

20–50). Snare polypectomy was performed for all pedunculated polyps. The colonoscopists were able to remove the polyp enbloc in 87.7% of patient (n=43) while in the rest polyps were removed piecemeal (n=6). There was no reported perforation or major bleeding requiring blood transfusion. Only 4 (8.1%) patients had minor bleeding which was successfully controlled during the procedure and no further intervention was required. Histologically, pedunculated polyps were 93.9 % villous or tubulovillous (n=46), 4.1% hamartomatous (n=2) and 2% benign leiomyoma (n=1). In the group of patient who had sessile polyp, 10 were male while rest were female. There mean age was 71.93 years. The average size of the polyp was 33.67 mm (range: 20–55). Endoscopic mucosal resection was performed in all of them. The polyp was removed enbloc in only three cases (20%) while in rest it was removed piecemeal (n=12). There was no reported perforation or blood loss requiring blood transfusion. Only 1 (6.66%) of the patient had a minor bleeding which was controlled during the procedure. All 15 of sessile polyp were histological either villous or tubulovillous.

Conclusion The complication rates of colonoscopic removal of large pedunculated and sessile polyps in a district general hospital are very low as evident from the data presented. Hence these procedures when performed by skilled colonoscopists are safe and can save the patient from major surgical procedures.

Competing interests None declared.

PMO-187 A MULTI-CENTRE AUDIT OF 16 064 COLONOSCOPIES LOOKING AT CAECAEAL INTUBATION RATES, OVER A 2-YEAR PERIOD. NON-GI OPERATORS AND THOSE DOING <100 P.A. NEED TO IMPROVE OR STOP PERFORMING COLONOSCOPY

doi:10.1136/gutjnl-2012-302514b.187

^{1,2}A M Verma,* ¹N McGrath, ³P Bennett, ²J de Caestecker, ¹A Dixon, ³J Eaden, ²P Wurm, ¹A P Chilton. ¹Department of Gastroenterology, Kettering General Hospital NHS Foundation Trust, Kettering, UK; ²Department of Gastroenterology, University Hospitals Leicester NHS Trust, Leicester, UK; ³Department of Gastroenterology, University Hospital Coventry NHS Trust, Coventry, UK

Introduction Colonoscopy is the gold standard assessment for large bowel mucosal pathology, but a complete examination is an essential requirement. The first national colonoscopy audit carried out in 1999 demonstrated caecal intubation rates (CIRs) of 56.9%, which the authors described as “unacceptably low”. As a result the Joint Advisory Group on Gastrointestinal endoscopy (JAG) launched a programme of continuous quality improvement by standardising training, peer review and audit. JAG recommends practitioners undertake at least 100 procedures per annum with target CIRs of 90%. This current audit provides an assessment of performance against these quality standards.

Methods Data were collected from all procedures undertaken in 2008–2009 from six hospitals across three English regions. The data included grade and specialism of operator, number of procedures and CIRs. Caecal intubation was recorded if reports positively documented reaching defined landmarks.

Results 16 064 colonoscopies performed with a CIR of 90.57% (95% CI 90.11% to 91.01%). Operators doing 100+ procedures per annum. CIR=91.76% (95% CI 91.24% to 92.25%). **Operators doing <100 procedures per annum=87.77% (95% CI 86.82% to 88.67%)**. Gastroenterologists=91.01% (95% CI 90.32% to 91.70%). Surgeons=91.03% (95% CI 90.27% to 91.79%). **Others practitioners=81.51% (95% CI 78.79% to 84.22%)**. Bowel cancer screening colonoscopies=97.71% (95% CI 97.07% to 98.34%). Non-screening colonoscopies=88.31% (95% CI 87.68% to 88.94%).

Conclusion This audit of 16 064 colonoscopies over three regions demonstrates aggregated achievement of the CIR quality standard,

which is evidence of the effects of improvements in training and the implementation of standards introduced by JAG since the 1999 national audit of colonoscopy. There is however a significant performance gap when comparing BCSP colonoscopists with non-screening colonoscopists and the CIR of >90% is supported by the volume of BCS colonoscopy work load (BCSP colonoscopies should be considered the new “gold standard”). Endoscopists performing low volume colonoscopy (<100 procedures per annum) and non-GI practitioners have a CIR (including the 95% CIs) of <90%. Endoscopists and/or non-GI practitioners with low volume practice who does not meet the quality standards should engage in skills augmentation plus further training and increase the numbers of procedures performed with local mentorship, **or stop performing colonoscopy**.

