EDUCATION

Should patients expect their colonoscopy to reach the standards experienced by bowel cancer screening patients?

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Received 19 March 2012
Accepted 19 March 2012
Published Online First
24 April 2012

Although the administrative burden of the endoscopy quality improvement programme is immense, these measures have undoubtedly had a very positive impact on patient-centred endoscopic care in the UK.

The first large UK audit of colonoscopy standards undertaken by Bowles *et al* revealed a caecal intubation rate (CIR) of only 56.9% from 9223 procedures.¹ The potential implications of this poor national performance were significant. One of the most important indications for colonoscopy is to prevent colorectal cancer deaths by detecting cancer at a curative stage or removing potentially cancerous polyps. Low CIRs are associated with colorectal cancer in patients who have undergone a colonoscopy in the past;² therefore, the number of 'missed' cancers was likely to be unacceptably high in the UK at the time of this audit. The audit also highlighted that improvements needed to be made before the introduction of colorectal screening.

Following this audit, the Joint Advisory Group on Gastrointestinal Endoscopy introduced a quality improvement programme involving training standards, peer review and the implementation of the Global Rating Scale. The most recent multicentre audit of 16 064 colonoscopies by Verma *et al*³ demonstrated the impact that this programme has had. Data over a 2-year period from 2008 to 2009 were collected from six hospitals, 120 endoscopists and 16 064 colonoscopies, demonstrating a marked improvement in the CIR to 90.57%. This is a remarkable achievement in such a short period of time.

As one would expect, the CIR was greater for bowel cancer screening colonoscopies

than for non-screening colonoscopies (97.71% vs 88.31%). This difference is likely to be related to a variety of factors including the skill of the screening colonoscopists who are required to pass a summative assessment test before undertaking screening lists, but also the extended time allocated for each screening colonoscopy allowing for a longer withdrawal time, quality of bowel preparation, patient selection and fitness and nurse preassessment. A very clear outcome of the study was that operators undertaking less than 100 procedures per year were less likely to achieve a CIR greater than 90%. Furthermore, non-gastroenterologist/surgeons failed to reach the caecum in nearly 22% of cases. The operator skill therefore plays a clear role in the success of the procedure and is supported by circumstantial evidence from earlier studies. Haseman *et al* demonstrated that colorectal cancers were more likely to be missed by non-gastroenterologists than gastroenterologists.⁴ In this study, if the caecum was reached, the miss rates were equal, further supporting the importance of a complete colonoscopy.

In addition to the CIR, there are other evidence based markers of diagnostic quality, including adenoma detection rate (ADR), polyp detection rate, colonoscopy withdrawal time, CIR, rectal retroversion rate, polyp retrieval rate and bowel preparation. These markers are routinely collected from screening colonoscopies by a dedicated nurse practitioner; however, only the CIR, ADR and bowel preparation are collected from non-screening colonoscopies. Recent data from 36 460 bowel cancer screening colonoscopies

demonstrated CIRs of 95.2%, withdrawal times of 9.2 min and ADRs of 46.5%.⁵ Although there are no comparative studies of screening and non-screening colonoscopies, audited withdrawal times appear to be lower as demonstrated by an early study from the Mayo Clinic with times averaging 6 min.⁶ This study demonstrated withdrawal times greater than 7 min improved ADRs.

The disparity in quality between screening and non-screening colonoscopies does have significant implications, in particular the risk of postcolonoscopy colorectal cancer. Two large Canadian studies demonstrated that the colonoscopy cancer miss rates are as high as 2%–6% depending upon the site of the cancer.^{7,8} Independent risk factors for missed cancers included lower CIRs and non-gastroenterologist endoscopists, a factor which has been shown to be related to a decreased CIR in the study of Verma *et al.*

How can parity between screening and non-screening colonoscopy be attained in the UK? Verma and colleagues suggest that perhaps non-gastrointestinal specialties and those performing less than 100 colonoscopies per year should be retrained or cease colonoscopy altogether. Although this will improve the CIR and overall quality of colonoscopy, many units will not be able to manage the demands for colonoscopy. Perhaps the quality measures collected for screening lists should be extended to all colonoscopies and the data collected by nurse practitioners trained to the same standards as those trained for the bowel cancer screening programme. This has significant resource implications, including staffing costs and IT.

The bowel cancer screening programme (BCSP) is undoubtedly driving improvements in colonoscopy standards and quality improvements have been

profound. However, the future aim should be equality as well as quality.

Competing interests None

Provenance and peer review Not commissioned; externally peer reviewed.

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