

Introduction Standards for Colorectal cancer (CRC) resection specimen histology reporting consider factors thought to have apparent significance for prognosis and further therapy. Whilst well validated for surgical resection, the increasing use of advanced endoscopic resection for polyps containing previously unknown early CRC presents challenges in interpretation of these factors. In addition to tumour budding, unfavourable tumour grade, and vascular invasion, Ueno *et al*[1] proposed parameters for width and depth of submucosal invasion as risk for adverse outcome. This study aims to analyse any association between pathological factors and outcome with endoscopic resection of early CRC.

Methods Retrospective review of all CRC removed endoscopically between March 2006 and March 2011. All endoscopic and surgical resection specimens were reviewed by two expert gastrointestinal histopathologists, with measurement of width and depth of submucosal invasion made. All follow up procedures, including radiology, were reviewed.

Results 35 cases were identified (24 males, 11 females, median age 69 years). All patients were alive after median follow-up period of 32 months; no residual/recurrent cancers were found in any patient managed with endoscopic therapy alone. Of the 12 patients who had further surgical intervention due to reported incomplete endoscopic resection on histology, none had residual carcinoma in the subsequent resection specimen. Three patients (8.6%) were found to have Dukes C1 cancers (all T1 N1 M0). These cancers were not associated with poor differentiation or lymphovascular invasion ($p = 0.546$) or tumour budding of low or high intensity ($p = 1.000$). The relationship between the width and depth of submucosal invasion and Dukes C1 did not reach statistical significance ($p = 0.096$), although these three cancers did fulfil Ueno criteria. Presence of lymph node metastases was associated with Haggitt level 4 ($p = 0.03$), but not with the presence of tumour at the excision margin ($p = 1.000$) in the subsequent surgical resection group.

Conclusion Our experience highlights the challenges in applying histopathological criteria to individual cases of early CRC resected via endoscopic therapy. Most patients underwent surgery for an unclear resection margin, however no residual cancer was present in the resection specimens and aside from a Haggitt level 4, found no other predictors of risk lymph node metastases. Suggestions for future studies include piloting a more minimally invasive approach, such as regional lymph node dissection in selected cases as well as studying biomarkers for refining risk stratification.

Disclosure of Interest None Declared.

REFERENCE

1. Ueno H *et al*. Risk factors for an adverse outcome in early invasive colorectal carcinoma. *Gastroenterology* 2004; 127: 385–394

PWE-042 COLONOSCOPY QUALITY MEASURES: EXPERIENCE FROM A WELSH BOWEL CANCER SCREENING CENTRE

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Introduction The NHS Bowel Cancer Screening Programme (BCSP) in England has demonstrated high quality colonoscopy [1]. Bowel Cancer Screening in Wales began in October 2008. We report results of first 3 years of screening in a single Welsh centre. Comparison is made with results from the English BCSP.

Methods Data was collected prospectively for participants undergoing FOBt testing and colonoscopy or flexible sigmoidoscopy between October 2009 and December 2011 in Cardiff and the Vale of Glamorgan. Quality indicators were calculated where appropriate.

Adenomas were confirmed after correlation with histopathology reports. with no adenoma double counted.

Results 42630 faecal occult blood test kits were returned from 91414 sent (46.6%), leading to 933 colonoscopies (795 index) and 82 flexible sigmoidoscopies (not index but mostly for therapeutic procedures) undertaken by four accredited screeners. Mean ADR per colonoscopist was 54.1%, mean number of adenomas per procedure (MAP) was 1.24 and the mean adenomas per positive procedure (MAP+) was 2.3, with a mean polyp retrieval rate of 98%. Mean midazolam dose was 2 mg (range 0.5–4 mg) and fentanyl 50mcg (range 25–100 mcg). Hyoscine n-butyl bromide was used in 34.5% of cases, with no increased ADR ($p = 1.000$). Only 2% of patients reported severe discomfort. Bowel cancer was detected in 69 individuals; a positive predictive value of colonoscopy (after positive FOBt) of 8.7%.

