

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 ( $p < 0.0001$   $\chi^2$  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,  $p \leq 0.0001$ ,  $\chi^2$  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.

#### REFERENCES

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### Inflammatory bowel disease I

#### PMO-224 NF- $\kappa$ B2 DELETION PROTECTS MURINE COLON AGAINST DSS-INDUCED COLITIS AND THIS IS ASSOCIATED WITH REDUCED EXPRESSION OF TNF- $\alpha$ AND IL14

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**Introduction** The Nuclear Factor kappa B (NF $\kappa$ B) family of five transcription factors signals via two pathways (classical and alternative). Classical pathway NF $\kappa$ B signalling has previously been implicated in the pathogenesis of inflammatory bowel diseases (IBD). However, the role of alternative NF $\kappa$ 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 $\kappa$ B family members to DSS-induced colitis and the associated molecular changes.

**Methods** Colitis was induced in adult male NF $\kappa$ B1-null and NF $\kappa$ 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- $\alpha$ , IL-1 $\beta$ , INF- $\gamma$ , 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 $\kappa$ B1-null mice showed significantly more loss of body weight whereas NF $\kappa$ 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 $\kappa$ B1-null mice and significantly lower in NF $\kappa$ 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 $\kappa$ B1-null mice and minimal histological damage and significantly lower inflammation scores in NF $\kappa$ B2-null mice. The expression of IL-6 mRNA was significantly increased in DSS-treated NF $\kappa$ B1-null colon and the expressions of TNF- $\alpha$  and IL-14 mRNAs were significantly reduced in DSS-treated NF $\kappa$ B2-null colon.

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