Competing interests None declared.

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PMO-188 GENDER DIFFERENCES: ANALYSIS OF 5162 COLONOSCOPIES OVER 4 YEARS REVEALS HIGHER CAECAEAL INTUBATION RATES IN MALE PATIENTS

doi:10.1136/gutjnl-2012-302514b.188

A M Verma,* N McGrath, A Dixon, A P Chilton. *Department of Gastroenterology, Kettering General Hospital NHS Foundation Trust, Kettering, UK*

Introduction Colonoscopy is the gold standard assessment for large bowel mucosal pathology, but a complete examination is an essential requirement. Higher caecal intubation rates in male patients vs female patients have been shown in the literature.^{1–3} Several theories are mooted for this difference such as female patients undergoing previous hysterectomy,¹ low BMI² and the suggestion that female patients have longer colons.³ The published papers on this subject are mostly over 10 years old and colonoscopy practice has changed dramatically over the last decade in the UK. The Joint Advisory Group on Gastrointestinal endoscopy (JAG) has run a programme of continuous quality improvement by standardising training, peer review and audit. The Bowel Cancer Screening Programme (BCSP) has been rolled out since 2006. This large audit revisits this subject to see if the improvements in colonoscopic practice have evened out the differences.

Methods Data were collected from all colonoscopies undertaken (symptomatic, surveillance and BCSP procedures) at Kettering General Hospital between 1 July 2007 and 30 June 2011.

Results

	Number of colonoscopies	Reached caecum/ TI/anastomosis	Failed	CIR (%)	95% CI
Females	2440	2138	302	87.62	86.26 to 88.87
Males	2772	2524	198	92.73	91.69 to 93.64
Total	5162	4662	500	90.31	89.48 to 91.09

Conclusion Analysis of the data reveals significant differences in CIR between female and male patients (87.62% vs 92.73% (p≤0.0001) NNT 19.57). This large retrospective audit shows despite the improvements in training and practice overseen by JAG and the introduction of BCSP, significant gender differences remain in CIR. Perhaps it would be prudent for endoscopy units to delineate these differences in gender and the potential ramifications (missed polyps etc) when giving information and consenting patients for

colonoscopy. Further analysis of the reasons resulting in gender differences in CIR and the impact on morbidity and mortality due to missed pathology would be desirable.

Competing interests None declared.

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PMO-189 ANALYSIS OF FACTORS PREDICTIVE OF DEPTH OF INSERTION DURING DOUBLE BALLOON ENTEROSCOPY

doi:10.1136/gutjnl-2012-302514b.189

A Murino,* M Nakamura, E J Despott, C Fraser. *The Wolfson Unit for Endoscopy, St Mark's Hospital and Academic Institute, Imperial College, London, UK*

Introduction For many decades the small bowel (SB) has represented a blind area for endoscopists, until the recent introduction of double balloon enteroscopy (DBE) allowing SB investigation and therapy. At times achieving deep insertion can be particularly challenging. The aim of this study was to determine factors that might influence depth of insertion during DBE.

Methods We retrospectively analysed 569 cases referred to our institute, a UK tertiary referral centre for DBE from February 2005 to October 2011. The maximum depth of insertion (MDI) was measured as described by May *et al.* History of abdomino-pelvic surgery, route of insertion, type of enteroscope, age, sedation or GA used and gender were considered influencing factors (IFs). Procedures were then divided into several subgroups according to the numbers IFs identified.

Results Out of 569 procedures reviewed, 399 cases were selected for this study (F:M=159:240, mean age: 56 years). The mean MDI was 212 cm. 274 procedures were approached via the oral route, P5 and T5 enteroscopes were used in 189 and 210 procedures respectively and 146 patients had a history of abdomino-pelvic surgery. MDI was significantly affected by history of surgery (p

Conclusion Our findings suggest that the MDI is significantly influenced by a history of abdomino-pelvic surgery, route of insertion and type of enteroscope used. Moreover the MDI tends to decrease if more than one factor is present. Based on these results, an estimation of likely insertion depth can be made prior to DBE and an appropriate strategy to achieve a successful outcome considered.

Competing interests A Murino: Grant/Research Support from: Research Grant in deep enteroscopy released by Imotec/Fujinon, M Nakamura: None declared, E Despott: None declared, C Fraser: None declared.

