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How can we avoid a stroke crisis?

A report from a multidisciplinary alliance has made a compelling case for a coordinated plan in Europe to reduce the health, social and economic burdens of stroke related to atrial fibrillation (AF). The group comprises eminent cardiologists, neurologists, a health economists, hospital pharmacists, a haematologist and representatives from patient organisations.

How Can We Avoid a Stroke Crisis? has been endorsed by 17 medical and patient organisations, including the European Primary Care Cardiovascular Society. Its aim is to highlight to European policy makers the need to achieve earlier diagnosis and better management of AF across Europe, with the ultimate goal of reducing the risk of stroke in patients with AF. The key points summarised in the report are shown in table 1.

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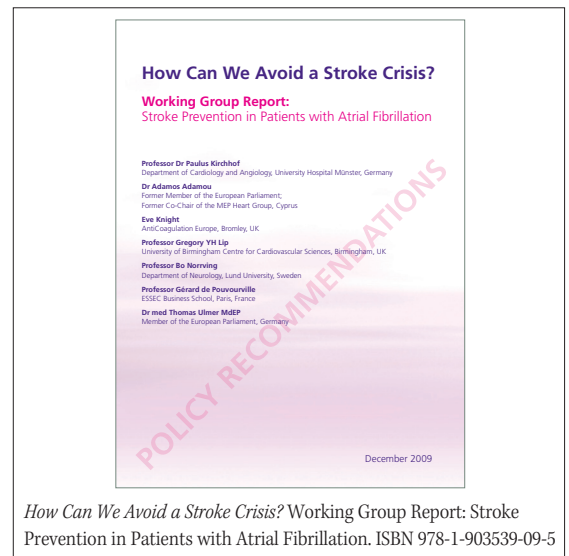
STROKE IS A HIGH-COST HEALTH PROBLEM IN EUROPE

Stroke is one of the diseases most feared by the public, second only to cancer. It affects approximately 9.6 million people in Europe, and is responsible for an estimated 5.7 million deaths annually worldwide.¹ It is a hugely costly health problem in Europe (Figure 1) – the total cost of stroke in the EU was calculated to be over €38 billion in 2006² – and imposes a massive burden on patients, their families and society. The healthcare costs attributable to stroke in the UK alone were estimated to be nearly €4 billion in 2006 – approximately £2.7 billion at that time.

ATRIAL FIBRILLATION IS A MAJOR RISK FACTOR FOR STROKE

Atrial fibrillation (AF) affects about 6 million people in Europe³ and is a major risk factor for stroke and death. Figure 2 shows the incidence of stroke in patients with different cardiovascular conditions. Individuals with AF have a fivefold increased risk of stroke compared with the general population – to put this in context, patients with hypertension have a threefold increased risk of stroke compared with the general population. In fact, AF accounts for approximately 20% of ischaemic strokes. AF-related strokes are more severe, cause greater disability and have a worse outcome than strokes in patients without AF. These factors make it more likely that, among patients who have a stroke, impairment in quality of life will be greater in those with AF than in those without.

Better management and prevention of AF using drugs and other strategies to control heart rhythm could ease the global burden of stroke. Additionally, patients with AF should receive antithrombotic therapy to reduce the risk of thrombosis and stroke.



