P22 IMPACT OF ADENOMA DETECTION RATES AT FLEXIBLE SIGMOIDOSCOPY ON LONG-TERM COLORECTAL CANCER INCIDENCE AND MORTALITY

[1]Emma C Robbins*, [1]Kate Wooldrage, [2]Brian P Saunders, [3]Stephen W Duffy, [1]Amanda J Cross. [1]*Cancer Screening and Prevention Research Group (CSPRG), Department of Surgery and Cancer, Imperial College London, London, UK*; [2]*Wolfson Unit for Endoscopy, St Mark's Hospital, London, UK*; [3]*Centre for Cancer Prevention, Wolfson Institute of Preventive Medicine, Queen Mary University, London, UK*

10.1136/gutjnl-2020-bsgcampus.97

Introduction Detection and removal of adenomas reduces colorectal cancer (CRC) risk. However, the effects of variable adenoma detection rates (ADRs) on long-term CRC incidence and mortality are not known. We investigated this using data from the UK Flexible Sigmoidoscopy Screening Trial (UKFSST).

Methods We analysed data from 167,882 UKFSST participants, of whom 111,503 were in the control arm and 56,379 in the intervention arm. The control arm was not contacted while the intervention arm was offered a single flexible sigmoidoscopy screen. In total, 40,085 participants underwent flexible sigmoidoscopy screening at 13 trial centres. Median follow-up was 17 years. At each centre, a single endoscopist performed nearly all flexible sigmoidoscopies. We used multivariable logistic regression to classify centres into high-, intermediate-, and low-detector ranking groups based on the ADR of their main endoscopist. We calculated CRC incidence and mortality rates, and estimated hazard ratios (HRs) with 95% confidence intervals (CIs) using Cox regression.

Results Five centres were classified into the high-detector group, four into the intermediate-detector group, and four into the low-detector group. Average ADRs in the high-, intermediate-, and low-detector groups were 15%, 12%, and 9%, respectively. In all three groups, all-site CRC incidence and mortality were reduced among screened participants, compared to the control arm, and although the heterogeneity was not statistically significant, a larger effect was seen in the high-detector group (incidence: HR=0.58, 95%CI 0.50–0.67; mortality: HR=0.52, 0.39–0.69) than in the low-detector group (incidence: HR=0.72, 0.61–0.85; mortality: HR=0.68, 0.51–0.92). For distal CRC, incidence and mortality were reduced among screened participants, compared to the control arm, in all three groups and there was significant heterogeneity by detector ranking, with a substantially larger effect in the high-detector group (incidence: HR=0.34, 0.27–0.42; mortality: HR=0.22, 0.13–0.37) than in the low-detector group (incidence: HR=0.55, 0.44–0.68; mortality: HR=0.54, 0.34–0.86).

Conclusions Higher ADRs at screening flexible sigmoidoscopy result in greater long-term protection against CRC incidence and mortality.

P23 ABLATION AND COLD AVULSION (ACA) FOR THE MANAGEMENT OF NON-LIFTING, SCARRED COLORECTAL LESIONS

[1]Angad Dhillon*, [1]Ahmir Ahmad, [1]Rajaratnam Rameshshanker, [1]Ioannis Stasinos, [2]Zacharias Tsiamoulos, [2]Aristeidis Oikonomakis, [1]Brian Saunders. [1]*Wolfson Unit for Endoscopy, St Mark's Hospital, UK*; [2]*East Kent Hospitals University NHS Foundation Trust, UK*

10.1136/gutjnl-2020-bsgcampus.98

Introduction A scarred submucosa limits the effectiveness of lifting during endoscopic mucosal resection (EMR) and may necessitate surgery. Endoscopic submucosal dissection (ESD) of scarred lesions is technically difficult and carries a significant risk of perforation. We report our experience of a salvage approach using ablation and cold avulsion (ACA) as an adjunct to EMR.

Methods Lesions treated with ACA between January 2015 – October 2019 were identified from a retrospective database. Following EMR, residual areas of non-lifting scarred tissue were ablated using high power argon plasma coagulation (APC). The cauterised polyp tissue was then avulsed using non-spiked biopsy forceps. Surveillance endoscopies and histology reports were reviewed and evidence of polyp recurrence documented. Recurrence was treated with repeat ACA.

