Atrial fibrillation: differences among patients and physicians in values and preferences about antithrombotic choice

A Spanish study found a wide range of views among patients and physicians on the acceptable trade-off between a reduction in risk of stroke and an increased risk of bleeding in atrial fibrillation (AF). Assuming that a similarly wide range of views is reflected in the UK, this study underlines the need for clinicians and patients to discuss treatment options. NICE guidance recommends anticoagulation for people with AF depending on their risk of stroke and taking their bleeding risk into account, it expects that there is discussion with the person about the risks and benefits of the interventions, and the person’s values and preferences. NICE has published a patient decision aid for use in such discussions, to help the person to reach a fully informed decision.

Overview and current advice

People with atrial fibrillation (AF) are at increased risk of ischaemic stroke. Antithrombotic drug therapies are available that reduce this risk, but this benefit must be weighed against an increased risk of bleeding, especially major bleeding including haemorrhagic stroke.

NICE guidance on AF recommends that the stroke and bleeding risk of people with AF should be estimated using the CHA2DS2-VASc and HAS-BLED scoring systems, respectively. It recommends that people with a CHA2DS2-VASc score of 2 or more (indicating an annual risk of ischaemic stroke of about 2.5% or more) should be offered an anticoagulant, taking their bleeding risk into account. In addition, anticoagulant therapy should be considered in men with a CHA2DS2-VASc score of 1 (in women a CHA2DS2-VASc score of 1 is considered very low risk of stroke, not requiring anticoagulation).

NICE uses the word ‘offer’ (and similar words such as ‘refer’ or ‘advise’) when it is confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective — a ‘strong’ recommendation. It uses the word ‘consider’ when it is confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation.
The evidence for the benefit of anticoagulants in preventing ischaemic stroke in people with AF and CHA2DS2-VASc score of 2 or more is compelling, and justifies this ‘strong’ recommendation in national guidance. However, for all recommendations, NICE expects that there is discussion with the patient about the risks and benefits of the interventions, and the person’s values and preferences.

For individual people with AF the decision about whether or not to take an anticoagulant is highly ‘preference sensitive’ – that is, it involves several trade-offs. Among other things, the person has to weigh up the comparative risks of stroke and major bleeding and the consequences of those outcomes. NICE has published a patient decision aid that might help the discussion with a patient, to help them to reach a fully informed decision.

Unpublished practice audits in primary care in England have found that a substantial proportion of people with AF who would be candidates for anticoagulation according to the NICE guideline are either receiving no antithrombotic or are taking aspirin. NICE guidance no longer recommends aspirin for stroke prophylaxis in AF. This reflects developments in the evidence base that indicate that aspirin is ineffective in preventing ischaemic stroke in AF and has a higher risk of causing major bleeds than was previously thought. However, evidence suggests that a common reason for not prescribing anticoagulants is that the clinicians perceive the risks of bleeding to outweigh the benefits on the risk of stroke.

See the NICE Evidence topic page on AF and the clinical knowledge summary for a general overview of the condition. The NICE Pathway: atrial fibrillation brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence

A multi-centre Spanish study sought to explore the maximum increased risk of bleeding (threshold risk) that patients and physicians would tolerate with warfarin compared with aspirin to achieve a specified reduction in risk of stroke. The authors recruited 96 primary care outpatients aged at least 60 years who were at risk of developing (but who did not have) AF, from 3 different regions in Spain. They also recruited 96 practicing physicians working in general medicine and cardiology, who spent at least 70% of their time seeing patients and who had cared for at least 1 person with AF in the preceding 6 months.

Patients were informed about stroke (ischaemic and haemorrhagic) and bleeding and their consequences in face to face discussions (non-fatal gastrointestinal bleeding was described as the most common type of major bleed). They were presented with a fixed risk difference in total stroke risk between warfarin and aspirin (5 strokes with warfarin versus 8 strokes with aspirin in 100 people over 2 years; that is, a benefit of 3 strokes per 100 people over 2 years) and a fixed risk of 2 gastrointestinal bleeds with aspirin in 100 people over 2 years. The additional risk of bleeding with warfarin was then varied in a probability trade-off exercise to elucidate the maximum number of additional bleeds arising from warfarin therapy the person would be prepared to accept and still take warfarin. A similar exercise was undertaken with the physicians.

The median number of bleeds per 100 people acceptable for a 3% absolute reduction in stroke risk over 2 years was 10 among patients and physicians (p value for difference 0.7), but the range was very wide: from 0 to 100 among patients and from 0 to 50 among physicians. A cluster of patients and physicians would accept fewer than 10 additional bleeds, and another cluster of patients, but not physicians, would accept more than 35 additional bleeds. Physicians who had either looked after people with AF who had had a non-fatal gastrointestinal bleed or looked after people who had had a stroke while not on warfarin were statistically significantly more likely to accept a high risk of bleeds than the median. However, no other factors examined (such as patient participants’ sex, age, level of education, or knowledge of someone with a non-fatal gastrointestinal bleed or stroke) was statistically significantly associated with the number of bleeds they found acceptable.
The authors suggest that the wide range of views among patients and physicians indicates that it is likely that there will frequently be a mismatch between patient and physician values in the context of individual decision-making, and that this highlights the importance of shared decision-making.

Commentary

Commentary provided by Richard Thomson, Professor of Epidemiology and Public Health, Associate Dean for Patient and Public Engagement, Institute of Health & Society, Newcastle University

This paper adds to a considerable body of literature revealing the preference-sensitive nature of decisions about stroke prevention in atrial fibrillation (AF). The authors interviewed 96 patients at risk of AF and 96 physicians. They used the probability trade-off technique to estimate how many additional bleeds (from taking warfarin rather than aspirin) respondents would accept to provide an absolute reduction from 8 to 5 strokes over a 2 year period, as described above. They also asked respondents to rate the health states (major and minor stroke, major bleeding and burden of aspirin or warfarin treatment) using a visual analogue scale from 0 (death) to 100 (full health).

This is a challenging exercise, and there are undoubtedly methodological issues related to trade-off exercises and health state utility elicitation. Indeed, in a 3-arm trial comparing a patient decision aid (PDA) that included a standard gamble exercise, the PDA without the standard gamble exercise, and a guidelines-driven consultation without shared decision-making, the standard gamble arm was discontinued as patients found the exercise problematic.

Nonetheless, this study again demonstrates considerable variation in how patients and clinicians value different health states. For example, a GI bleed was valued between 0 and 95; thus, some felt a GI bleed was similar or close to death, whilst others thought it was similar or close to full health. Although the study was conducted in Spain, it seems likely that patients and clinicians in the UK would have a similar range of views. Hence, appropriate treatment decisions to prevent stroke in AF based on patient values are likely to differ between patients.

Furthermore, it is likely that a patient and their physician will have very different perspectives, underlining the importance of physicians being receptive to patient values; otherwise patients may be led into decisions inconsistent with their preferences. An important element of variation in preference is the burden of treatment (such as INR monitoring with warfarin); the findings will retain relevance for the latest NICE guidance on AF, incorporating choice between warfarin and newer oral anticoagulants, which require less monitoring.

PDAs can support better decisions; the publication of a PDA with the latest NICE guidance on AF is a significant step forward. However, much depends on the attitudes and skills of clinicians supporting patients to make well-informed choices consistent with their values.

Study sponsorship

The study was sponsored through a governmental grant of the National Institute of Health ‘Carlos III’ – Sub-Directorate General for Assessment and Promotion of Research (PI06/90391).

References


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