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The effect of age and quality of life on doctors' decisions to anticoagulate patients with atrial fibrillation

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Abstract

Introduction: we report the results of a questionnaire survey into the effect of patients' age and of medico-social factors on hospital consultants' and general practitioners' reported use of warfarin anticoagulation to treat patients with non-valvular atrial fibrillation (NVAF).
Methods: half of the general practitioners ($n = 824$) and all consultants in specialities likely to be involved in treating such patients ($n = 207$) in the former Northern Region were sent questionnaires asking for their views on the treatment of patients with atrial fibrillation using anticoagulants.
Results: the response rate was 56% (459/824) for general practitioners and 76% (163/207) for consultants. A patient's age was of significance to many clinicians. Forty-six percent of consultants and 43% of general practitioners felt that no patient above the age of 84 years should be treated. Medico-social factors also had an important effect on whether clinicians felt patients ought to be treated with anticoagulants. A patient's quality of life was the most important medico-social factor, with handicap and place of residence having much smaller effects.
Conclusions: age and medico-social factors have an important effect on clinicians use of anticoagulants in NVAF and reluctance to treat elderly subjects is likely to explain much of the apparent under-use of this treatment.

Keywords: *age factors, anticoagulants, atrial fibrillation, cerebral embolism and thrombosis, cerebrovascular disorders, physicians practice patterns, quality of life, warfarin*

Introduction

Several large randomized controlled trials have demonstrated that treating selected patients who have non-valvular atrial fibrillation (NVAF) with anticoagulants reduces their risk of stroke [1–7]. There has been considerable debate as to how these results ought to be incorporated into practice and particularly about the selection of patients for treatment [8–10]. Large numbers of patients, who on strictly medical criteria might be appropriate for treatment, are not receiving it [11–13]. The reasons for this are unclear, but semistructured interviews with clinicians that we carried out before embarking on this survey demonstrated that a range of factors were considered when deciding whether treatment should be offered. These included patient's age, quality of life, place of residence and handicap. Such considerations may have an important effect on the number of patients treated. For example, as the median age of those with NVAF is 75 years [14], a widespread feeling amongst clinicians that a patient above this age should not be treated could halve the total number of patients with NVAF given anticoagulants. We carried out a questionnaire survey to explore whether age or medico-social factors might influence the clinical practice of general practitioners and consultants with regard to anticoagulation of patients with NVAF and whether these factors influenced general practitioners and consultants to a different extent.

Methods

A 50% random sample of the general practitioners ($n = 824$) and all hospital consultants with a commitment to general medicine (including specialists also involved in acute general medical admissions), cardiology, care of the elderly, haematology, neurology and renal medicine ($n = 207$), in the former Northern Region, were sent a

questionnaire seeking their views on the use of anticoagulants in patients with atrial fibrillation. Two reminders were sent to non-responders.

We report respondents' views on which patients with NVAF should not be treated with anticoagulants. Respondents were asked to grade their responses to a series of statements on a five-point Lickert scale which ranged from 'strongly agree' to 'strongly disagree' (see Table 1). Amongst the groups described were patients in three age bands, with two levels of quality of life, four degrees of handicap (based on the Oxford Handicap Scale [15]) and living in three different types of accommodation. We should emphasize that we were not asking clinicians whether they thought these groups of patients were more likely to have other contraindications to treatment (such as dementia, falls or poor compliance), but, separately, whether they felt that patients in these groups ought not to be treated because of their age, their quality of life, their degree of handicap or their place of residence itself.

The significance of differences between general practitioners and consultants was calculated by comparing the proportion agreeing or strongly agreeing with each statement using χ^2 with Yates' correction or Fisher's exact test where appropriate.

