CLINICAL AUDIT

Colonoscopy in the very old: why bother?
K K Y Yoong, T Heymann

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. Physical frailty and diminished mental capacity are common. Gastrointestinal disorders including colonic tumours are more common with advancing age. Colorectal cancer is the second commonest cause of cancer deaths in the UK. The risk of developing the disease increases considerably after the age of 50.

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. 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%.

The risks are thought to be higher in the elderly population. Colonoscopy is particularly useful for patients aged 50–70 years. However, there is less information on its benefit in the very old. 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>
<thead>
<tr>
<th>Indication</th>
<th>Patients Number (%)</th>
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<tbody>
<tr>
<td>Anaemia</td>
<td>120 (40.0)</td>
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<tr>
<td>Rectal bleeding</td>
<td>70 (22.2)</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>60 (19.0)</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>24 (7.6)</td>
</tr>
<tr>
<td>Weight loss</td>
<td>13 (4.1)</td>
</tr>
<tr>
<td>Constipation</td>
<td>13 (4.1)</td>
</tr>
<tr>
<td>Alternating bowel habit</td>
<td>12 (3.8)</td>
</tr>
<tr>
<td>Abdominal mass on examination</td>
<td>5 (1.6)</td>
</tr>
<tr>
<td>Abnormal barium enema</td>
<td>4 (1.3)</td>
</tr>
<tr>
<td>Follow up of previous abnormality</td>
<td>24 (7.6)</td>
</tr>
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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 
adrenomatous 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 increase 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. That the percentage of 
patients is not unsafe although the 21% ‘inadequate bowel 
preparation in elderly patients 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%. Our study suggests that 
colonoscopy in the very old is as safe as in the younger 
patients, several abnormalities were recorded.

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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 
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(68%) went on to have a curative resection.

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.13

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Table 2 Common findings on colonoscopy

<table>
<thead>
<tr>
<th>Findings</th>
<th>Patients Number (%)</th>
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<tr>
<td>Diverticular disease</td>
<td>152 [41.1]</td>
</tr>
<tr>
<td>Polyps</td>
<td>45 [14.2]</td>
</tr>
<tr>
<td>Colorectal cancer</td>
<td>28 [8.9]</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>13 [4.1]</td>
</tr>
<tr>
<td>Angiodysplasia</td>
<td>7 [2.2]</td>
</tr>
<tr>
<td>Normal</td>
<td>78 [24.7]</td>
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</tbody>
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