

was relatively uncommon and one third required a stoma at surgery. Variation between Trusts in coding quality is inevitable but the data suggest 1 in 5 institutions may lack provision for SEMS.

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**PTU-214 AN IN-VITRO STUDY TO ASSESS, AND IMPROVE, THE ACCURACY OF COLONIC POLYP SIZING AMONG NURSE ENDOSCOPISTS, TRAINEES AND CONSULTANT GASTROENTEROLOGISTS**

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**Introduction** Knowing if polyps are larger than 10mm is critical when determining colonoscopic surveillance strategies. Judging polyp size from the endoscopic view alone becomes important if polyps are not retrieved intact. Strategies based on deliberately discarding small polyps rely on accurate discrimination of polyp size but little is known about endoscopists ability to make this judgement. Our aim is to assess the accuracy of polyp size estimation using a novel in vitro model, comparing different professional groups and use of accessories to improve estimates.

**Methods** Nine endoscopists (3 consultants, 3 trainees and 3 nurse endoscopists) judged the size of 15 "polyps" made from modelling clay (size range 6–36 mm) placed inside a colonoscopy training model (Koken Co Ltd, Tokyo). Polyps of different sizes were presented in random order. Size estimates were made using endoscopic visual assessment alone or by comparing the polyp to biopsy forceps or a 10 mm snare. A degree of confidence for each guess was recorded.

**Results** Consultants and trainees were significantly better than nurse endoscopists at judging whether the model polyps were larger or smaller than 10 mm (91.8% vs 79.2%  $p<0.05$ ). Overall, visual assessment alone had an accuracy of 78.8%. Inaccuracy was largely due to underestimation of size. Use of accessories improved discrimination around the 10 mm threshold ( $p<0.05$ ). The snare produced slightly better accuracy (87.9%) than forceps (83.8%) (NS). All professional groups expressed similar degrees of confidence in their estimates.

**Conclusion** In this model, medical endoscopists were better than nurse endoscopists in assessing the size of polyps. This may be because nurses in our study do not routinely perform polypectomy whereas doctors have all had the opportunity to learn from comparing the size of resected polyps with their original endoscopic assessment. Use of biopsy forceps or a snare improved size estimation and these may be helpful tools when teaching this important aspect of polyp assessment in vivo.

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**PTU-215 ASSESSING COMFORT SCORES FOR CO2 INSUFFLATION AS COMPARED TO AIR IN FLEXIBLE SIGMOIDOSCOPY-A PROSPECTIVE AUDIT**

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**Introduction** Patients experience of discomfort with Air insufflation during flexible sigmoidoscopy (FS) limits compliance and thus

success of the procedure. There has been only one study<sup>1</sup> which has shown that CO<sub>2</sub> insufflation reduces discomfort as compared to Air in FS. Recently, we have been using CO<sub>2</sub> insufflation for routine FS. We therefore conducted a prospective audit comparing the two modalities and to assess whether the use of CO<sub>2</sub> during FS reduces discomfort both during and after the procedure using a standardised scoring system.

**Methods** 200 consecutive patients undergoing FS, commonly for rectal bleeding, altered bowel habit and abdominal pain were selected to either Air or CO<sub>2</sub> insufflation. There were 100 patients (42 males) in the CO<sub>2</sub> group and 100 patients (51 males) in the Air group. The ages ranged from 19 to 92 years in both the groups. Any history of previous abdominal surgery was also noted. Patients were asked to grade discomfort during the procedure, post procedure in the recovery room and on discharge. We used the standardised comfort score of Wong and Baker (0=no discomfort and 10=extreme discomfort). Abdominal bloating was also assessed verbally after the procedure. Statistical analysis was done using Prism software.

