CLINICAL AUDIT

Colonoscopy in the very old: why bother?

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Objectives: To evaluate the use of colonoscopy in patients aged at least 85 years. Does the ideal of an ageism free service apply?

Design: A retrospective audit.

Setting: Department of gastroenterology that carries out about 1000 colonoscopies annually in a district general hospital serving a population of about 320 000.

Subjects: All patients aged at least 85 years who underwent colonoscopy over five years to 2003.

Main outcome measures: The indications for colonoscopy and its findings. The outcome of patients found to have colonic cancers.

Results: Colonoscopy was completed in 219 cases (69%). The main reasons for failure were poor bowel preparation and severe diverticular disease. Normal findings occurred in 65 (30%) of the 219 cases that had had a complete examination. Colonoscopy identified a problem that explained the patient's symptoms in 116 (37%) cases. Polyps were found in 45 (14.2%) cases and malignancy in 28 (8.8%).

Conclusions: The absence of significant complications and comparatively high yield of colonic malignancies and polyps reinforces the value of colonoscopy as a diagnostic tool even after 85 years of age and despite the technical challenges of the procedure in this age group that limited completion. Increasing age alone should not preclude a patient from colonoscopy.

The United Kingdom is typical of a developed country in that it has an aging population. The over 85s are one of the fastest growing groups.¹ Physical frailty and diminished mental capacity are common. Gastrointestinal disorders including colonic tumours are more common with advancing age.² Colorectal cancer is the second commonest cause of cancer deaths in the UK.³ The risk of developing the disease increases considerably after the age of 50.⁴

There are several ways to visualise the colon. Colonoscopy is the most accurate method with the advantage that biopsy specimens can be taken from suspicious lesions and precancerous polyps excised.⁵ However, colonoscopy may be uncomfortable for the patient, usually entails intravenous sedation, and has a perforation rate of up to 0.5%. Mortality may approach 0.1%.⁶ The risks are thought to be higher in the elderly population.⁷ Colonoscopy is particularly useful for patients aged 50–70 years. However, there is less information on its benefit in the very old.⁸ The aim of this study is to evaluate the use of colonoscopy in patients aged at least 85 years in the setting of a district general hospital. Should a patient's age in itself cause us to modify our approach to the investigation and treatment of bowel disease?

METHODS

We carried out a retrospective audit of all patients aged at least 85 years who underwent colonoscopy at our hospital over the five years to 2003. It is a district general hospital serving a population of about 320 000. The hospital's department of medical gastroenterology carries out about 1000 colonoscopies a year. Data were obtained from medical records and our computerised endoscopy database. Demographic details along with the indication for examination, colonoscopic findings, type and amount of sedation used, complications, and completion rates were recorded.

All patients underwent routine pre-colonoscopy bowel preparation, normally with three sachets of sodium picosulphate (10 mg per sachet). Patients received intravenous sedation, midazolam and/or pethidine according to the preference and judgement of the colonoscopist. Some patients also received buscopan as an antispasmodic agent. All colonoscopists were of consultant or specialist registrar standing. During the procedure pulse and oxygen saturations were continuously monitored using pulse oximetry. Patients received oxygen via a nasal cannula.

RESULTS

A total of 5094 colonoscopies were carried out by the medical colonoscopists from April 1998 to March 2003. Of these, 316 (6.2%) colonoscopies were performed in patients aged 85 years and over. During the same period, a total of 27 719 patients were seen in our gastroenterology outpatient clinic of whom 1290 (4.7%) were aged 85 years and over. A consultant endoscopist carried out 225 (71.2%) of the procedures and trainee endoscopists the rest. The median age of patients in our study was 87.5 years (range 85–100). Table 1 summarises the most common indications for colonoscopy. In 40 cases there was more than one indication.

