

Methods We examined the factors that might potentially influence patient satisfaction with their colonoscopic procedure using a pre test questionnaire [self reported apprehension, the reason for any concerns, expectations of pain (represented as a visual analogue scale of 0–10, 0=no pain and 10=maximum pain) and previous experience of colonoscopy]. Data collected during the test itself (patient self reported pain scores collected immediately post procedure and sedation doses used) were compared with a post test questionnaire of overall satisfaction and willingness to undergo the test again in the future if required.

Results 448 patients participated (287 females and 201 males). Age range 18–88 years and mean age was 58 years. The mean anticipation of pain on the visual analogue scale was 2.61. The most common causes of anxiety were “fear of cancer?” (n=70) followed by “pain” (n=35), “tear/perforation” (n=14) and “previous adverse endoscopic experiences” (n=9). The mean actual patient reported pain scores were 3.14. 63 patients (43 females and 19 males) was very worried before test and their average anticipated pain score (AtPS) was 4.19 (total average 2.61) and the actual pain score (AcPS) 3.48 (average 3.14). 225 patients were worried before test and their AtPS 2.95 and AcPS 3.37. The patients who were not worried, their AtPS were 1.74 and AcPS 2.8. Patients (n=32) whose expected pre test pain scores were between 7 and 10 on visual analogue scale expressed higher levels of satisfaction with their procedures than those with lower anticipated pain scores (0–6) [93.7% vs 73.8%]. Patients who had a pre test apprehension score >7 were more agreeable to undergo the test again than those with score <6.

Conclusion Patient satisfaction is strongly correlated with patient comfort. Patients’ appreciating that colonoscopy is a potentially painful procedure report a higher level of satisfaction and acceptance of the sedation offered. The importance appropriate preparation of the patient should not be underestimated.

Competing interests None declared.

REFERENCE

1. Global Rating Scale.

Abstract PMO-220 Table 1

Groups	Total number, 488	Anticipated pain score (A 2.61)	Actual pain score (A 3.14)	Pt satisfaction a–c (a=very, c=none) %
(A) Very worried	63	4.19	3.48	a=87 b=8 c=5
(B) Worried	225	2.95	3.37	a=82 b=14 c=4
(C) Not worried	200	1.74	2.8	a=78 b=18 c=4

PMO-221 APPROPRIATENESS OF FOLLOW-UP INDICATIONS AFTER COLONIC POLYP REMOVAL: AUDIT OF CURRENT PRACTICE IN A DISTRICT GENERAL HOSPITAL

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Introduction Demand for colonoscopy is increasing worldwide due to the implementation of colon cancer screening programmes. According to current guidelines, the indication and timing for surveillance colonoscopy after removal of colonic adenomas are

based on a risk estimation taking into account number and size of adenomas removed. In this study we audited the compliance with guidelines in the current practice of two district general hospital endoscopy services.

Methods The study was conducted at the King George and Queen’s Hospitals in Essex (UK). All colonoscopies from June to August 2011 were retrospectively reviewed. All polyp-finding colonoscopies were selected and relevant data were retrieved from electronic records, patient notes and histopathology reports. The appropriate follow-up indication was established according to current British Society of Gastroenterology (BSG) guidelines, taking into account previous risk status, number and size of colonic adenomas. Finally the ideal indication was compared with the actual follow-up indication given to each patient.

Results A total of 1438 colonoscopies were reviewed. Polyps were found and removed in 314 (22%). Only 205 were included in further analysis. The remaining 109 were excluded because further follow-up indication was based on different issues (12 IBD, 19 colon cancers, 34 technical problems, 21 unknown previous risk status, 23 referred for surgery). Of the included 205, 34 patients were given an appointment in 1 year (high risk), one in 2 years, 28 in 3 years (intermediate risk), 142 in 5 years or no follow-up (low risk). The follow-up indication was compliant with BSG guidelines in 136 (66.3%) cases. In 33 (16.1%) patients the follow-up appointment was scheduled too early and in 4 (2%) too late. The remaining 32 (15.6%) were booked for later decision in outpatient clinic. They belonged to the intermediate (No.=28) and high (No.=4) risk groups. Overall, in the 3-months period, 24 inappropriate colonoscopies and 32 extra outpatient appointments were scheduled for the following year alone. In a further step we reviewed 154 histopathology results of benign polyps and found that 22 (14.3%) more patients could have had their follow-up appointment modified on the basis of the final histopathology finding (2 earlier and 20 later).

