X-Ray screening trolley improved specificity. For subjects 31–44 (n = 14), a detector with increased sensitivity and directional capabilities, GPP (Garrett Metal Detectors, USA), was used on standard endoscopy trolleys. This showed concordance with SG in 100% of cases (n = 14) including 4 patients with BMI >30 kg/m^2. There was one true HHMD negative versus endoscopic assessment confirmed by 3D imaging. The technique was further validated by loss of signal on scope withdrawal. Patient questionnaires showed high acceptability.

Conclusion Use of HHMD in FS has shown excellent concordance with Scopeguide™ for colonoscope localisation at SF. Specificity and sensitivity are improved by adapting the specifications of the HHMD. A HHMD is an accurate and very cheap (£100 per unit) means of assuring quality during FS and further studies may confirm its role as a useful training tool especially during future service expansion.

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Disclosure of Interest None Declared.

PWE-040 COMFORT SCORING FOR ENDOSCOPIC PROCEDURES: WHO IS RIGHT – THE ENDOSCOPIST, THE NURSE OR THE PATIENT?

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Introduction Patient experience is a key aspect of endoscopy service quality. It is a Global Rating Scale (GRS) requirement to capture data on patient comfort. In our unit comfort scores are recorded by the endoscopist and by the endoscopy nurse using the Modified Gloucester Scale (1=no discomfort to 5=severe discomfort). Patients do not usually record a score. We suspected there may be differences in comfort assessment between these different groups, which may affect the value of this quality indicator.

Methods Comfort data was prospectively collected from patients undergoing an endoscopic procedure (either an esophagogastroduodenoscopy (OGD), colonoscopy or flexible sigmoidoscopy (FS)), over a three week period (April–May 2013). Endoscopist and nurse recorded scores were collected for each procedure

from the endoscopy documentation, and a patient comfort score was completed by the patient in the recovery area. The endoscopists and nurses were unaware that the comfort data was going to be studied. The wilcoxon matched pairs signal rank statistical test was used to look for comfort score differences between the groups.

Results A total of 139 procedures were included in the analysis. The OGD mean comfort scores were: endoscopist 1.3 (SEM, 0.1), nurse 1.6 (SEM, 0.1), patient 1.4 (SEM, 0.1). A significant difference was found between the endoscopist and nurse comfort scores ($p < 0.01$). No significant difference was found for FS comfort scores: endoscopist 1.8 (SEM, 0.1), nurse 1.6 (SEM, 0.1), and patient 1.8 (SEM, 0.2). For colonoscopy, the mean scores were: endoscopist 1.7 (SEM, 0.1), nurse 2.1 (SEM, 0.2), patient 1.6 (SEM, 0.2). A significant difference was found between patient and nurse comfort scores ($p < 0.01$), but not between the patient and endoscopist comfort scores.

Conclusion Endoscopy nurses gave a higher comfort score (more discomfort) than patients and endoscopists for OGD and colonoscopy, with no difference between the groups for FS comfort scores. These results suggest that the perception of procedure related discomfort differs between these three groups, particularly between endoscopists and nurses. As patient experience is a key aspect of endoscopy service quality, it is important to recognise that there are differences between the perceived comforts levels between the endoscopist, the nurse and the patient.

Disclosure of Interest None Declared.

PWE-041 MANAGEMENT OF LARGE COLONIC POLYPS IN A BOWEL CANCER SCREENING PROGRAMME

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Introduction Bowel cancer is the third most common cancer in the United Kingdom forming up to 13.6% of all newl1y diagnosed cancers (1). Bowel cancer screening colonoscopy allows early polyp detection at a curable stage. Complete resection and follow-up of large polyps is crucial to prevent malignant progression.

The aim of this study was to review the management of polyps with diameters ≥2 cm, particularly of sessile polyps, to assess the enbloc resection rates, completeness of resection using endoscopic mucosal resection (EMR) vs surgery and the incidence of malignant polyps.

Methods Patients were identified retrospectively from a regional bowel screening programme database. Details of index colonoscopy including polyp characteristics, method of resection and complications were recorded. Histology results were reviewed for all polyps. Outcomes from follow-up endoscopic surveillance were analysed.

Results One hundred and fifty-eight patients (102 males, 56 females, mean age 66.2 years) with polyps ≥2 cm were identified from 2182 screening colonoscopies from January 2010 to August 2013. Caecal intubation rate was 96.8% in this group.

Largest polyp size for each patient ranged from 20 to 60 mm (mean 26.6 mm). The incidence of adenocarcinoma was 11.9% (n = 19), all located within the left colon, with 12 requiring surgical resection.

One hundred thirty nine patients (n = 139) had 155 non-malignant large polyps, mostly tubulovillous or villous histology (n = 110, 79%).

Thirty-six patients had 37 sessile polyps which underwent primary resection by EMR (n = 26) or surgery (n = 11).

Polyp diameter was larger in the surgery group with mean polyp diameter of 40.4 vs. 28.0 mm ($p < 0.05$).

EMR enbloc resection rate was 11.5% (n = 3 out of 26). Completeness of excision was 38.4% (n = 10) at 3 months and 92.3% (n = 24) at 1 year. EMR complications included 1 perforation, 1 post polypectomy syndrome and 1 bleed.

Surgical resection included: anterior resection in 2, TEMS excision in 7 and right hemicolectomy in 3.

Conclusion Sessile polyps ≥2 cm are relatively uncommon in an asymptomatic bowel cancer screening programme (37 in 2182 colonoscopies). They can be successfully resected by EMR without recurrence in 92.3% at 1 year providing a 3 month site check is performed in all piecemeal polypectomies.

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PWE-042 ASSOCIATION BETWEEN MIDAZOLAM DOSE AND CAECAL INTUBATION RATE AT COLONOSCOPY

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Introduction Midazolam is a short acting benzodiazepine that is commonly used for sedation during colonoscopy. There is no standard dose of midazolam; however, British Society of Gastroenterology guidelines suggest a maximum of 5 mg with lower doses for elderly patients. Caecal intubation rate (CIR) is a commonly used performance indicator for colonoscopy. Data exploring the relationship between midazolam dose and CIR is limited.

Methods A retrospective cohort study of all patients who had undergone a colonoscopy at Milton Keynes General hospital between January 2010 and December 2012. Patients were identified from the Endoscopy Unit database and their records were reviewed. Patient details, midazolam dose and depth of insertion were extracted into a standardised form. Caecal intubation was defined as insertion of the colonoscope to a point proximal to the ileocaecal valve so that the entire caecum could be visualised.

Results 6200 patients were included for analysis. The median age was 62 years and 49.4% were male. The mean midazolam dose was 1.9 mg. 1004 patients had a low dose of midazolam (<2 mg), 4618 a standard dose (2 mg) and 578 a high dose (>2 mg). The CIR in the low dose cohort was 83.6%, in the standard dose cohort was 91.3% and in the high dose cohort was 78.7%. Procedural discomfort was significantly greater in the high dose cohort. When patients with poor bowel preparation were removed from the cohort (n = 5534), CIR was 85.2% in the low dose cohort vs. 92.1% in the standard dose cohort. Patients who received doses of midazolam <2 mg or > 2 mg

Abstract PWE-042 Table 1

Midazolam dose	<2 mg	2 mg	>2 mg
N	1004 (16.2)	4618 (74.5)	578 (9.3)
Caecum positively identified	839	4216	455
CIR	83.6%	91.3%	78.7%
P-value	<0.001	–	<0.001