Results

Overall response rates from general practitioners and consultants were 56% (459/824) and 79% (163/207) respectively. General practitioner fundholders and general practitioners from training practices were slightly more likely to respond than other general practitioners [152 of 247 fundholders responded (61.5%) compared with 304 of 577 non-fundholders (52.7%) and 163 of 248 from training practices (65.7%) compared with 293 of 575 (50.9%) from other practices ($P<0.05$ in both cases)]. The results are summarized in Table 2.

A large proportion of the clinicians in both groups felt that it was inappropriate to treat patients above a certain age, although this remained a minority view even when they were asked about treatment of patients aged 85 years or more (46.1% of general practitioners and 42.9% of consultants felt that patients over 85 should not be anticoagulated). A substantial minority of clinicians also felt that it would be inappropriate to treat patients with a severely impaired quality of life (38.4% of general practitioners and 45.8% of consultants), although very few felt that a mild impairment of quality of life should prevent patients being treated with warfarin (6.1% of general practitioners and 5.2% of consultants). Relatively few clinicians felt that handicap or place of residence were important considerations. Even where a patient was so handicapped that independent existence was impossible, few consultants (22.1%) or general practitioners (24.3%) felt that treatment should not be given. Only a few consultants (12.3%) and general practitioners (9.2%) felt that patients who required nursing-home care should not be treated.

The views of consultants and of general practitioners on these issues were very similar. However, more general practitioners than consultants were unwilling to treat those between 65 and 74 (7.9% of general practitioners and 2.0% of consultants $P=0.017$) and those between 75 and 84 (19.4% of general practitioners and 9.1% of consultants $P=0.002$). No significant differences were noted in views on the treatment of those over 85. More consultants than general practitioners felt that patients with a severely

Table 1. Questions asked of clinicians in the survey: "In my opinion, patients with non-valvular atrial fibrillation and the following features should not be anticoagulated with warfarin"

Age (years)
65–74
75–84
85+
Reduction in quality of life
Mild
Severe
Handicap (chronic symptoms from any other disease)
None
Symptoms leading to some restriction in lifestyle
Symptoms leading to significant restriction in lifestyle or partial dependence on others
Symptoms preventing independent existence
Place of residence
Sheltered accommodation
Residential care
Nursing home

Table 2. Responses to the statement: "In my opinion, patients with non-valvular atrial fibrillation and the following features should not be anticoagulated with warfarin"

Patient characteristic	Percentage responding			
	General practitioner		Hospital consultant	
	Agree/ strongly agree	Disagree/ strongly disagree	Agree/ strongly agree	Disagree/ strongly disagree
Age (years)				
65-74	7.9[a]	52.1	2.0[a]	84.3
75-84	19.4[a]	36.1	9.1[a]	64.7
≥85	46.1	20.2	42.9	28.6
Change in quality of life				
Mild reduction	6.1	48.5	5.2	68.2
Severe reduction	38.4[a]	25.3	45.8[a]	22.6
Chronic symptoms from any other disease				
None	8.0	58.7	11.8	69.0
Some restriction in lifestyle	5.9	56.0	5.9	76.5
Significant restriction in lifestyle/ partial dependence on others	16.3	38.0	16.9	50.6
Preventing independent existence	24.3	30.6	22.1	37.7
Living arrangements				
Sheltered accommodation	2.4	60.7	2.6	78.7
Residential care	4.7	58.3	3.9	72.9
Nursing home	9.2	55.4	12.3	59.4

[a]Significant difference ($P < 0.05$) between proportion of general practitioners and consultants agreeing with statement.
Denominators vary slightly according to the number of respondents who answered each individual question (399-406 for consultants and 152-155 for general practitioners).

impaired quality of life should not be treated ($P = 0.02$), but there were no differences in views on the treatment of those with mildly impaired quality of life. There were no significant differences between general practitioners and consultants in their responses to questions on handicap and place of residence.