**Results** The mean comfort scores for CO<sub>2</sub> compared to Air during the procedure was 1.02 vs 1.93 ( $p=0.0006$ ), postprocedure 0.54 vs 1.12 ( $p=0.002$ ) and on discharge 0.32 vs 0.8 ( $p=0.0008$ ) respectively. Abdominal bloating appeared to be less with CO<sub>2</sub> as compared to Air on verbal questioning. No differences in comfort scores were observed with a history of previous abdominal surgery.

**Conclusion** This study has shown that CO<sub>2</sub> insufflation reduces discomfort as compared to Air during FS, both during and after the procedure. Abdominal bloating was also significantly reduced. The use of CO<sub>2</sub> will contribute to better public acceptance for FS, in particular for FS screening in colorectal cancer.

**Competing interests** None declared.

**REFERENCE**

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**PTU-216 A SURVEY OF PATIENTS ATTITUDES TO COLONOSCOPY DEMONSTRATES HIGH VALUE FOR ENDOSCOPIST INTERACTION BUT NOT THE SINGLE SEX ENVIRONMENT**

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**Introduction** Understanding patient attitudes to their medical experience is essential for optimising care and use of resources. This includes their interaction with their health practitioner and their healthcare environment. This study was undertaken to determine patient's preferences and expectations for outpatient colonoscopy, a common gastrointestinal procedure for which there is limited such data from the UK.

**Methods** Unselected patients attending for elective colonoscopy at a large District General Hospital on randomly selected days in October and November 2011 were invited to participate. Patients independently completed a composite, validated dedicated endoscopy questionnaire, with Likert scale anxiety-related and single sex environment questions and a 15-point preference (ranking) scale of aspects of endoscopy care that were considered most important (1) to least important (15) as contributing to a satisfactory experience. Qualitative and pilot studies were performed initially to confirm validity and reliability in the local population.

**Results** 217 out of 225 patients agreed to participate (96.4%); male (49%) and female (51%), with mean age of 58 years (range 16–87 years). Mild to moderate anxiety was recorded in over 70% of

patients, commonly with respect to anticipation of pain or the results of the procedure. The ranked preference scores suggested that interaction with the endoscopist, including technical skill of the endoscopist, discomfort during the procedure, manner of the endoscopist and the pre-and post procedure discussions were considered as most important to patients. A majority of patients (55%) preferred the endoscopist to explain the findings, but only 26% specified that they needed to explain the procedure itself. Environmental factors were considered of relatively low importance, including the single sex environment (least important), noise levels, explanation of delay, privacy and intra department waiting time. A majority (82.1%) thought that having a single sex environment was minimally/not important, and only 14.3% of patients were prepared to have a delayed appointment for a single sex environment.

**Conclusion** Patients undergoing colonoscopy appear to highly prioritise aspects of care relating to the interaction with the endoscopist and the procedure itself. Environment factors are considered to have much less value and specifically having a single sex environment. These findings may assist in service redesign around patient-centred care and patients priorities, and the development of patient satisfaction surveys in endoscopy.

**Competing interests** None declared.

#### PTU-217 OESOPHAGO-GASTRODUODENOSCOPY YIELD IN PATIENTS WITH COELIAC DISEASE PRESENTING WITH IRON DEFICIENCY ANAEMIA: A RE-AUDIT

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**Introduction** In our previous audit it was shown that the majority of patients with iron-deficiency anaemia (IDA) suspected of having coeliac disease (CD) underwent oesophago-gastroduodenoscopy (OGD) and duodenal biopsy as a routine procedure, but only 0.2% patients had serum coeliac screening prior to OGD. It was suggested that routine duodenal biopsy could be avoided by routine serum coeliac screening, as recommended by the British Society of Gastroenterology (BSG). The purpose of this current study was to complete the audit cycle.

**Methods** Data related to histology and serum coeliac screen of all patients with IDA undergoing OGD in a District General Hospital from January 1st to October 31st 2011 were evaluated. Data were extracted from Gastrointestinal reporting tool® and analysed in Microsoft Excel® spreadsheet.

