Introduction

Indigocarmine (IC) and narrow-band imaging have been shown to be effective in the in vivo diagnosis of small colonic polyps. The learning curve for achieving high level of accuracy with a new technology for real-time diagnosis of small colonic polyps has not been determined.

Methods

We aimed to assess the learning curve of a novel electronic iScan surface and tone enhancement, (3) IC chromoendoscopy. Results were statistically significant in all imaging modalities in the 3rd set of polyps as compared to the first two sets (p < 0.05).

Results

A total of 309 polyps were eligible for inclusion in the study. Mean polyp diameter was 4.1 mm, median 3 mm. 133 polyps were non-neoplastic, 199 were adenomatous and one contained adenocarcinoma. Sensitivity and overall accuracy improved significantly with diarrhoea who had a "normal" colonoscopy. 750 (15.8%) were performed for diarrhoea. 313/750 (41.7%) had biopsies taken, 274/294 (93%) had both right and left colon sampled.

Conclusion

(1) Even in expert hands there is a significant learning curve for using a new technology for the in vivo diagnosis of small colonic polyps, with improvement in performance over the first 200 polyps assessed. (2) Excellent results can be achieved once the new technology has been mastered. (3) This is the first report of results achieved with high-definition white light endoscopy which are comparable with electronic chromoendoscopy and IC chromoendoscopy.

Competing interests

None declared.

Abstract PWE-186 Table 1

<table>
<thead>
<tr>
<th></th>
<th>WL</th>
<th>iScan</th>
<th>IC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set 1 (Polyps 1–100)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sensitivity</td>
<td>0.788</td>
<td>0.868</td>
<td>0.904</td>
</tr>
<tr>
<td>Specificity</td>
<td>0.708</td>
<td>0.766</td>
<td>0.729</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.750</td>
<td>0.820</td>
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</tr>
<tr>
<td>Set 2 (Polyps 101–200)</td>
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</tr>
<tr>
<td>Sensitivity</td>
<td>0.866</td>
<td>0.851</td>
<td>0.881</td>
</tr>
<tr>
<td>Specificity</td>
<td>0.758</td>
<td>0.758</td>
<td>0.788</td>
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<tr>
<td>Accuracy</td>
<td>0.830</td>
<td>0.820</td>
<td>0.850</td>
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<tr>
<td>Set 3 (Polyps 201–309)</td>
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<tr>
<td>Sensitivity</td>
<td>0.964</td>
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<td>0.976</td>
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<tr>
<td>Specificity</td>
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<td>0.769</td>
<td>0.808</td>
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<tr>
<td>Accuracy</td>
<td>0.927</td>
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PWE-187 COLONIC BIOPSIES TO DETECT MICROSCOPIC COLITIS IN PATIENTS WITH DIARRHOEA AND "NORMAL" COLONOSCOPY: WORTH THE EFFORT?

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

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Introduction

Patients investigated for diarrhoea often have macroscopically normal colonoscopies. Biopsies are, however, required in order to diagnose microscopic colitis (MC). Obtaining colonic biopsies for persistent diarrhoea is an auditble JAG standard. The aim of this study, carried out in a single large NHS Teaching Hospitals Trust was (1) To measure the incidence of MC in patients with diarrhoea and a normal colonoscopy. (2) To examine whether the discipline of the colonoscopist affected whether biopsies were taken in this situation or not. (3) To assess which biopsy protocols were being used.

Methods

An analysis was performed of all colonoscopies with the indication of diarrhoea, with normal findings, undertaken in 2010. Interrogation of the endoscopy recording system (ERS), looked at endoscopist discipline, if biopsies were taken, biopsy sites and histology results. A total of 4753 colonoscopy records were examined, of which 750 (15.8%) were performed for diarrhoea. 313/750 (41.7%) had biopsies taken, 274/294 (93%) had both right and left colon sampled.

Conclusion

The vast majority (93.9%) of patients presenting with diarrhoea and a normal colonoscopy in our unit are having colonic biopsies performed to exclude a diagnosis of microscopic colitis. The histology positivity rate was 5%, comparable to similar published series. A majority of all professional colonoscopists perform colonic biopsies appropriately in the setting of diarrhoea and normal colonoscopy. There is variability, but this is not statistically significant.

Competing interests

None declared.