Discussion

Six randomized controlled trials have demonstrated that treatment of selected patients with NVAF substantially reduces their risk of stroke [1-7]. However, the implementation of these research findings in clinical practice has been slow and studies have shown considerable under-use of warfarin in patients with atrial fibrillation [10-13]. Reasons for this remain unclear, but we thought it likely that clinicians tend not to use anticoagulants in many patients with NVAF because of consideration of the patient's age or for other reasons that might be termed medico-social. Our results demonstrate that age and medico-social factors have a substantial effect on whether doctors feel that patients with atrial fibrillation should be treated with anticoagulants. Age and quality of life are of particular importance.

In terms of explaining the apparent under-use of warfarin treatment [10-13], the effect of age is likely to be of most significance. Although the prevalence of severely impaired quality of life, severe handicap and residence in institutions in patients with NVAF is unknown, it is unlikely that more than a few patients with NVAF are in these situations. These medico-social factors could explain part of the under-use of warfarin only if a high proportion of clinicians felt that patients to whom they applied should not be treated. However, the results of this survey suggest that severe handicap and residence in an institution would deter only a small minority of clinicians from using warfarin and suggest that these factors are of little help in explaining the poor uptake of treatment. Many clinicians, however, were deterred from using treatment in the more elderly patients, who make up a high proportion of those with NVAF [14]. This aversion to using warfarin in elderly people is likely to greatly reduce the use of warfarin on the population level and could explain much of the current under-use.

On the individual patient level, we would agree that it may be inappropriate to offer preventative treatments to patients whose quality of life is already substantially impaired. However, the apparent effect of age on clinicians' treatment decisions is of concern,

particularly as the reduction in stroke risk that anticoagulation provides for elderly patients is greater than that in younger patients [7] and, at least in females aged 75 and over, adjusted-dose warfarin is far superior to alternative lower intensity regimes and/or aspirin [16]. As general practitioners are likely to be responsible for most decisions about which patients should be offered anticoagulants, the fact that general practitioners were more likely to be deterred from treatment by a patient's age heightens this concern.

There are several explanations for the effect of age on clinicians responses. Firstly, it is possible that many clinicians believe that it is inappropriate to offer preventative treatment to patients of advanced age for ethical reasons. Arguments have been made for discrimination against older patients on the grounds that, particularly where limited resources are available, it is more important to save the young [17]. Such arguments have been condemned by many organizations, including the British Medical Association [18], but remain widely held amongst health care workers and in society.

Secondly, it may be that many clinicians believe that the inconvenience of anticoagulant treatment is greater in elderly people simply by reason of their more advanced age and that this inconvenience is so large that it overwhelms the potential benefits of treatment. If there is to be equity in health care provision and patients with equal chance of benefit from treatment given equal opportunity to receive it, then strenuous efforts will have to be made to ensure that anticoagulant treatment is no more difficult for elderly patients than for young subjects.

Finally, it is possible that many clinicians believe that the risks of treatment with anticoagulants rise with age *per se*, such that increased bleeding amongst the old offsets any gains they may have from prevention of stroke. Although many clinicians may believe that treatment is less desirable in elderly patients because of an increased risk of bleeding, there is little evidence to support this view. A recent comprehensive review of the risks of anticoagulation concluded that there were insufficient data to say whether age was or was not a risk factor for bleeding complications [19]. Although some studies have concluded that age is a risk, most have not been able to consider the many confounding factors (such as co-morbidity and polypharmacy) which may be in operation. Most studies reporting an increase in bleeding with age show only a relatively modest increase [20-22] which would be more than offset by the much greater benefits which elderly people are likely to gain from treatment, by virtue of the greater absolute reduction in stroke risk which anticoagulation gives them [7]. These considerations led the recent American College of Chest Physicians consensus conference, which has previously taken the lead in providing guidance to clinicians on the use of anticoagulants, to promote treatment of more elderly patients in their recent guidelines on the use of anticoagulants in NVAF [23].