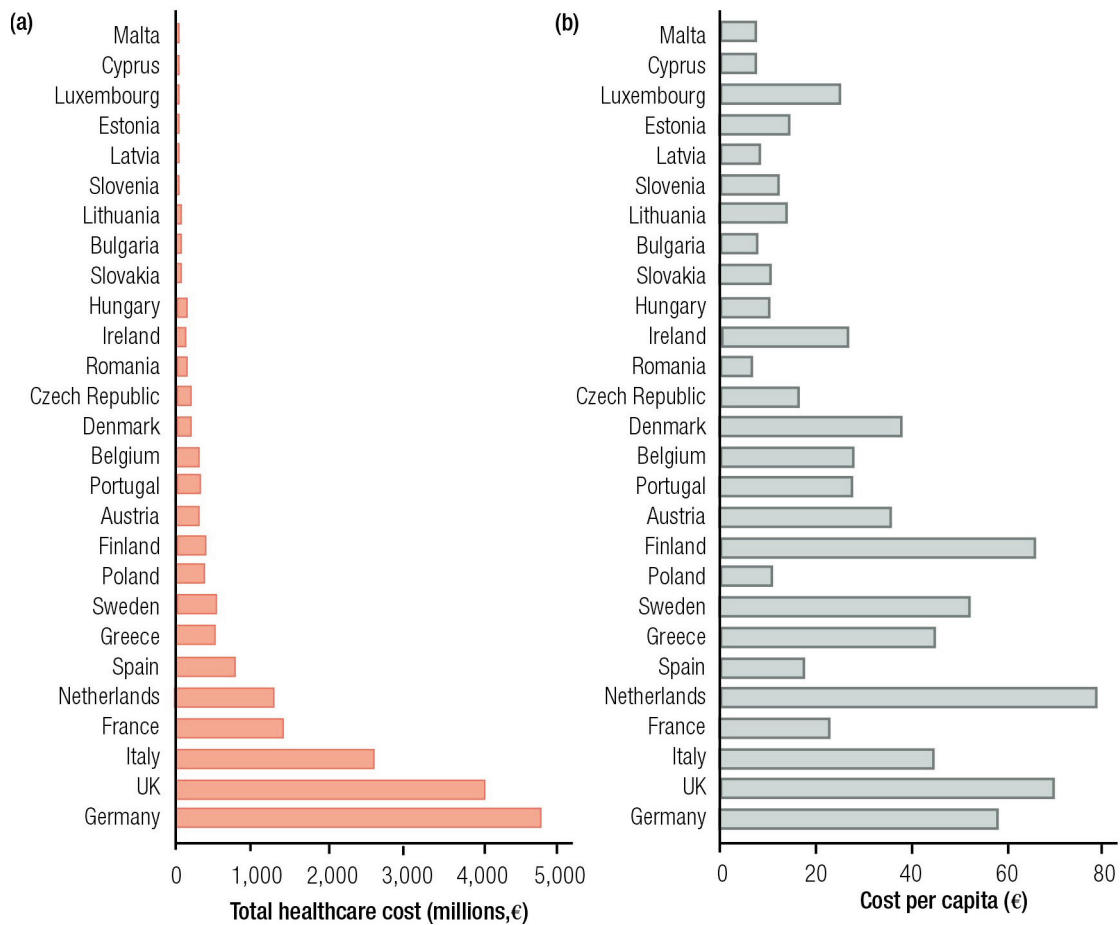
How Can We Avoid a Stroke Crisis? Working Group Report: Stroke Prevention in Patients with Atrial Fibrillation. ISBN 978-1-903539-09-5

Table 1: Key recommendations of the report

The key recommendations of the report are that European policy makers should:

- Raise awareness of the impact of AF and AF-related stroke
- Develop coordinated strategies for early diagnosis of AF
- Improve the education of patients about AF
- Encourage new approaches to the management of AF and the prevention of AF-related stroke
- Improve awareness of physicians about AF management
- Promote equity of access to services and information for patients across the European Union (EU)
- Advocate adherence to guidelines for AF management
- Exchange information on best practice between EU Member States
- Boost research into the causes, prevention and management of AF

Figure 1: Healthcare costs attributable to stroke in the European Union in 2006. (a) Total healthcare cost; (b) cost per capita.



Data taken from Allender *et al.*²

Vitamin K antagonists (VKAs) and aspirin are the antithrombotics most widely used in patients with AF; however, as the report explains, their use is not without problems.

VITAMIN K ANTAGONIST THERAPY AND ASPIRIN THERAPY HAVE LIMITATIONS

In the clinical trial setting, VKAs have been shown to effectively reduce the risk of stroke and death;⁵ however, there is a gap between what can be achieved in clinical trials and what happens in real-world practice. The reasons for this are many and complex. For example, the effects of VKAs can be significantly altered by genetic factors, other drugs and food. As a result, in many patients the international normalised ratio (INR) is outside the therapeutic range for some of the time, putting the patient at risk of either stroke (low INR) or bleeding (high INR). Many patients find the frequent monitoring and necessary dose adjustments associated with VKAs to be inconvenient and time-consuming, and may therefore miss appointments. This reduces adherence to therapy outside the clinical trial setting.

