Primary care

Identifying and managing patients at low risk of bowel cancer in general practice

M R Thompson, I Heath, B G Ellis, E T Swarbrick, L Faulds Wood, W S Atkin

All NHS patients who are suspected to have bowel cancer by their general practitioner should now be seen by a specialist within two weeks. The government introduced this policy in July 2000 in response to concerns that some patients had to wait too long for an outpatient appointment. However, this new policy could distort referral patterns either by increasing the referral of patients with transient symptoms or by increasing the delay for cancer patients presenting with non-typical symptoms. Unless general practitioners act as efficient gatekeepers, specialist services could become overloaded. We explain the basis for the government's guidelines for referral and discuss how to manage patients at low risk of cancer.

Development of guidelines for referral

The Department of Health has developed guidelines to help general practitioners decide which patients require fast track referral and which can safely be treated and monitored in general practice (table).^{1 2} The guidelines were based on data from relevant studies, which were assigned levels of evidence by established methods.³ The grading system for the higher risk symptoms was similar to that used to grade recommendations for hypertension, thrombosis, and diabetes.⁴⁻⁶

Why is selection needed?

The high prevalence of rectal bleeding,^{7 8} changes in bowel habit,⁹ and abdominal pain¹⁰ in the community relative to the incidence of bowel cancer means that most patients with these symptoms are at very low risk of cancer. Many of these symptoms are transient or cause no alarm, and over 80% of patients do not seek medical advice.⁷⁻¹¹ Of those who do, only 40-50% are referred to hospital.^{7 8} The risk of cancer in patients with rectal bleeding, for example, varies from 1:700 in the community⁸ to 1:30 in primary care,¹² and 1:16 in a hospital surgical clinic.¹³ This means that 97% of patients seen in primary care with rectal bleeding do not have cancer.

As abdominal pain and change in bowel habit are more common than rectal bleeding,¹⁴ they will have even lower predictive values for cancer. Careful selection is therefore needed to decide which patients should be referred promptly to hospital. The recently launched public awareness campaign could result in

Summary points

Lower gastrointestinal symptoms are common in the community and primary care but most are benign

Patients at higher risk can be identified for rapid referral from a careful history of symptoms and signs, rectal and abdominal examination, and test for iron deficiency anaemia

Low risk patients can be treated and carefully monitored in primary care

Patients with persistent low risk symptoms may also require referral for investigation

Appropriate identification of patients for rapid referral is essential to avoid overwhelming hospital services and delaying treatment of patients with bowel cancer

more patients consulting their general practitioners,¹⁵ making selection of patients at risk of cancer more difficult and even more essential.

Selecting patients for referral

Initial assessment of patients with lower gastrointestinal symptoms in primary care comprises a careful history, a simple abdominal and rectal examination, and measurement of haemoglobin concentrations. Management has to balance the possible benefits of prompt referral of those with cancer with the risks and costs of unnecessary referral of patients with self limiting symptoms from benign disease (box 1). Although early diagnosis of symptomatic bowel cancer is commonly assumed to improve survival, many studies have not shown this.¹⁶⁻¹⁸ Short delays before referral are unlikely to affect the survival of most patients with bowel cancer.^{1 2 16-18}

Rapid referral of symptomatic patients at low risk of bowel cancer is inappropriate because of the potential harms of investigation and the fact that short time lags before referral will not affect survival of most of those with cancer. Patients with the low risk profiles in

Department of Surgery, Queen Alexandra Hospital, Portsmouth PO6 3LY

M R Thompson
consultant colorectal surgeon

School of Postgraduate Medicine, Queen Alexandra Hospital
B G Ellis
senior lecturer in general practice

Kaversham Group Practice, London
I Heath
general practitioner

New Cross Hospital, Wolverhampton
E T Swarbrick
consultant gastroenterologist

Bowel Cancer Campaign, Twickenham TW1 1QS
L Faulds Wood
patients' representative

Colorectal Cancer Unit, St Mark's Hospital, Harrow, Middlesex
W S Atkin
deputy director

Correspondence to: M R Thompson
michael.thompson@porthosp.nhs.uk

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Department of Health criteria for high and low risk of bowel cancer

	Age group
Higher risk	
Rectal bleeding with a change in bowel habit to looser stools or increased frequency of defaecation persistent for 6 weeks	All ages
Change in bowel habit as above without rectal bleeding and persistent for 6 weeks	>60
Rectal bleeding persistently without anal symptoms*	>60
Palpable right sided abdominal mass	All ages
Palpable rectal mass (not pelvic)	All ages
Unexplained iron deficiency anaemia:	
Men: haemoglobin <110g/l	All ages
Women: haemoglobin <100g/l	Postmenopausal
Low risk	
Patients with no iron deficiency anaemia, no palpable rectal or abdominal mass, and:	
Rectal bleeding with anal symptoms and no persistent change in bowel habit	All ages
Rectal bleeding with an obvious external cause (such as anal fissure, thrombosed or prolapsed pile, rectal prolapse)	All ages
Change in bowel habit without rectal bleeding	<60
Transient changes in bowel habit, particularly to harder or decreased frequency of defaecation	All ages
Abdominal pain as a single symptom without signs and symptoms of intestinal obstruction	All ages

*Soreness, discomfort, itching, lumps, prolapse, or pain.

the table have diagnostic yields of cancer in a hospital surgical outpatient clinic of less than 5%.¹³ The predictive value of these profiles in primary care will be even lower.¹⁹ Patients at low risk can be treated and carefully monitored in primary care on the basis that those with benign disease will have transient symptoms whereas those with serious disease will have persistent and progressive symptoms.

