

How has the 'two-week wait' rule affected the presentation of colorectal cancer?

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Abstract

Objective To assess the impact of the 'two-week wait' rule on the presentation of colorectal cancer.

Methods A retrospective study of all patients referred to a fast-track clinic in a colorectal cancer centre over an 18-month period, documenting outcome, especially colorectal cancer diagnosis. Comparison was made with patients diagnosed with colorectal cancer presenting via other routes in the same time period.

Results Over an 18-month period, 462 patients were seen in the fast-track clinic and 64 (13.8%) were diagnosed with colorectal cancer. A further 131 patients with colorectal cancer presented to the department in the same time period through other means; 66 via standard out-patient letters, 26 from other departments and 39 (20%) as emergency admissions. Median (range) time to first clinic was 12 (2–28) days for fast-track and 24 (1–118) days for standard referrals ($P < 0.0001$); median time to first treatment was a further 36 (9–134) and 36.5 (1–226) days, respectively. The fast-track cohort had more advanced staging than those referred

by standard letter. There were 19 Dukes' B, 22 Dukes' C and 14 Dukes' D cancers in the fast-track group compared with 28 Dukes' B, 25 Dukes' C and 6 Dukes' D in the standard referral group. After patient interview, only 337 (73%) of 462 fast-track patients appeared to fulfil the referral criteria but of the 64 diagnosed with cancer, 59 (92%) satisfied the criteria. Of the 66 patients with cancer referred by standard letter, 61 (92%) fulfilled the criteria.

Conclusion Patients referred to the fast-track clinic were seen quicker than those referred by standard letter, but they tended to have more advanced disease. The fast-track referral criteria were fulfilled by most patients with cancer (whether or not they were referred to the fast track clinic), confirming their validity. After detailed interview in the clinic, a quarter of fast-track referrals were found not to satisfy referral criteria, suggesting that prioritization in primary care could be improved.

Keywords Colorectal cancer, fast-track, referral criteria, presentation, treatment

Introduction

Colorectal cancer survival in the United Kingdom is poor compared to other European countries [1] and the USA [2]. The reasons for this are unclear, but may include delays in diagnosis and treatment, inadequate surgery or adjuvant therapy, and the lack of a screening programme. The 'two-week wait' criteria arose from a government wish to improve the referral process for malignant disease. At the same time, due to increasing pressure on clinics, there was also an impetus to prioritize patients according to clinical need. Analysis of presenting symptoms and signs from a single centre revealed that the majority of patients with colorectal cancer presented with a limited

number of symptoms and/or signs [3]. Further analysis using other studies showed which of these symptoms and signs were associated with the greatest risk of colorectal cancer [4]. This formed the basis for referral to the fast-track clinic (Table 1).

We set up a fast-track clinic in July 2000. Patients fulfilling the criteria were seen within 2 weeks of referral in a new dedicated nurse-led clinic or by a colorectal surgeon.

The aim of this study was to assess the impact of the 'two-week wait' rule on the presentation and treatment of colorectal cancer presenting to our unit, which is a designated colorectal cancer centre.

Patients and methods

All fast track referrals to a colorectal cancer centre were analysed from July 2000 to December 2001, documenting symptoms, signs and outcome, especially colorectal

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Table 1 Fast-track referral criteria.

1	Change in bowel habit to looser and/or more frequent for more than 6 weeks
2	Rectal bleeding and no perianal symptoms in persons aged over 55 years
3	Change in bowel habit and any rectal bleeding
4	Iron deficiency anaemia below 10 g/dL in men or postmenopausal women
5	Definite abdominal mass
6	Definite rectal mass

cancer diagnosis. Data were collected prospectively on a standard proforma and transferred to an Access® database. Comparison was made with patients diagnosed with colorectal cancer presenting via other routes during the same time period; here, data concerning presenting factors were collected retrospectively from the notes.

We compared the times to presentation and treatment, staging, sites and operations performed. Statistical analysis was performed using nonparametric tests and χ^2 comparison.

Results

Over the 18-month period of the study, 462 patients were seen in the fast-track clinic of whom 64 (13.8%) were diagnosed with colorectal cancer. A further 131 patients with colorectal cancer presented to the department in the same time period through other means. Sixty-six patients came from standard outpatient appointments, 26 from other departments (of approximately 2500 new patients seen in clinic over the time period of the study) and 39 (20%) as emergency admissions. Median (range) time to first clinic visit was 12 days (2–28 days) for fast-track and 24 days (1–118 days) for standard referrals (Mann–Whitney U, $P < 0.0001$); median (range) time to first treatment was a further 36.5 days (9–134 days) and 36 days (1–226 days), respectively (Mann–Whitney U, $P = 0.7$) (Table 2). Overall median times from referral to treatment were 49 days for fast track and 69 days for standard referrals. The proposed government targets of 62 days from referral to treatment were met in 44/64 (69%) fast track referrals and 27/66 (41%) standard referrals.

Dukes' staging of the cancers in the fast-track group showed fewer Dukes' B and more metastatic tumours than the colorectal out-patients group ($P < 0.003$, $\chi^2 = 14.2$, 3df), (Table 3). In the fast-track group, there were 48 tumours distal to the splenic flexure and 16 proximal, compared with 55 and 11, respectively, in the standard referral group – this is not a significant difference ($P = 0.7$, $\chi^2 = 3.2$, 1df).

