

Warfarin anticoagulation in primary care: a regional survey of present practice and clinicians' views

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SUMMARY

The demand for anticoagulation services is rising. Warfarin anticoagulation has been shown to reduce the risk of stroke in patients with non-valvular atrial fibrillation by 68%. This raises issues about how services are best organized to initiate and monitor anticoagulation in this potentially large group of patients. We report the results of a regional postal survey undertaken to describe the views of general practitioners and consultants regarding warfarin anticoagulation in light of this potentially high increase in demand.

Keywords: warfarin; anticoagulation; atrial fibrillation; general practice.

Introduction

SEVERAL studies have reported convincing evidence of the effectiveness of warfarin anticoagulation in preventing stroke in patients with non-valvular atrial fibrillation (NVAF).¹ These studies have effected a debate in the medical literature about the implications of the results for both primary and secondary care.^{2,3} Discussion has focused upon the implications of anticoagulating potentially large numbers of patients. A general practice serving 10 000 patients could expect to have approximately 70 patients with a history of atrial fibrillation.⁴

The attitudes of clinicians in both primary and secondary care will influence how anticoagulation services adapt or develop. We report the findings of a regional survey that describes the current practice of clinicians and their views about initiating and monitoring warfarin anticoagulation in a primary care setting.

Method

A postal questionnaire, with two reminders if required, was sent to a random 50% sample of general practitioners (GPs) ($n = 824$) and to all consultants in the specialties of general medicine, care of the elderly, cardiology, haematology, neurology and nephrology ($n = 207$) in the former Northern Region, which provides

health services to a population of over three million.

The questionnaire was developed following a literature review and semi-structured interviews with clinicians to identify issues they felt to be important in the management of warfarin anticoagulation. It included sections on details of current anticoagulation services and practice, and views on anticoagulating patients in primary and secondary care settings. Questions seeking respondents' views used a five-point Lickert scale with the categories, strongly agree, agree, neither agree nor disagree, disagree or strongly disagree.

Results

The response rate was 56% (459/824) for GPs and 79% (163/207) for consultants. GP respondents were more likely to be from fundholding or training practices ($P < 0.05$).

At the time, GPs were more involved in monitoring (78%, 325/419) than initiating (32%, 134/417) warfarin anticoagulation. Only 3% (13/387) held specific anticoagulation clinics in their practice.

Both GPs and consultants were asked about the perceived benefits of undertaking warfarin anticoagulation in primary and secondary care. Eighty nine per cent (392/439) of GPs and 85% (133/157) of consultants agreed that management in primary care offered better access, and 85% (373/439) of GPs and 73% (115/157) of consultants felt that primary care offered a greater continuity of care for warfarin anticoagulation than secondary care. Consultants (82%, 130/159) felt that better warfarin control was achieved by hospital anticoagulation clinics than in a primary care setting. The majority of GPs did not feel that this was the case.

There was considerable concordance in the views of GPs and consultants on the capacity of primary care services to manage anticoagulation (Table 1). Both groups felt that patients would prefer to have their anticoagulation managed in primary care, and that more anticoagulation should be undertaken in that setting. Most felt that anticoagulation monitoring could be safely carried out in primary care, although concerns were expressed by 5% (21/442) of GPs and 12% (19/157) of consultants. Respondents were less sure whether warfarin therapy could be safely initiated in primary care.

GPs felt that the factors that limited their ability to manage warfarin anticoagulation were, lack of time (57%, 248/436), delay in receiving laboratory results (40%, 175/438), potential interactions with other medication (40%, 177/439), fear of litigation (29%, 126/440), and space constraints (22%, 95/437). Most GPs (70%, 311/443) did not feel that warfarin anticoagulation was too expensive to manage in primary care.

GPs identified the following factors that would increase their willingness to manage warfarin anticoagulation: guidelines on whom to anticoagulate (78%, 342/436); availability of consultant advice (77%, 338/441); guidelines on managing anticoagulation (66%, 288/438); further remuneration (63%, 276/440); encouragement by local haematologists (58%, 253/439); and further training (48%, 211/437).