Abstract PWE-042 Table 1 Comparison of colonoscopy performance and complication between Cardiff and English BCSP

| | Cardiff and Vale | English BCSP | p Value |
|-----------------------------------|------------------|---------------------|--------------|
| Unadjusted caecal intubation rate | 887/933 (95.1%) | 32020/33635 (95.2%) | $p = 0.917$ |
| Adenoma detection index round | 422/795 (53.1%) | 1334/2282 (46.3%) | $p = 0.009$ |
| Adenoma detection prevalent round | 54/79 (68.4%) | 13216/28607 (46.2%) | $p = 0.0001$ |
| Perforation | 1/1025 (0.1%) | 35/38168 (0.09%) | $p = 0.951$ |
| Bleeding | | | |
| All | 4/1025 (0.39%) | 155/38168 (0.41%) | $p = 0.937$ |
| Major | 1/1025 (0.0.9%) | 4/38168 (0.01%) | $p = 0.301$ |

Conclusion Our centre is providing high quality colonoscopy, with statistically significant higher rates of adenoma detection in both the index and prevalent rounds of screening colonoscopies compared to data from the English BCSP, and a low rate of adverse events given an increased need for endoscopic therapy. Measures of total adenoma detection (MAP and MAP+) also compare favourably. Further information is required to ascertain the clinical outcome measure of the missed cancer rate following a screening colonoscopy within the BCSP across the UK.

Disclosure of Interest None Declared.

REFERENCE

1. Lee TJW *et al*. Colonoscopy quality measures: experience from the NHS Bowel Cancer Screening Programme. *Gut* 2011; 61: 1050–7

PWE-043 THE MANAGEMENT OF LARGE SESSILE COLORECTAL POLYPS: EXPERIENCE OF A SINGLE WELSH SCREENING CENTRE

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Introduction Previous studies on large sessile colorectal polyps (LSCPs) suggest that management (Endoscopic vs Surgical) and outcomes (complication rates, incomplete resection, recurrence rates) may vary. The advent of the Bowel Cancer Screening Program (BCSP) provides opportunities to study this lesion subgroup systematically. We report the experience and outcomes of managing LSCPs in a single Welsh screening centre undertaking screening colonoscopy within an established local multidisciplinary discussion forum (colorectal surgery, endoscopy, radiology & histopathology).

Methods Outcome data was collected prospectively for BCSP participants with a benign adenoma greater than 20mm between October 2009 and December 2011 in Cardiff and the Vale of Glamorgan. Each patient was discussed at a multidisciplinary team meeting. Standard protocol for piecemeal EMR or histology suggesting

uncertain margins was to cheque the site at 3 months and 12 months post index therapeutic procedure.

Results LCSP accounted for 3.42% of adenomas, mean size 32.2mm (1.02% were LSCP > 40mm). 33/40 (82.5%) LCSP were managed endoscopically, with either enbloc EMR, piecemeal EMR, or laparoscopically-assisted EMR. Of these, 84.8% had successful endoscopic resection with no recurrence at 3 to 12 months. Recurrent or residual polyp was detected in 1/28 (3.6%) at 3 months, with no recurrence at 12 months. 4/29 (13.8%) of lesions initially managed endoscopically subsequently required surgery. 3/4 (75%) went on to undergo TEM and 1/4 (25%) a segmental colonic resection. Indications included technical limitations to endoscopic management; difficult access or previous attempts at endoscopic resection at a different centre. No significant adverse events occurred in the endoscopically managed group. There was a cancer rate (in lesions initially managed endoscopically) of 5.7% - no residual cancer was detected following definitive treatment.

Surgery was the initial therapeutic modality in 7/40 (17.5%); 5/7 (71.4%) had segmental colectomy and 2/7 (28.6%) had TEM. No cancer was found in any surgically resected specimen.

Conclusion Most patients with LSCPs can be managed endoscopically with good outcomes, including a low adverse event profile and recurrence rate. A small proportion of cases may turn out to have carcinoma that was not possible to diagnose in pre-procedure biopsies and thus require further surgery. Our study supports high quality endoscopic assessment and multidisciplinary team discussion as important factors in achieving optimal patient management and has resulted in piloting a change of practise across the BCSP to minimise variation in outcomes.

Disclosure of Interest None Declared.