Table 2 Times from referral to colorectal team and treatment.

Referral source	Median wait (Interquartile range) from referral to colorectal clinic (days)	Median wait (Interquartile range) from first clinic to treatment (days)
GP (fast-track referral)	12 (9–13)	36.5 (22–55)
GP (standard referral)	24 (14–33)	36 (27–53)
Medical out-patient	100 (53–124)	23 (15–31)
Medical in-patient	11 (4–18)	24 (2–29)

Table 3 Cancer staging.

Referral source	Number of patients				
	Dukes' staging				
	A	B	C1	C2	D
Fast-track*	8	19	18	4	14
Surgical outpatient	9	28	18	5	6
Medical out-patient	3	6	7	1	2
Medical in-patient	1	4	2	0	0
Emergency	2	16	14	2	5

*1 Fast-track patient had no operation, due to angina, so has unknown staging.

Table 4 documents the patients who fulfilled each of the 6 fast-track referral criteria at the time of detailed interview in hospital. Most patients in both fast-track and standard clinics presented with rectal bleeding and/or change in bowel habit.

Out of 462 fast-track patients, 337 (73%) had at least one of the symptom criteria. In 125 (27%) patients, however, the clinic findings were at variance with those documented in the referral form. Of these 125 patients, 47 had a change in bowel habit to less often/harder stools and/or a duration of less than 6 weeks. Twenty-five patients had rectal bleeding, but were aged <55 years, and 13 patients had rectal bleeding with perianal symptoms. A further 20 patients had both rectal bleeding and change in bowel habit not fitting the referral criteria. Three patients had a probable abdominal mass and 1 had a rectal polyp. Sixteen patients had no symptoms or signs at clinic.

Of the 398 fast-track patients who did not have cancer, 278 (70%), fulfilled the fast-track criteria, compared with 59 (92%) of 64 fast-track patients who were subsequently diagnosed with cancer. From the standard referral patient group, 61 (92%) of 66 had satisfied the fast-track clinic criteria (Table 4).

Symptoms	Fast-track clinic			Out-patient clinic cancer patients <i>n</i> = 66
	Total, <i>n</i> = 462	Final diagnosis		
		Not cancer <i>n</i> = 398	Cancer <i>n</i> = 64	
Rectal bleeding > 55 year	201	164	37	48
Change in bowel habit: looser/ more often	198	171	27	26
Rectal bleeding and change in bowel habit	152	123	29	34
Abdominal mass	17	10	7	14
Rectal mass	20	4	16	19
Anaemia	38	25	13	9
Fulfil fast track criteria	337	278	59	61

Table 4 Breakdown of symptoms/signs in fast-track and standard referral groups.

Table 5 Final diagnoses of fast-track patients.

Final diagnosis	No. of patients
No abnormality/irritable bowel syndrome	166
Diverticular disease	105
Haemorrhoids	70
Colorectal cancer	64
Polyp	25
Constipation	18
Inflammatory bowel disease/proctitis	12
Fistula	1
Prostate cancer	1

The final diagnoses of the fast-track patients are shown in Table 5.

Discussion

In this cohort, as one would expect, the fast-track clinic did speed up access to the colorectal clinic. However, median times to treatment for standard urgent referrals in this centre are generally short already. Despite this, we still fell short in our ability to treat all patients within the proposed government targets of 62 days in 31% fast track referrals and 59% standard referrals.

The majority of patients (92%) with colorectal cancer presented with the cardinal symptoms and signs that fulfil the fast-track criteria. Thus, the fast-track criteria appear to be a useful method of selecting patients with a higher probability of malignancy. Approximately equal numbers of cancer patients were referred by General Practitioners in standard and fast-track routes. However, those perceived by General Practitioners to be most urgent and referred on the fast-track proforma presented at a more advanced stage compared with those referred by standard

letter. It is known that patients with shorter symptoms often have more advanced disease [5]. General Practitioners may be more likely to refer patients with rapidly progressing symptoms to a fast-track clinic, thus explaining these findings. Thus, earlier referral demonstrated no apparent advantage in terms of disease stage, but it may have relieved patient anxiety.

There was a discrepancy between the symptoms and signs recorded by General Practitioners and those elicited in the colorectal clinic in 27% of fast-track referrals. Other studies have also shown that many fast-track referrals are inappropriate [6,7].

Possible reasons for this difference may be a lack of time in the general practice consultation, less familiarity with taking colorectal histories, or the patient's recollection of symptoms may have altered. There may also be an understandable desire on the part of General Practitioners to maximize their patient's symptoms to hasten their appointment in hospital.

Overall, only 14% of the fast-track referrals were diagnosed with colorectal cancer. The majority therefore had no abnormal findings or irritable bowel syndrome (36%), diverticular disease (23%) and haemorrhoids (15%). Many more patients present with abdominal and perineal symptoms in primary care, however, and the gatekeeper role of the General Practitioner is crucial; the fast track criteria provide simple guidelines that appear practical and effective in aiding risk stratification [8].

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