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Table 1. Attitudes of GPs and consultants on factors that might limit anticoagulation in general practice.

	GPs		Consultants	
	Agree ^a	Disagree ^b	Agree ^a	Disagree ^b
More management of warfarin anticoagulation should be undertaken in primary care	43%	18%	58%	17%
Patients would prefer to have their warfarin anticoagulation managed by their GP	60%	6%	43%	8%
GPs cannot initiate warfarin anticoagulation as efficiently as hospital provided services	32%	42%	40%	38%
GPs cannot monitor warfarin anticoagulation as efficiently as hospital provided services	21%	62%	28%	50%
GPs do not have enough experience to manage the warfarin anticoagulation of their patients	18%	60%	27%	37%
Warfarin anticoagulation treatment can be safely initiated by GPs	56%	19%	61%	22%
Warfarin anticoagulation treatment can be safely monitored by GPs	87%	5%	77%	12%

^aIncludes categories 'strongly agree', 'agree'; ^bincludes categories 'strongly disagree', 'disagree'. Denominators vary for GPs from 440 to 444, and for consultants from 155 to 158.

Discussion

Traditionally, anticoagulation services have been hospital based and in most instances anticoagulation has been undertaken for acute conditions (e.g. deep vein thrombosis or pulmonary embolus), or following specialist assessment (e.g. valvular heart disease). Patients with NVAf require long-term anticoagulation for primary or secondary prevention of cerebrovascular events. As warfarin is being prescribed prophylactically, patients would benefit from a discussion of the pros and cons with their GP, and an involvement in decision making. There are important factors, beyond purely clinical indications, in making decisions as to whom and when to treat. Factors such as likely compliance, social support, frailty and falls, and capacity to understand therapy will often be best assessed in primary care.

The results of this regional survey suggest that clinicians in both settings perceive that patients may prefer and benefit from having their warfarin anticoagulation managed in primary care. Furthermore, there is a willingness among GPs to take on this role, provided that they are given appropriate advice and support. There was a high demand for guidelines in particular. In order to increase the management of anticoagulation in primary care it is important to recognize the barriers to doing this and the factors that could facilitate change.

Anticoagulant control in general practice can be superior to that obtained in a dedicated hospital outpatient clinic,⁵ although there is a need for more evaluation of primary care-based services. Audit of warfarin control and monitoring of complications should be an integral part of any anticoagulation service whether in primary or secondary care. Computer-assisted control of anticoagulation has been shown to improve the quality of anticoagulation and may have a role to play.⁶

There was a significantly higher response rate from GPs from fundholding and training practices. This may bias the results as non-responders may be less positive about anticoagulation in primary care. However, the number of GPs in fundholding and training practices were in a minority, and overall we feel that the results are representative of GPs' views locally.

Any shift of warfarin management to primary care would need a careful planning of services and appropriate resources to meet potential demand, effective measures for quality control, and would need to take account of the expressed concerns of clinicians.

References

1. Atrial Fibrillation Investigators. Risk factors for stroke and efficacy of antithrombotic therapy in atrial fibrillation. *Arch Intern Med* 1994; **154**: 1449-1457.
2. Sudlow CM, Rodgers H, Kenny RA, Thomson R. Service provision and use of anticoagulants in atrial fibrillation. *BMJ* 1995; **311**: 558-560.
3. Sweeney KG, Gray DP, Steele R, Evans P. Use of warfarin in non-rheumatic atrial fibrillation: a commentary from general practice. *Br J Gen Pract* 1995; **45**: 153-158.
4. Lip GYH, Beevers BG, Coope JR. Atrial fibrillation in general and hospital practice. *BMJ* 1995; **312**: 175-178.
5. Pell JP, McIver B, Malone DNS, Alcock J. Comparison of anticoagulant control among patients attending general practice and a hospital anticoagulant clinic. *Br J Gen Pract* 1993; **43**: 152-154.
6. Galloway MJ, Foggin JJ, Dixon S. Introduction of computer assisted control of oral anticoagulation in general practice. *J Clin Path* 1995; **48**: 1144-1146.

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