PWE-044 CURRENT PRACTICE IN COMPLEX LOWER GI POLYPECTOMY: A UK NATIONAL SURVEY

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Introduction In recent years there have been considerable developments in polypectomy techniques. However, even among experienced colonoscopists, there remains a wide variation in practise. This survey attempts to evaluate current UK practise in more advanced polypectomy.

Methods NHS Bowel Cancer Screening Programme (BCSP) colonoscopists and BSG members were invited to complete an anonymous online questionnaire regarding their approach to large polyps.

Results Respondents: Complete responses were obtained from 268 colonoscopists practising independently in the UK. 75% were consultant gastroenterologists, 10% surgeons and 9% nurse endoscopists. 41% did at least one session in a teaching hospital. 64% were BCSP accredited. All regions were well represented in the survey, although there were only 2 responders from Wales. Median lifetime colonoscopy experience was 3000 and typical workload was about 10 procedures per week.

Experience & Practice: 86% felt confident to remove lesions > 2cm by endoscopic mucosal resection (EMR). 27% of this group had done < 10 EMR procedures in the previous year; 14% claimed > 50 EMRs per year. When asked to describe the most complex polypectomy they would undertake, 30% (81) judged themselves capable of resecting very large flat or polypoid lesions that are also suitable for surgery (i.e. Level 4 polypectomy). Of these Level 4 operators, 17% had never tackled a polyp greater than 5cm and 10% had performed < 10 EMRs in the previous year. Video recording was used in the assessment of difficult polyps by only 20%. 32% declared that they would routinely biopsy a potentially resectable polyp they did

not feel comfortable to remove themselves, with 3.5% opting to snare a large piece for histology.

Endoscopic Submucosal Dissection (ESD): 7 responders perform full ESD and a further 13 use ESD as part of a hybrid technique. 11% had referred a patient to another specialist for ESD in the last year.

Complications: Among those performing EMR, 10% admitted to a perforation in the previous year and 23% reported significant bleeding.

Conclusion This is the first "snap shot" of advanced polypectomy practise across the UK. Although the sample was self-selected, a range of experience is represented. Most experienced colonoscopists appear happy to attempt piecemeal EMR even if their annual numbers are low. As expected, very few colonoscopists are performing ESD. A surprising number of colonoscopists regarded themselves as Level 4 experts, suggesting that the current definition of what constitutes very advanced practise needs to be modified, or at least better defined. The limited use of video documentation is disappointing and unhelpful practises, such as routine polyp biopsy (or partial polypectomy), are still relatively common

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PWE-045 TRAINING IN ADVANCED POLYPECTOMY: RESULTS FROM A NATIONAL UK SURVEY

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Introduction Despite considerable developments in polypectomy techniques, the training of the skills necessary for removal of complex polyps remains a challenge. Little is known about the level of formal training in polypectomy among colonoscopists currently practising in the UK.

Methods As part of a national survey of advanced polypectomy, targeted at BSG members and Bowel Cancer Screening Programme (BCSP) colonoscopists, individuals were asked about the training they had received in polypectomy and their perceived training needs.

Results Respondents 268 fully trained colonoscopists with a median lifetime experience of 3000 procedures. 64% were BCSP colonoscopists. All but 4 had been involved in a hands-on colonoscopy-related training course and almost half had acted as course faculty.

Competence 86% reported competence in endoscopic mucosal resection (EMR) of sessile polyps > 2cm and half of responders had been doing EMR for > 5years. 30% felt comfortable removing lesions up to 3cm with good access, 35% would tackle larger lesions (by EMR) or smaller lesions with difficult access. 30% considered themselves able to remove very large flat or polypoid lesions that were also suitable for surgery.

Formal Training In relation to EMR, 58% regarded themselves as predominantly self-taught. 24% had been on an attachment at a recognised training centre and 36% had attended a hands-on advanced colonoscopy or polypectomy course. 20% reported that their only formal education in EMR was at a demonstration workshop or study day.

Training Needs When asked what limited their advanced polypectomy practise, 18% identified lack of formal training in EMR, 18% lack of opportunity to gain experience and 7.5% lack of guidelines in the management of large polyps. Surprisingly, even colonoscopists claiming to operate at the most expert level admitted that they might decide against tackling a potentially resectable polyp because of lack of confidence in assessing surface morphology (7%). 2.5%