

# Study of the prevalence of atrial fibrillation in general practice patients over 65 years of age

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**SUMMARY.** Eight hundred and nineteen symptomless patients over the age of 65 years in one general practice were surveyed to establish the prevalence of atrial fibrillation among this age group. Thirty patients were found to have atrial fibrillation and 20 of these patients were already known to the practice. Of the 30 patients 17, six of whom were newly discovered cases, had no contraindications to treatment with anticoagulant drugs. Any randomized trial of anticoagulant drugs among symptomless patients in this age group would require many participating centres and major financial outlay.

## Introduction

**A**TRIAL fibrillation with<sup>1</sup> or without<sup>2</sup> an identifiable primary cardiac lesion, has been well documented as a cause of stroke. Surveys of hospitalized patients with stroke have revealed a prevalence of atrial fibrillation of up to 40% on admission.<sup>3</sup> Trials of secondary prevention with anticoagulant drugs may be possible, based on this prevalence.<sup>4</sup>

Among the elderly, the risks of treatment with anticoagulant drugs are higher than in younger patients, because multiple pathology and its treatment, physical and psychiatric disability and social problems increase the difficulties of monitoring therapy. Although anticoagulant drugs are widely used to prevent primary stroke in patients with atrial fibrillation, no adequate trial of their efficacy has been carried out. The feasibility of such a trial depends on the prevalence of atrial fibrillation in the community. Clearly, if 40% prevalence of atrial fibrillation were a consistent figure among the elderly, then a randomized trial of anticoagulant drugs would be feasible, with a view to the prevention of stroke in the elderly.

One epidemiological study<sup>5</sup> of ischaemic heart disease in a randomly selected elderly population suggested a 5% prevalence of atrial fibrillation. Another study of an elderly population<sup>6</sup> revealed a 2% prevalence of atrial fibrillation among those surveyed. However, only those patients who were capable of attending the local health centre were studied and some patients with the dysrhythmia (and the greatest risk of developing an embolic stroke) may have been too ill to attend.

In this study a deliberate effort was made to survey those patients who were unwilling or unable to attend the health centre.

## Method

All symptomless patients over the age of 65 years on 1 December 1983 were identified from the age-sex register of a large general

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practice in Tamworth, Staffordshire. The practice has a list size of 11 000 patients, five partners and four practice nurses.

Initially patients in sequential age groups were invited by post to attend the health centre for a range of tests which were performed by one of the practice nurses. The tests included a 12-lead electrocardiogram recording. Those patients who were unable or unwilling to come to the health centre were visited at home by one of the nurses unless the patient refused the visit. All the patients taking part in the study were seen within 18 months.

The electrocardiogram tracings were analysed by two doctors (P.D.K. and J.D.H.). Patients identified as having atrial fibrillation were further assessed for their suitability for treatment with anticoagulant drugs on the basis of clinical consultation or by scrutiny of the records. More sophisticated investigation, for example echocardiography, was not possible as the necessary equipment was only available at distant hospitals.

## Results

Using the practice age-sex register 1015 symptomless patients over the age of 65 years were identified. Of these, 196 refused to take part in the study or had moved or died. Therefore 819 patients were available for study. Of these, 500 patients were tested at the health centre, and 319 in their own homes.

Of the 819 patients, 30 (3.7%) were discovered to have atrial fibrillation and 10 of these were new cases. The prevalence of atrial fibrillation rose steadily with increasing age (Table 1). A primary cause was clearly identified in four of the patients with atrial fibrillation (one was a new case) — two had clinical evidence of mitral valve disease, one had associated chest pains suggestive of ischaemic heart disease and one had clinical and biochemical hyperthyroidism. Among the remaining 26 patients the primary cause was not clear, although there were several patients with associated hypertension: a single blood pressure reading above 170/105 mmHg.

Of the 20 patients with atrial fibrillation already known to the practice, 11 had no evidence of a tendency to bleeding or other contraindication to treatment with anticoagulant drugs. Of the remaining nine patients four were unsuitable for treatment on medical grounds and five were unable or unwilling to take tablets. For a small number of these patients already known to the practice the initial tests were carried out at home and further consultation or investigation was not carried out because of the lack of available transport, or because the general practitioner considered it inappropriate. However, all relevant details were already documented in the case notes, so further enquiries were unnecessary.

**Table 1.** Cases of atrial fibrillation among different age groups.

Age (years)	Number of patients studied	Number (%) with atrial fibrillation
65-69	119	4 (3.4)
70-74	297	8 (2.7)
75-79	207	7 (3.4)
80-84	111	6 (5.4)
85+	85	5 (5.9)
Total	819	30 (3.7)

Of the 10 newly identified patients with atrial fibrillation, four were found to be unsuitable for treatment with anticoagulant drugs on medical grounds — one had an active peptic ulcer, two were taking non-steroidal anti-inflammatory drugs for polyarthrititis and for one patient there were several medical factors. There was no obvious contraindication to the use of anticoagulant drugs in the remaining six patients.

### Discussion

This study set out to establish the prevalence of atrial fibrillation in an elderly population, in order to assess the feasibility of a trial of anticoagulant therapy in a group of patients at apparent high risk from embolic stroke. There are clearly many logistic problems among this age group, as older patients tend to have many more physical and psychological problems than younger patients. Nevertheless, it was disappointing that one fifth of the patients in this age group registered with a modern urban practice refused the chance of a simple medical check. As only one practice was involved this may not be a representative sample, but any large-scale trial would probably have a similar proportion of non-attenders, and there is a lesson here for those involved in health screening among the elderly.

The prevalence of atrial fibrillation found in this study was consistent with that described previously,<sup>6</sup> despite the fact that some patients were surveyed at home in this study which may have increased the number of more disabled patients included. The steady rise in the dysrhythmia with age appears to confirm the findings of the Framingham Study,<sup>2</sup> but the small numbers in this study preclude further interpretation.

Of those patients discovered to have atrial fibrillation, only one third were new cases, and only a small proportion had a clinically identifiable primary cause for the dysrhythmia. Most of the latter were already known to the practice, and were on routine anticoagulant therapy. Even if allowance were made for additional patients with transient atrial fibrillation, the results of this study suggest that many centres would be required to obtain sufficient patients for an anticoagulant trial and this would involve major financial outlay. It is also possible that for the larger proportion of elderly patients with atrial fibrillation admitted to hospital with stroke,<sup>3</sup> the dysrhythmia is the result of the cerebrovascular event, rather than its cause.

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