Colonoscopy was completed in 219 cases (69%). However, if cases with poor bowel preparation (65 cases) and strictures (14 cases) were excluded then the adjusted caecal intubation rate would be 92%. The other reported reason for failure to complete the procedure was severe diverticular disease. Patients that had an incomplete examination without

Table 1 Common indications for colonoscopy

Indication	Patients Number (%)
Anaemia	120 (40.0)
Rectal bleeding	70 (22.2)
Diarrhoea	60 (19.0)
Abdominal pain	24 (7.6)
Weight loss	13 (4.1)
Constipation	13 (4.1)
Alternating bowel habit	12 (3.8)
Abdominal mass on examination	5 (1.6)
Abnormal barium enema	4 (1.3)
Follow up of previous abnormality	24 (7.6)

Table 2 Common findings on colonoscopy

Findings	Patients Number (%)
Diverticular disease	152 (41.1)
Polyps	45 (14.2)
Colorectal cancer	28 (8.9)
Inflammatory bowel disease	13 (4.1)
Angiodysplasia	7 (2.2)
Normal	78 (24.7)

identifying an explanation for their symptoms underwent a barium enema. Midazolam (median 4 mg, range 0–12) and pethidine (median 50 mg, range, 0–100) were used as pre-medications. No major complications such as perforation or bleeding occurred.

Table 2 summarises the commonest findings. For some patients, several abnormalities were recorded.

A normal colon was found in 65 (30%) of the 219 cases that had had a complete examination. Colonoscopy identified a problem that explained the patient's symptoms in 116 (37%) cases.

Polyps were found in 45 (14.2%) cases and a malignant tumour in 28 (8.8%). All except two of these were adenomatous polyps on histological examination. The presenting symptoms for those in whom a malignant tumour was found were anaemia (53%), diarrhoea (17%) rectal bleeding (17%), and others (13%). Of these patients, 19 (68%) went on to have a curative resection.

DISCUSSION

Life expectancy in the UK continues to increase⁹ and advancing age is an important risk factor for the development of colorectal cancer. There is more than a 10-fold increase in the risk of developing colorectal cancer in people aged over 65 compared with younger people.¹⁰ That the percentage of patients above 85 years of age seen in the clinic and undergoing colonoscopy is similar suggest that we do not deny patients access to colonoscopy on the grounds of age alone.

In our elderly population the yield of polyps and malignancy of 14.2% and 8.8% respectively was higher than for an average risk population with non-specific large bowel symptoms, of about 5.8% and 0.4%.¹¹ Our study suggests that colonoscopy in the very old is as safe as in the younger patients but may be technically more challenging as shown by a lower overall completion rate. Although our completion rates are comparable to those from previous studies, our failure to complete in many was attributable to the higher incidence of severe diverticular disease with increasing age.^{8,12} Difficulties with bowel preparation resulting in a poorly prepared colon contributed too. Our study supports the findings of a recent prospective study of colonoscopy practice in the UK, which found that there is an inverse relation between caecal intubation rate and increasing age and that it was considerably reduced in the presence of a stricture.¹³ However, our results also support the notion we have previously put forward that bowel preparation in elderly patients is not unsafe¹⁴ although the 21% "inadequate bowel preparation" score we report here is disappointing, as it is higher than in previous studies in older age groups.^{8,15} The risk associated with bowel preparation of clinically significant electrolyte disturbance seems very low even if fluid balance disturbances are commoner in this age group¹⁶ as we have suggested elsewhere.^{17,18}

The most common presentation for patients who were found to have colorectal cancer was anaemia, often an

incidental finding in clinic or in primary care. Many of these patients may not have any gastrointestinal symptoms. Anaemia is but one of several presentations that may be appropriately and helpfully investigated by colonoscopy, even in, or especially in the elderly population.

CONCLUSION

The absence of significant complications and a comparatively high yield of colonic malignancies and polyps reinforces the value of colonoscopy as a diagnostic tool even after 85 years of age. Increasing age alone should not preclude a patient from having a colonoscopy. Our study supports the view set by the National Service Framework, which states that it is appropriate to provide health services, at least in the field of diagnostic colonoscopy regardless of patient age, on the basis of clinical need alone.¹⁹

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