Continuity and quality of care in people with coronary heart disease in general practice

This retrospective cohort study looks at whether there is a relationship between the continuity and the quality of care given to patients with coronary heart disease in general practice.

Abstract

Continuity of care is much valued by patients and doctors. It is seen as a core feature of the discipline in general practice, although there is little supporting evidence that it leads to improvement in the care given during the management of patients with chronic disorders. This study shows that increased continuity is not associated with improved clinical care in the secondary prevention of coronary heart disease. The study also shows that it is possible to maintain high continuity for a chronic condition in a group practice with flexible working arrangements. This has implications for recruitment of future general practitioners.

Key words: continuity of care, quality of care, secondary prevention, coronary heart disease.

Introduction

Continuity of care is defined in general practice as care from one doctor, usually spanning an extended time and several episodes of illness. It is much valued by patients and doctors.[1] There is evidence that increased continuity results in benefits including improved compliance with medication, reduction in number and duration of hospital admissions and test ordering, and reporting of emotional problems by patients.[1] Little is known, however, about the effect of continuity on the clinical management of patients in primary care. The aim of this study was to determine whether longitudinal continuity of care[1] is associated with the quality of care given to patients with coronary heart disease.

Subjects and methods

The study was conducted in an inner city training practice (Jarman Score 35) with four full-time and two part-time partners running a combined list system.[2] The list size in 1999 was 9,600 patients, 14.7% of whom were over the age of 65 years. At the time of the study, the practice did not run a special clinic for patients with coronary heart disease and did not have a recall system. Patients were identified by computer searches of prescribing records and disease registers. The health authority also supplied data on patients who had been discharged from local hospitals following myocardial infarction within the past five years. Case notes were retrospectively reviewed to ensure that only patients who had coronary heart disease were included and also to determine the quality of care given. Measures of process and outcome of care were derived from a recent primary care study of secondary prevention of coronary heart disease.[3] Patients were excluded if they were terminally ill, housebound with serious comorbidity, or had dementia. A continuity score was obtained for each patient, this being the percentage of consultations out of the past twelve with the doctor consulted most frequently.[4] Longitudinal continuity tends to be used as a proxy for quality of personal care.[1] We dichotomised continuity into those scoring above or below 50%. Analysis was carried out using the statistical package SPSS.

> ***'Continuity of care is seen as a core feature of general practice'***

Results

Out of the 229 patients under the age of 80 years with coronary heart disease (prevalence 2.4%), 202 patients met the inclusion criteria; of these 134 (66.3%) were male and 89 (44.1%) had a history of myocardial infarction. The mean age of patients was 65.7 years (range 35–80 years). The mean continuity score for the patients was 69.1% (range between GPs 63.0%–73.8%). Table 1 summarises the logistic regression analyses of factors associated with measures of process and outcome of care. Continuity is not associated with quality of care except for an association with assessment for left ventricular dysfunction. However, the number of patients assessed for this was small. Duration of illness was the strongest predictor of quality of care. Patients with a long history of coronary heart disease received lower quality of care than those diagnosed more recently.

Discussion

This study examined the relationship between continuity and quality of care of a chronic disease. The results are based on patients from one practice; nevertheless, the prevalence, mean age and the proportion of patients with a past history of myocardial infarction is similar to those published.[3] Compliance with process and outcome measures in this study are better than those recently reported.[3] Although increased conti-

Table 1. Multiple logistic regression analysis for annual compliance with process and outcome of care*

		Odds ratios[f] (95% confidence intervals)					
	Compliance: number (%) (n=202)	**Continuity[e]**	**CHD[†] duration (years)**	**Reviewed in past 12 months**	**Male patient**	**Age of patient[†]**	**Adjusted R^2 (%)**
Taking aspirin[a]	134/183 (73)	-	0.91[f] (0.86–0.97)	3.86 (1.11–13.38)	-	-	10
Lipids checked	94 (46.5)	-	0.93[f] (0.88–0.98)	-	-	-	6.8
Lipids normal[b]	46 (22.8)	-	-	-	-	-	-
Blood pressure checked	153 (75.7)	-	0.93[f] (0.88–0.98)	14.58 (3.00–70.74)	-	-	13.7
Blood pressure </= 140/90 mmHg	69 (34.2)	-	0.92[f] (0.87–0.97)	-	2.14 (1.09–4.22)	-	6.6
LVSD assessed by echocardiography[c]	31/89 (34.8)	4.01 (1.12–14.38)	-	-	-	0.94 (0.89–1.00)	9.1
Taking beta blockers[d]	29/68 (42.6)	-	0.93[f] (0.88–0.99)	-	-	-	3.0
Smoking checked	83 (38.1)	-	-	-	1.95 (1.02–3.75)	0.95 (0.92–0.98)	6.6

Key: CHD = coronary heart disease; LVSD = left ventricular systolic dysfunction; *variables included if significant at p<0.05; [†] odds ratio for unit increase; [a]excludes 19 patients for whom aspirin was contraindicated; [b]lipids </= 4.8 mmol/L in post-myocardial infarction patients and </ = 5.5 mmol/L for angina patients;[5] [c]post-myocardial infarction patients only (n=89 patients); [d]excludes 21 patients for whom beta blockers were contraindicated; [e]continuity dichotomised into high and low continuity; [f]coefficient was negative indicating that longer duration of coronary heart disease is associated with *lower* compliance

Key messages

- Continuity of care is much valued by patients and doctors
- Continuity of care is not generally associated with quality of care
- Duration of illness is the strongest predictor of quality of care
- High continuity for a chronic condition can be achieved in a group practice with flexible working arrangements

nuity is associated with high levels of patient satisfaction, our results show it is not associated with improved clinical care in the secondary prevention of coronary heart disease. This may be a result of the high continuity achieved by doctors in this practice. This study shows that it is possible to maintain high continuity for a chronic condition in a group practice with flexible working arrangements. This has implications for recruitment of future general practitioners.

> ***'Increased continuity is not associated with improved clinical care in secondary prevention of coronary heart disease'***

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