There is often a perception among doctors that aspirin is safer than VKAs in preventing stroke in patients with AF; however, clinical trials

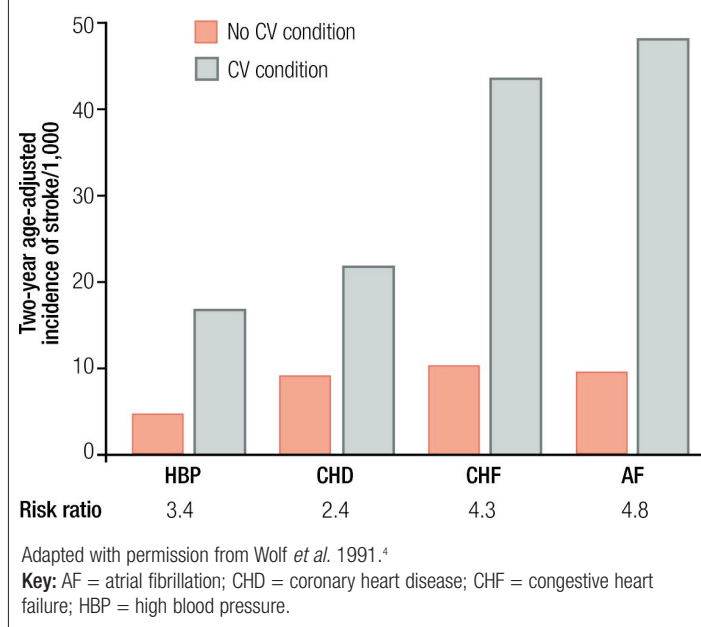
have shown that the risk of stroke is 50% lower in patients receiving VKAs than in those in those receiving aspirin.^{6,7} Furthermore, the risk of bleeding in patients with aspirin actually increases with age. Aspirin should therefore be considered only in patients with a low risk of stroke and those who have an absolute contraindication to VKA therapy.

ADHERENCE TO GUIDELINES IS SUBOPTIMAL

There are several sets of international, European and country-specific guidelines for the prevention of stroke in patients with AF. Generally, these guidelines recommend that patients at risk of stroke should receive antithrombotic therapy, with those at moderate and high risk receiving VKAs and those at lower risk receiving aspirin. However, guideline application varies widely; many patients eligible for VKA therapy receive aspirin, and a vast number receive no therapy at all.

Poor adherence to guidelines occurs for many reasons. These include difficulties in maintaining the dose of VKA within the therapeutic range, and physicians' perceptions about increased bleeding risk in patients receiving VKAs, especially the elderly. Interestingly, a study of perceptions of risk among physicians and patients with AF and a high risk of developing stroke has shown that

Figure 2: Two-year age-adjusted incidence of stroke in the presence and absence of cardiovascular conditions



patients place more value than physicians do on the avoidance of stroke, whereas physicians place more value than patients do on the avoidance of bleeding.⁸

THERE IS A NEED FOR ALTERNATIVES TO VKAs AND ASPIRIN

The limitations of VKAs and aspirin in the prevention of stroke in patients with AF have led to the search for alternative therapies. Several new anticoagulants are in development. These include the oral direct factor Xa inhibitors rivaroxaban, apixaban and edoxaban, and the oral direct thrombin inhibitor dabigatran etexilate. Although new anticoagulants may be more expensive in direct drug costs than VKAs and aspirin, their availability may ultimately improve stroke prevention in patients with AF and may therefore prove cost-effective.

WHAT IS THE ROLE OF THE PRIMARY CARE PROVIDER?

How Can We Avoid a Stroke Crisis? has highlighted the huge health, social and economic burdens imposed by AF-related stroke and has outlined the need for coordinated action at national and European levels to reduce these burdens. Physicians should be working together to provide effective continuity of care for patients, and general practitioners (GPs) can play a key role in this action. For example, all patients should have easy access to information about their condition and its treatment. Through collaboration with patient organisations,

many of which provide leaflets and freely available downloads, primary care providers can empower patients to take an active role in their healthcare, ensuring a full understanding of AF its link with stroke and effective measures to prevent this devastating complication.

Importantly, GPs should also ensure that patients who are receiving VKAs understand what they are taking, why they are taking it, and the need for careful dose monitoring. The National Institute for Health and Clinical Excellence (NICE) has produced guidance on AF for patients and their carers, and this provides an overview of the main treatments available. All patients with AF should be given access to this information.

As the first point of contact with patients, GPs are at the front line of detection of AF. A key multicentre UK study – the Screening for AF in the Elderly (SAFE) study – highlighted the important role of primary care in identifying patients with AF.⁹ This study showed how a simple procedure, such as routine pulse-taking at the GP's surgery, can be extremely effective in helping to improve detection of AF in at-risk patients. NICE recommends that individuals presenting with dyspnoea, palpitations, dizziness, chest discomfort, stroke or transient ischaemic attack should be assessed for the presence of AF. GPs should be alert to these signs and symptoms, particularly if more than one present together, and should refer such patients for further investigation. Together, as a physician community, we can play an important part in the action needed to improve the detection and management of AF and, ultimately, reduce the risk of stroke in patients with AF.

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