We conclude that clinicians' decisions to use anticoagulants in NVAF are greatly affected by the patients' quality of life and by their age. Much of the apparent under-use of anticoagulants in patients with atrial fibrillation may be due to clinicians' consideration of patients' age. The effect of patients' age on clinicians' use of anticoagulants is without clear foundation, is unlikely to lead to equitable treatment of individual elderly patients and may be preventing much of the substantial overall reduction in stroke incidence which could be achieved by appropriate use of warfarin in those with atrial fibrillation.

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Key points

- Warfarin reduces the risk of stroke in patients with atrial fibrillation but treatment appears to be underused.
- We asked clinicians in a postal questionnaire whether a patient's age and medico-social factors should affect use of this treatment and found that advanced age and severely impaired quality of life may dissuade them from using warfarin.
- Fears of the use of warfarin in advanced age are poorly supported by evidence.
- As half of patients with atrial fibrillation are over 75 years the effect of age on clinicians decisions is likely to explain much of the under-use of this treatment.

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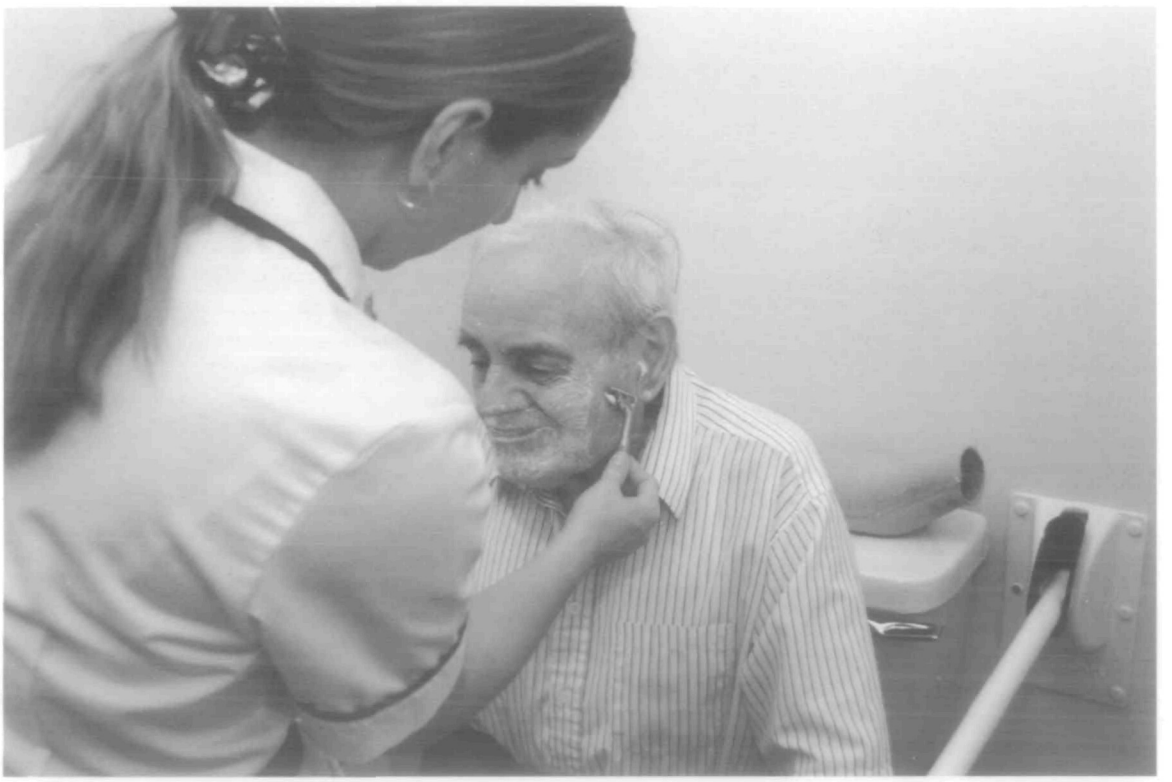

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