PMO-190 INVESTIGATING THE PREVALENCE AND CAUSE OF IRON DEFICIENCY IN A FAECAL OCCULT BLOOD POSITIVE, COLONOSCOPY NEGATIVE PATIENTS FROM THE UK COLORECTAL CANCER SCREENING PROGRAMME

doi:10.1136/gutjnl-2012-302514b.190

A Murino,* E J Despott, A Postgate, A O'Rourke, C Fraser. *The Wolfson Unit for Endoscopy, St Mark's Hospital and Academic Institute, Imperial College, London, UK*

Introduction Faecal occult blood test (FOBT) is a simple test, which detects small amounts of blood released from the gastrointestinal tract. Recently it has been adopted as discriminator test for the BCSP in the UK. A colonoscopy is strongly recommended when FOBT results test positive. At present there are no plans for further investigation of the source of blood loss in patients who have had a

negative colonoscopy. The aim of this study was to identify the proportion of UK colorectal cancer screening patients with a positive FOBT and negative colonoscopy affected by iron deficiency (ID) or iron deficiency anaemia (IDA) and then to detect any source of blood loss in the upper GI tract or small bowel.

Methods 100 patients with a positive FOBT referred for a BCSP were prospectively enrolled in the study between January 2008 and September 2010. A full blood count and ferritin were acquired after a negative colonoscopy. Patients with identified ID or IDA were invited to have an oesophagogastroduodenoscopy (OGD) and small bowel capsule endoscopy (SBCE).

Results 100 patients (male: 70, female: 30) with a positive FOBT referred to our tertiary centre had a negative colonoscopy. 19 patients were excluded due to vegetarianism. Of the remaining 81 patients, 1 had ID and 3 had IDA (4.9%) and therefore underwent OGD and SBCE. In 2/4 patients both procedures were normal. Three superficial gastric antral ulcers and a few gastric erosions were diagnosed respectively in the other two patients (2.4%), while their SBCEs were negative. Both patients had a history of aspirin or NSAID usage.

Conclusion In this cohort of FOBT positive and colonoscopy negative patients from the UK BCSP, we found that the prevalence of ID and IDA was 4.9%. Of these four patients only 2 (2.4%) had positive findings when further investigated, but these could be explained by medication. If these patients are excluded from the analysis then OGD and SBCE post negative colonoscopy in FOBT positive patients cannot be recommended.

Competing interests None declared.

PMO-191 MISSED UPPER GASTROINTESTINAL CANCER AT ENDOSCOPY: CAN PERFORMANCE BE IMPROVED BY SPECIALISTS?

doi:10.1136/gutjnl-2012-302514b.191

¹A T Vesey,* ²C D Auld, ²D McCole. ¹General Surgery, NHS Greater Glasgow and Clyde, Glasgow, UK; ²General Surgery, NHS Dumfries and Galloway, Dumfries, UK

Introduction Upper gastrointestinal (UGI) cancer continues to have a very poor prognosis; it tends to present late and at an advanced stage. The best hope for long term survival therefore remains early diagnosis with radical treatment. There has been increasing interest recently in measuring the accuracy of UGI endoscopy in diagnosing cancer. Depending on the population studied published missed rates vary between 3% and 20%. We hypothesised that concentrating the practice of UGI endoscopy into specialist hands would reduce the rate of missed diagnosis.

Methods This is a historical cohort study. In 2001 our institution employed an UGI nurse endoscopist and concentrated the practise of UGI endoscopy into her hands and those of the only UGI surgeon in the hospital. Rates of missed cancer diagnosis were calculated for the 7 years up to and subsequent to 2001 by cross-referencing the regional electronic endoscopy reporting system and the regional UGI cancer registry. As in other similar studies, we defined a definitely missed cancer as one diagnosed within 1 year of previous endoscopy and a possibly missed cancer as one diagnosed between 1 and 3 years of previous endoscopy. Missed diagnoses were sub-classified as being due to endoscopist error, pathologist error or follow-up error.

Results From 1994 to 2001 a total of 13 589 UGI endoscopies were performed—of a total of 305 UGI cancers diagnosed in this time 30 (10%) were missed (22 (7%) definitely missed and 8 (3%) possibly missed). From 2002 to 2009 a total of 16 503 UGI endoscopies were performed—of a total of 344 UGI cancers diagnosed in this time 20 (6%) were missed (11 (3.2%) definitely missed and 9 (2.6%) possibly missed). There was a statistically significant (p<0.05) difference between definite miss rates but between total miss rates. The