PWE-188 USING A "CONVERSION FACTOR" TO ESTIMATE ADENOMA DETECTION RATE

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Introduction Adenoma detection rate (ADR) is the recommended surrogate marker for a thorough colonoscopic examination. Collecting histology makes its calculation arduous so polyp detection rate (PDR) is often used instead. It has been proposed that the ADR:PDR ratio can be used as a “conversion factor” to accurately estimate ADR. Work from the Bowel Cancer Screening Programme (BCSP) has shown that adenomas are more prevalent in this population suggesting the ratio may be different. We aimed to assess the feasibility of using a “conversion factor” to estimate ADR from PDR in different UK populations.

Methods Colonoscopy performance data from the symptomatic services were collected over a 3-month period from 12 units in the northern region of England. Data from all procedures performed by BCSP accredited colonoscopists were excluded from this group. National colonoscopy performance data were extracted from the BCSP database from a 12-month period. Colonoscopists detecting polyps in ≥10 patients were included. Data collected included colonoscopist, PDR and ADR. The conversion factor was calculated separately for each group. The ADR:PDR ratio was calculated at the level of the colonoscopist and the group mean used as the conversion factor. The estimated ADR was calculated using: PDR × conversion factor. The relationship between the actual and estimated ADR was evaluated using Pearson’s correlation coefficient.

Results In the symptomatic services 3219 colonoscopies were performed by 55 colonoscopists. In the BCSP 31 017 procedures were performed by 147 colonoscopists. The PDR and ADR respectively for the symptomatic group were 30.7%, IQR 24.8–40.0 and 18.0%, IQR 14.0–24.0, and for the BCSP group were 59.3%, IQR 53.8–65.0 and 46.0%, IQR 45.0–51.3. The ADR:PDR ratio in the symptomatic and BCSP groups were 0.59 (IQR 0.47–0.69) and 0.78 (IQR 0.74–0.81). The correlation between the estimated and actual ADR was 0.68 (p<0.001) and 0.83 (p<0.001) for the symptomatic and BCSP groups respectively.

Conclusion We demonstrate using estimated ADR, when calculation of ADR is not feasible, may be an acceptable marker of quality in colonoscopy. The difference in the conversion factors between the groups studied here is likely to be due to the selected population colonoscoped within the BCSP but suggests it will need to be adjusted for different patient populations. Studies to further validate this concept and ensure that conversion factors remain consistent over time are ongoing.

Competing interests None declared.

PWE-189 ACHIEVING HIGH QUALITY COLONOSCOPY: USING GRAPHICAL REPRESENTATION TO MEASURE PERFORMANCE AND RESET STANDARDS
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Introduction The aim of colonoscopy is to examine the colon completely and meticulously looking for malignant and pre-malignant lesions (adenomas). The measure for completeness is the caecal intubation rate (CIR) and for thoroughness the adenoma detection rate (ADR). National Standards (NS) are ≥90% and ≥10% respectively.1 Variability in CIR, ADR and thusly quality, have been shown but comparison between individuals and units is difficult.2 3 We aimed to use graphical representation to assess colonoscopy performance in the North East of England.

Methods Data on colonoscopy performance and sedation use were collected over 3 months from 12 units. Colonoscopies performed by screening colonoscopists were included in the global CIR only. Funnel plots with upper and lower 95% confidence limits (CL) for CIR and ADR were created using the binomial probability distributions for inferences about a single proportion.

Results CIR was 92.5% (n=5720) and ADR 15.9% (n=4748). All units and 128 (99.2%) colonoscopists were above the lower limit for CIR. All units achieved the ADR standard with 10 above the upper limit. Ninety-nine (76.7%) colonoscopists were above 10%, 16 (12.4%) above the upper limit and 7 (5.4%) below the lower limit (Abstract PWE-189 figure 1). Median medication doses were 2.2 mg midazolam, 29.4 mg pethidine, and 83.3 mg fentanyl. 15.1% of colonoscopies were unseated. Complications were bleeding (0.10%) and perforation (0.02%). There was 1 death possibly related to bowel preparation.

Abstract PWE-189 Figure 1 Funnel plot showing each colonoscopist’s ADR with respect to the NS. CLs calculated relative to the NS.

Conclusion Results indicate colonoscopies are performed safely and to a high standard. Funnel plots can highlight variability and areas for improvement. Analyses of ADR presented graphically around the global mean suggest that the NS should be reset at 15%.

Competing interests None declared.

REFERENCES

PWE-190 ENDOSCOPIC MUCOSAL RESECTION OF LARGE COLORECTAL POLYPS: OUTCOMES FROM A REGIONAL BOWEL CANCER SCREENING CENTRE
doi:10.1136/gutjnl-2012-302514d.190

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Introduction Endoscopic mucosal resection (EMR) of colorectal polyps has been reported to be a safe and effective technique within