Conclusion The overall compliance with BSG guidelines in the evaluated period was 66.3% which is higher to that reported in previous studies. Nevertheless in only 3 months a significant inappropriate workload for endoscopy and outpatient clinics was generated. A more careful compliance with guidelines and a review of histopathology results could save a significant number of unnecessary colonoscopies and outpatient appointments.

Competing interests None declared.

PMO-222 PRE-OPERATIVE ENDOSCOPY IN BARIATRIC SURGERY PATIENTS

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Introduction Some authors suggest the routine use of endoscopy in patients undergoing bariatric surgery in order to detect asymptomatic hiatal hernias, oesophagitis, and gastric ulcers. Our unit uses selective endoscopy. The current study analyses the indications and findings of upper GI endoscopy in pre-operative bariatric surgery patients.

Methods A retrospective analysis of all bariatric surgery patients referred for Upper GI endoscopy at Charing Cross Hospital from 1 January 2009 to 30 October 2011. During this time period, 1093 bariatric surgery cases were performed. These consisted of 542 laparoscopic gastric bypasses, 220 laparoscopic gastric band insertions, 223 laparoscopic sleeve gastrectomies and 108 revisional bariatric procedures. The Endoscopy units’ electronic database of oesophagogastroduodenoscopies (OGDs) performed in that time period was analysed to determine how many bariatric surgery

patients underwent OGDs pre-operatively and for what indication and with what result. Further sub-analysis was performed for each operation type.

Results 147 OGDs were done on a total of 116 bariatric surgical patients, with 23 patients having had more than one OGD each. Of these 147 OGDs 44 were pre-operative. 13 (29.5%) OGD referrals were made to investigate anaemia, 12 (27.3%) for pre-surgical screening to investigate existing symptoms of gastric ulceration, and 9 (20.5%) to investigate abdominal pain. The remaining referrals were made for interventional gastric balloon insertions and removals (6=13.6%) and to investigate symptoms of reflux (3=6.8%) and dysphagia (1=2.3%). The majority of patients (50%) were referred prior to having a roux-en-y gastric bypass operation. Most of the pre-operative OGD findings were normal (16=36.4%), but gastritis (6=13.6%), hiatal hernias (6=13.6%), gastric ulceration (2=4.5%), oesophagitis (1=2.3%) and duodenitis (1=2.3%) were noted. Of the 13 patients referred with anaemia, 9 (69.2%) had normal mucosa on OGD, but of the 12 patients who had pre-surgical screening 7 (58.3%) were found to have abnormalities, including a fundic gland polyp and antral erosions.

Conclusion Using a selective referral process, only 4% of all bariatric surgery cases performed required preoperative endoscopy. The commonest indication for OGD preoperatively was anaemia and the commonest pathology found was mucosal inflammation (gastritis, oesophagitis and duodenitis).

Competing interests None declared.

PMO-223 TATTOOING OF SUSPICIOUS COLONIC LESIONS AT COLONOSCOPY: IS ADHERENCE TO LOCAL PROTOCOL BETTER IF IDENTIFIED THROUGH THE BOWEL CANCER SCREENING PROGRAMME?

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Introduction The Joint Advisory Group on gastrointestinal endoscopy and the National Bowel Cancer Screening Programme (BCSP) have published guidelines on the tattooing of malignant and suspicious lesions at colonoscopy. Our endoscopy department has a local protocol for the tattooing of these lesions based on these guidelines. The BCSP has led to an increase in the number of colonoscopies performed and the number of lesions identified.

Aim To assess adherence to a local protocol in a single endoscopy unit and identify if lesions identified through the BCSP are more likely to be tattooed than lesions identified for other reasons.

