Monitoring anticoagulant control in general practice: comparison of management in areas with and without access to hospital anticoagulant

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SUMMARY
Background. Hospital anticoagulant clinics are available only in some areas. There is little information on the contribution of general practitioners to oral anticoagulant monitoring, and whether their management varies with access to hospital clinics.

Aim. A study was undertaken to compare general practice management of anticoagulant therapy in two health boards with contrasting access to hospital clinics.

Method. A postal questionnaire was sent to the senior partners in all 198 practices in Lothian and Fife, Scotland. Results. Lack of access to hospital clinics in Lothian health board resulted in more practices reporting taking sole responsibility for anticoagulant control than in Fife where there was access (P<0.001). However, there was no significant difference in management policies. Overall, 93% of practices used a protocol for thrombotest target ranges, but 75% had no policy on review frequency and only 2% assessed complication or failure rates. Reduced access to hospital clinics was associated with a decreased likelihood of favouring hospital involvement. Sole responsibility for anticoagulant management was undertaken by 56% of general practices, although only 21% of doctors viewed this as ideal. Most general practitioners felt that they should monitor patients on anticoagulant therapy but should refer to hospital those with problematic control.

Conclusion. Access to hospital clinics affected the degree of involvement of general practitioners in oral anticoagulant monitoring, but did not considerably alter their management practice.

Keywords: thrombolytic therapy; drug monitoring; drug long term use; management of disease.

Introduction
Increasing numbers of patients on long-term anticoagulant therapy generate a considerable workload for those involved in their management.1,5 There is a lack of consensus on whether responsibility for anticoagulant monitoring should lie within the remit of the general practitioner or hospital, and this has resulted in varying access to dedicated hospital clinics. A previous study has reported that anticoagulant control may be managed better by general practitioners.6 However, there is little information about the current involvement of general practitioners in anticoagulant control and whether their practice varies with access to hospital clinics.

A study was undertaken to assess the practice and views of general practitioners with regard to oral anticoagulant control in two Scottish health boards with different access to hospital clinics.

Method
General practice management of anticoagulant control was compared in Fife and Lothian health boards. Fife is served by two district general hospitals, both of which run anticoagulant clinics. Despite serving a larger population, none of the hospitals in Lothian currently provides an anticoagulant clinic.

In June 1993 a questionnaire was sent to the senior partners of the 198 practices in Lothian and Fife. Information was requested on the strategies adopted to monitor patients; use of policies for thrombotest target ranges and review intervals; whether attempts had been made to audit process or outcome; and views on the ideal system of review. A follow-up letter was sent to non-respondents.

Significant differences between health boards were assessed using the chi square test and the association between current and perceived ideal practice was expressed as a kappa statistic.

Results
Fifty seven general practitioners in Fife (89.1%) and 120 in Lothian (89.6%) returned completed questionnaires. Overall, 56.5% of practices took complete responsibility for anticoagulant control: only 1.7% (three practices in Fife) had no involvement. There were significant differences between the two health boards, with fewer practices in Fife taking sole responsibility for anticoagulant therapy (29.8% of 57 practices in Fife compared with 69.2% of 120 in Lothian, χ²=32.8, 4 df, P<0.001).

Overall, most general practitioners thought they should monitor patients on anticoagulant therapy but refer patients to hospital when control was problematic or if the patient requested referral (Table 1). Opinions on ideal management differed between the health boards, with doctors in Fife being in favour of greater hospital involvement (Table 1). However, these differences did not simply reflect differences in current practice since there was no significant association between current practice and perceptions of ideal practice (kappa = 0.3). Only 21.5% of general practitioners believed that anticoagulant control should be their sole responsibility, compared with 56.5% currently adopting such practice (P<0.001). Of those 100 doctors currently managing all patients on anticoagulant therapy registered with them, 63.0% felt they should be able to refer to hospital patients with problematic control. Few (25) felt anticoagulant control should be restricted to hospitals.

Of 154 group practices, 98.1% involved all partners in anti-
coagulant control of patients. In 6.6% of these the on-call doctor was responsible for reviewing all results returned that day. The remaining 93.4% of practices tried to ensure that patients were reviewed routinely by the same doctor. Twelve practices (6.8%) were fundholders. Although doctors in fundholding practices had similar views on ideal practice compared with doctors in non-fundholding practices, they were significantly more likely to be solely responsible for anticoagulant control (91.7% of 12 versus 53.9% of 165, $\chi^2 = 6.5$, 1 df, $P<0.05$). In 82.5% of practices, nurses assisted with venepuncture and, in 13.0%, patients were reviewed solely by a nurse, although dosage adjustments were invariably initiated by a doctor. Only 4.0% of practices had a dedicated anticoagulant session, the remainder accommodating patients during normal surgeries. In 83.1% of practices, patients were asked to telephone the practice to obtain their results; only 9.6% reported that they routinely telephoned patients. There were no significant differences between health boards in the division of responsibilities between doctors and nurses, or review procedures.

Although 93.2% of practices applied some form of protocol on target ranges, only 30.5% used the British Society for Haematology guidelines (Table 2). Of 171 responding practices 75.4% had no agreed policy on the frequency with which to monitor patients. Of those 42 who had, 92.9% monitored control every four to eight weeks. One practice reviewed patients fortnightly and two practices only every three months. Seventy nine per cent of practices (136/173) had never audited any aspect of their anticoagulant management. Of those 37 that had, 54.1% reported assessing patient throughput, 45.9% compliance and 67.6% control. Complication and failure rates had been evaluated in only 2.3% of all practices. There were no significant differences between health boards in the use of policies and audit.

Discussion

The main arguments in favour of general practice monitoring of anticoagulant therapy are better knowledge of concomitant diseases and medication and greater continuity of care. These advantages were secured in many group practices by the use of personal lists, but negated in a small number where results were reviewed and dosage adjustments made by the duty doctor for that day. Perceptions of ideal management varied according to whether or not there was access to hospital clinics. However, this may simply reflect differences in confidence since there were no discernible differences between health boards in general practice management of the condition.

Audit is an essential pre-requisite of therapeutic quality control. Although one fifth of practices assessed the structure and process of their anticoagulant management, only 2% evaluated outcome in terms of complication and failure rates. The establishment of anticoagulant registers in all practices could facilitate both patient management and audit, and computer assisted management may further enhance quality control.\(^7\)

Extension of the role of nurses in primary care can contribute to more efficient monitoring of anticoagulant control. By nurses assisting in venepuncture and checking compliance, the workload of the general practitioner can be reduced while still maintaining supervision of dosage changes.

Considerable experience in warfarin control exists among general practitioners. Even in Fife, where hospital anticoagulant clinics were readily accessible, almost one third of practices monitored all registered patients on warfarin, and all but three had some involvement in anticoagulant control. Managing anticoagulation requires a good knowledge of all aspects of a patient's health, including concomitant illnesses and drug therapies, which the general practitioner is well placed to acquire. Certainly, few doctors included in this study thought that the advantages of specialist training were sufficient to favour hospital review as the norm. However, they accepted that hospital clinics had an important role in the monitoring of those patients for whom control was problematic.

References


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