Results Eighty-six patients (male n=47, mean age 69 years, range 49–86) with 88 polyps (median size 36.6 mm, range 10–120 mm) underwent ACA. Thirty-eight (43%) lesions were located proximal to the transverse colon. Forty-two lesions (47.7%) were recurrent lesions. The remaining 46 (52.3%) were partially non-lifting, de novo lesions.

Intraprocedural bleeding requiring treatment with haemostatic forceps occurred in 12 cases (13.6%) during snare resection, although areas treated with ACA never required treatment with haemostatic forceps or clips. Intraprocedural perforation occurred in one case (target sign) during snare resection and was successfully closed with endoscopic clips prior to ACA. No perforation was reported during ACA.

Following the index ACA procedure, histology showed: adenoma with low grade dysplasia in 63.6% (n= 56); high grade dysplasia in 30.7% (n= 27); serrated lesions without dysplasia in 4.5% (n=4). One patient had a moderately differentiated adenocarcinoma and subsequently declined surgery with no endoscopic evidence of recurrence at 24 months.

Endoscopic follow-up was available for 78 lesions (mean 13.4 months, range 3–60). Recurrence at first follow-up was 30.7% (24/78). Follow-up for the second and third procedure was available for 17 patients with clearance rates of 58.8% (10/17) and 42.8% (3/7) respectively. Of the remaining 4 patients with recurrence, 3 underwent surgery (adenoma with low grade dysplasia n= 2, progression from high grade dysplasia to T1 adenocarcinoma n= 1). One was lost to follow-up following the development of significant co-morbidity.

Conclusions The endoscopic clearance rate using ACA was 95.7%. ACA appears to be a safe, effective, and surgery-sparing therapy in this difficult cohort of, scarred, partially non-lifting lesions.

P24 CLIP MUSCLE PROTECTION (CLIMP) METHOD IN MUSCLE-RETRACTING SIGN DURING COLONIC ENDOSCOPIC SUBMUCOSAL DISSECTION

[1]Noriko Suzuki*, [1]Angad Dhillon, [2]Edward Seward, [1]Adam Humphries. [1]*Wolfson Unit for Endoscopy, St Mark's Hospital, UK*; [2]*Endoscopy Unit, University College Hospital, UK*

10.1136/gutjnl-2020-bsgcampus.99

Introduction Muscle retracting (MR) sign is a feature occasionally observed during Endoscopic Submucosal Dissection (ESD).[1] The muscle layer can be pulled towards a neoplastic lesion due to the desmoplastic reaction associated with cancer invasion, or it may be due to fibrosis caused by mechanical forces of intestinal peristalsis pulling on the body of the polyp

over time. The MR sign indicates a potentially difficult ESD and reduces the chance of a complete resection.

Methods We performed a Clip Muscle Protection (CliMP) method, in which clips are attached at the base of the retracting muscle during colonic ESD, for 6 benign polyps. When MR sign was encountered during ESD, the surrounding submucosal layer was dissected to expose retracted muscle and endoclips were applied at the base of the tented area. This sealed the muscle and allowed further resection above the clipped area.

Results A complete resection was possible in 4 out 6 cases. Two CliMP cases are shown on the accompanying video. Morphologically they were broad based Ip in 5/6 polyps at the sigmoid colon, the final lesion was a LST nodular mixed type at the rectosigmoid junction. The median size of the polyps was 45 mm in diameter (range between 35–75 mm). No complications were observed. No electrocautery effect was observed at the clip attachment site. All 6 lesions were found to be tubular or tubulovillous adenomas with high grade dysplasia on histopathological analysis. R0 resection was achieved for all of the four completed cases; two procedures were abandoned due to a broad MR sign in one and an inability to access the whole of the lesion due to sigmoid fixation in the other.

Conclusions CliMP method appears to allow continuous deeper dissection without complication in lesions demonstrating MR sign during colonic ESD.