**Results** A total of 732 patients with IDA were referred for OGD. There were 282 male and 450 female patients with a mean age of 69.1 years. Duodenal biopsy was performed in 610 patients (83.3%) at the time of OGD; CD was confirmed histopathologically in 17 patients (2.8%). Duodenal biopsy was normal in 593 patients (97.2 %). A total of 122 patients (16.7 %) had serum coeliac screening prior to OGD; 7 cases (5.7%) were positive.

**Conclusion** Completing the audit cycle it was found that the majority (83.3%) of patients with suspected CD presenting with IDA continue to undergo OGD and duodenal biopsy as a routine procedure. CD was confirmed histopathologically in 2.8% of cases (compared with 2.52% previously). Of note, 16.7% of patients had serum coeliac screening prior to OGD, compared with 0.2% previously. While this represents an improvement in practice the need for wider use of coeliac screening appears to remain

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#### PTU-218 PILOT RANDOMISED CROSS-OVER STUDY COMPARING THE EFFICACY OF TRANSNASAL ENDOSHEATH® TO STANDARD ENDOSCOPY TO DETECT BARRETT'S OESOPHAGUS

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**Introduction** A less expensive and safer alternative to standard sedated endoscopy (SE) needs to be considered as a screening method to detect Barrett's oesophagus (BE) in the population, with the aim of reducing the mortality associated with oesophageal adenocarcinoma. The Endosheath® transnasal oesophagoscope (TNE) can potentially offer a new alternative to conventional standard endoscopy in diagnosing Barrett's oesophagus. The Endosheath® technology uses a sterile, disposable sheath which covers the ultra thin flexible oesophagoscope and isolates it from the patient. The oesophagoscope is placed in a new sheath prior to each procedure which obviates the need for machine washing and permits a quick turnaround. **Aim:** A pilot study to evaluate the efficacy of TNE in diagnosing BE compared with SE and to assess patient acceptability of TNE.

**Methods** Patients referred for surveillance endoscopy for BE or a clinically indicated routine endoscopy were recruited to both TNE and SE in a randomised cross-over design. The interval between the procedures was at least 6 weeks. TNE findings of endoscopic BE, and presence of intestinal metaplasia (IM) on the biopsy samples were compared against SE, which was used as gold standard. A 10-point visual analogue scale (0 represented the worst experience and 10 the best experience) to assess the post-endoscopy experience and a single question addressing preference for endoscopy type were used to measure patient acceptability of the procedures.

**Results** 15 patients completed the study, 10 males and 5 females with a mean age of 62.85 years (range 50–76 years). Nine of which were BE surveillance patients and six were referred for a clinically indicated routine endoscopy. Eight patients were randomised to the SE as the first procedure. All the 11 patients with an endoscopic diagnosis of BE on SE were accurately identified with the TNE (sensitivity 100%; specificity 100%). Biopsies were taken in all the 11 Barrett's segments except in one <1 cm segment with TNE due to technical difficulty. IM was detected in 9 out of the 11 patients with BE on SE compared to 7 out of the 11 patients with BE on TNE (sensitivity 77.8%; specificity 100%). Patients reported significantly better experiences of endoscopy with TNE with scores of 6.9 ( $\pm 0.81$  SEM) compared with 3.7 ( $\pm 0.37$  SEM) for SE ( $p=0.001$ ). Eight patients (53%) reported a preference for TNE compared with 1 (7%) for SE.

**Conclusion** Endosheath® transnasal oesophagoscope is accurate in diagnosing endoscopic BE and can detect IM. It is better tolerated and preferred by patients, making it a useful screening tool for BE with potential for use in primary care.

**Competing interests** None declared.

#### PTU-219 INTRAOPERATIVE ENDOSCOPY: THE FIRST SINGLE-CENTRE UK EXPERIENCE

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**Introduction** Intra-operative enteroscopy (IOE) is the gold standard for examination of the small bowel. However, with the invention of