Watching and waiting

The safe use of watchful waiting requires considerable clinical skill to avoid excessive delays in referral of patients with cancer, particularly those presenting with low risk symptoms. Box 2 gives the seven key

Box 1: Benefits and risks of prompt referral

Benefits

- Early diagnosis of bowel cancer:
 - Reduced morbidity and mortality
 - Avoid medicolegal consequences of delayed diagnosis
 - Maintain general practitioners' credibility with patient and family
- Reassure patients they do not have cancer
- Prompt treatment of benign disease

Risks

- Unnecessary worry and fear of cancer
- Physical harm from investigations:
 - Colonoscopy 1:17 000 deaths and 1:1000 perforations
 - Barium enema 1:57 000 deaths
- Overwhelming available resources:
 - Delay in investigation of those with cancer
 - Delaying reassurance of people without cancer
 - Blocking resources for higher risk patients
- Opportunity costs
- Costs for patient and carers:
 - Time off work
 - Travel costs
- Medicolegal costs from damage done by unnecessary investigations and incorrect diagnoses

Box 2: Seven key principles of safe watchful waiting

- Establish the degree of concern and cancer risk from the patient's narrative
- Have a clear understanding of the age, symptom, and sign profiles indicating patients at low risk of bowel cancer (table). Adjust the duration of watchful waiting and speed of referral to the patient's risk
- Ensure the patient understands the benefits of not being immediately referred
- Recognise the importance of the way the information is framed and can be emphasised in writing
- Use a therapeutic diagnostic test with repeat history taking and examinations if there is clinical uncertainty
- If low risk patients do not want to watch and wait, refer to a routine clinic, if necessary, with an urgent appointment
- All patients with persistent or recurrent symptoms, even if low risk, may eventually need referring

principles. The consultation in primary care will determine further demands on the health service and requires time.²⁰ Enabling patients to make informed choices about their treatment is associated with greater satisfaction with the process of care²¹ and may reduce the risk of litigation. The way that information on risk is framed²² and provision of written information²³ may affect how well the patient is reassured and the likelihood of accepting a period of watchful waiting.

Discussion

Efficient and effective management of patients with common symptoms that are only occasionally harbingers of serious disease is a major challenge for the health service at a time when hospital resources are failing to meet increasing demands for investigation.²⁴ Management of patients with lower gastrointestinal symptoms in primary care requires a clear understanding of the general principles governing the management of all low risk situations.²⁵ General practitioners need to ensure that patients understand that everyone lives with a low level baseline risk for bowel cancer, as the disease can exist for a substantial time before producing symptoms. No one has a zero risk of bowel cancer. Development of the low risk profiles described in the table has little practical effect on this baseline risk, particularly in patients younger than 60.

Public education is required to help patients understand that their management has to be based on estimates of risk, and that although good scientific evidence will reduce the uncertainty, it will not eliminate risk altogether.²⁵ Effective management of patients is achieved when those with serious disease are promptly identified and referred; efficient management is achieved when most people without serious disease avoid referral to hospital. It requires considerable clinical skill to balance these two aims.

Although assessment of the risk of bowel cancer is important, it is not the only criterion that determines which patients get referred to secondary care. Anxious young patients at low risk of cancer may be reassured

Algorithm for referral of patients with lower gastrointestinal symptoms

by prompt referral to hospital, whereas a longer period of watchful waiting in frail elderly patients may be appropriate. The figure shows the appropriate route of referral for different risk levels.

Public awareness campaigns are valuable to inform people when they need to see their general practitioner. However, even a small increase in the number of patients presenting to general practice as a result of such campaigns can have a large effect on the demand for hospital resources.¹⁵ Overzealous public awareness campaigns can also cause considerable harm in vulnerable patients without cancer by labelling them as being at risk. Such campaigns need to make it clear that initial treatment with the help of a pharmacist is appropriate and may avoid unnecessary and occasionally harmful investigation.²⁶

Many patients with bowel symptoms can be managed in primary care with careful treatment and watch and wait strategies. In attempting to achieve prompt diagnosis of bowel cancer, doctors should not forget their responsibility to protect the much larger group of patients with benign disease from unnecessary investigation and from overburdening an already overstretched secondary care system.

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