REFERENCE

1. Toyonaga, *et al*. Clinical significance of the muscle-retracting sign during colorectal endoscopic submucosal dissection. *EIO* 2015

P25 SIGMOID LOOPING: CREATION OF DOMAINS FOR A MAGNETIC ENDOSCOPE IMAGING-BASED SCORE

[1,2]Shiran Esmaily*, [1]Iosif Beintaris, [3]John Anderson, [4]Sunil Dolwani, [4]James East, [1]John Hancock, [5]Neil Hawkes, [6]Brian McKaig, [7]Paul O'Toole, [8]Brian Saunders, [10]Zacharias Tsiamoulos, [1]Chris Wells, [1]Matt Rutter. [1]*Gastroenterology, University Hospital of North Tees, UK*; [2]*Newcastle University, UK*; [3]*Gastroenterology, Gloucestershire Hospitals, UK*; [4]*Gastroenterology, Cardiff and Vale NHS Trust, UK*; [5]*Gastroeneterology, Royal Glamorgan Hospital, UK*; [6]*Gastroenterology, East Kent Hospitals, UK*; [7]*Translational Gastroenterology Unit, John Radcliffe Hospital, UK*; [8]*Endoscopy, St Mark's Hospital, UK*; [9]*Gastroenterology, Royal Wolverhampton Hospital, UK*; [10]*Gastroenterology, Royal Liverpool and broad green Hospital, UK*

10.1136/gutjnl-2020-bsgcampus.100

Introduction The 2013 national colonoscopy audit found that pain or looping were the most common reasons for incomplete colonoscopy. Sigmoid colon intubation is the most painful part of colonoscopy and looping may occur even in the hands of expert endoscopists. Magnetic endoscope imaging (MEI) facilitates loop identification and resolution. The aim of this study was to identify components of looping and, from these, reach consensus on which should form sigmoid looping domains for an MEI-based sigmoid looping score.

Methodology A panel of 12 endoscopists from across the UK, with a range of experience in colonoscopy, took part in a modified Delphi consensus process. A detailed PubMed literature search was performed to identify prior studies. Potential components of sigmoid looping were extracted and provided to the panel as statements, along with an evidence summary. Statements were voted and commented on anonymously and adjusted through subsequent voting and discussion rounds to achieve consensus. Consensus was defined in advance as >80% agreement.

Results 46 relevant papers were identified. One paper described a classification for sigmoid looping. A total of 4 Delphi rounds took place. 12/12 panel members took part in Delphi rounds 1 and 2, 11/12 in round 3 and 10/12 in round 4. Initially, consensus was gained on categories, followed by subcategories as the Delphi progressed.

Consensus was reached for 7 domains and for potential categorisation within each domain.

1. Loop Type (with definitions for each)
2. Scope shaft angulation (<90, 90–180, 180–270, >270 degrees, excluding scope tip)
3. Loop Size (Small, Medium, Large)
4. Loop duration (Minutes and seconds)
5. Loop Recurrence (Yes, No)
6. Extent of intubation on MEI (colonic segment)
7. MEI image quality (Adequate, Inadequate)

Results are summarised in Table 1.

Conclusion This is the first effort to develop consensus-based categorisation of sigmoid looping, as identified on MEI. It highlights components of looping that are measurable on MEI and provides a platform for further research into looping and pain. We now plan to validate each component by testing for interrater reliability. The score can then be used to research looping and pain in different contexts.

Abstract P25 Table 1

Component	Percentage Agree or neutral
Loop Type (n=11)	
1. Alpha	100% (11/11)
2. N-Spiral	100% (11/11)
3. Flat N (non spiral)	100% (11/11)
4. Reverse Alpha	100% (11/11)
5. Reverse N-Spiral	81.8% (9/11)
6. Complex	90.9% (10/11)
7. No Loop	100% (11/11)
Definition of Loop Type (n=10)	100% (10/10)
1. Alpha	100% (10/10)
2. N-Spiral	100% (10/10)
3. Flat N (non spiral)	100% (10/10)
4. Reverse Alpha	100% (10/10)
5. Reverse N-Spiral	100% (10/10)
6. Complex	100% (10/10)
7. No Loop	100% (10/10)
Scope Shaft Angulation (n=11)	100% (11/11)
Loop Size (n=10)	90% (9/10)
Duration of Looping (n=11)	90.9% (10/11)
Loop Recurrence (n=11)	81.8% (9/11)
Extent of intubation (n=11)	90.9% (10/11)
Quality of MEI (n=11)	100% (11/11)