Methods A retrospective review of a prospectively maintained database was performed. All colonoscopies performed between 1 April 2010 and 31 March 2011 were reviewed and screening cases identified.

Results 4023 colonoscopies were performed, 307 (8%) as part of the BCSP. Malignancy or polyps were identified in 192 (63%) of BCSP colonoscopies compared to 26% (958/3716) of non-BCSP colonoscopies. Significantly more polyps and malignancies were identified during BCSP colonoscopies than non-BCSP colonoscopies ($p < 0.0001$ χ^2 test). Our local protocol states that any malignant/suspicious/ >1 cm lesion distal to the right colon should be marked by placing three tattoos just distal to the lesion. 94 (49%) lesions were identified during BCSP colonoscopies that met these criteria. Of these 54 (57%) were tattooed, and 20 (21%) were tattooed by the method advised. This compared to 262 non-BCSP lesions identified that should have been tattooed of which 77 (29%) were tattooed and 20 (8%) were tattooed by the method advised. Tattooing rate was significantly higher in BCSP detected lesions (54/94 compared with 77/262, $p \leq 0.0001$, χ^2 test).

Conclusion Tattooing practice in our endoscopy unit is poor despite the presence of a local protocol. However, tattooing practice is significantly better in lesions identified through the BCSP. Reasons for this may include the higher yield of lesions in screening colonoscopies or lack of awareness of the protocol. We aim to improve adherence by increasing awareness among all endoscopy staff to ensure optimum management of malignant and suspicious lesions.

Competing interests None declared.

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Inflammatory bowel disease I

PMO-224 NF- κ B2 DELETION PROTECTS MURINE COLON AGAINST DSS-INDUCED COLITIS AND THIS IS ASSOCIATED WITH REDUCED EXPRESSION OF TNF- α AND IL14

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Introduction The Nuclear Factor kappa B (NF κ B) family of five transcription factors signals via two pathways (classical and alternative). Classical pathway NF κ B signalling has previously been implicated in the pathogenesis of inflammatory bowel diseases (IBD). However, the role of alternative NF κ B pathway activation in the development of intestinal inflammation has not previously been investigated.

Aims To investigate the susceptibility of mice deficient in two individual NF κ B family members to DSS-induced colitis and the associated molecular changes.

Methods Colitis was induced in adult male NF κ B1-null and NF κ B2-null mice and their wild-type (C57BL/6) counterparts by oral 2% DSS administration for 5 days ($n=10$ per group). Weight loss and Disease Activity Index (DAI) were evaluated daily. Animals were euthanased on day 6 and histological colitis severity was evaluated in H/E stained colonic sections. The colonic expression of 6 key pro-inflammatory cytokines (TNF- α , IL-1 β , INF- γ , IL-6 and IL-14) was assessed by real time PCR ($n=4$ per group). Statistical comparisons were mostly performed by ANOVA with Bonferroni post-hoc tests, but the Kruskal-Wallis with Dunn's multiple comparison test was used to analyse DAI and histological scores.

Results After oral administration of 2% DSS, NF κ B1-null mice showed significantly more loss of body weight whereas NF κ B2-null mice showed significantly less loss of body weight on days 5 and 6 compared to wild-type mice. DAI was also significantly higher in NF κ B1-null mice and significantly lower in NF κ B2-null mice compared to C57BL/6 mice. In agreement with these clinical findings, histological assessment of DSS treated animals confirmed a severely damaged and inflamed distal colon in C57BL/6 and NF κ B1-null mice and minimal histological damage and significantly lower inflammation scores in NF κ B2-null mice. The expression of IL-6 mRNA was significantly increased in DSS-treated NF κ B1-null colon and the expressions of TNF- α and IL-14 mRNAs were significantly reduced in DSS-treated NF κ B2-null colon.

Conclusion Disruption of the classical NF κ B signalling pathway by deleting NF κ B1 exacerbates colonic inflammation and tissue damage following DSS administration which may be partially mediated by IL-6. This suggests that classical NF κ B pathway inhibitors may be