Atrial Fibrillation

Stroke Prevention in Older Adults

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KEYWORDS

• Atrial fibrillation • Stroke prevention • Anticoagulants • Bleeding risk

KEY POINTS

- Antithrombotic treatment of atrial fibrillation (AF), including paroxysmal AF, should be guided by stroke risk stratification tools.
- Bleeding risk stratification tools may help clinicians counsel patients about bleeding risk on anticoagulants and are most appropriate when applied to patients at low or intermediate stroke risk in which the net benefit of anticoagulation is less clear.
- Newer fixed-dose oral anticoagulants have emerged as viable alternatives to warfarin and choice of anticoagulant should depend on comorbidities (eg, renal function), side-effect profile, cost, and patient preference.
- Stroke prevention in atrial flutter should be managed using the same recommendations as those for AF.

INTRODUCTION

The prevalence of atrial fibrillation (AF), the most common clinically significant cardiac arrhythmia, is increasing as the population of the United States ages.[1–3] AF disproportionately affects the elderly and confers a significant stroke risk.[1] With appropriate preventive strategies, the negative consequences of AF can be dramatically reduced; yet there is widespread underuse of proven antithrombotic therapies, particularly among older patients.[4] This article reviews stroke prevention in AF, including risk stratification for stroke and advances in newer oral anticoagulants, with a focus on treatment of the elderly.

Note that the available literature suggests that stroke risk related to paroxysmal AF is similar to the risk with chronic AF, as well as atrial flutter.[5] Thus, the recommendations in this article addressing chronic AF should be applied to paroxysmal AF and atrial flutter except as specifically noted.

Disclosures: None.

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Epidemiology of AF

AF disproportionately affects older adults. The overall prevalence of AF in the United States is about 1%, but it is considerably higher in older populations. When stratified by age, the prevalence in adults older than age 65 is approximately 5%, and in those older than age 85 it nears 10% (**Fig. 1**). It is estimated that there will be approximately 5.6 million people with AF in the United States by the year 2050 and recent reports have suggested even higher growth projections.[2,6] Most of this disease burden will likely be borne by the elderly.

Common risk factors for chronic AF include advancing age, hypertension, underlying heart disease, and hyperthyroidism.[7,8] There may also be contributory genetic and lifestyle factors.

The negative health consequences of AF stem largely from the risk of AF-related ischemic stroke. An estimated 15% of ischemic strokes in the United States are related to AF and a substantial proportion of patients with cryptogenic strokes (eg, without a history of clinical AF) are later found to have atrial tachyarrhythmias on cardiac monitoring.[9,10] AF-related strokes also tend to be more severe than other ischemic stroke types, leading to longer hospital stays, higher rates of disability, and increased mortality in comparison with patients without AF.[11–14] The public health impact of AF is thus considerable.

Nonvalvular AF confers an increased stroke risk of at least two, and perhaps up to seven, times that of patients without the disease.[1,15] Rheumatic AF confers an even greater stroke risk—approximately 17 times as high as that found in patients without the disease, and five times higher than in patients with nonvalvular AF.[1,15] The stroke risk attributable to AF varies by age. In the Framingham cohort study, subjects ages 50 to 59 had 1.5% of their stroke risk attributable to AF, whereas subjects ages 80 to 89 had 23.5% of their stroke risk attributable to AF. Overall mortality was doubled in subjects with AF as opposed to those in normal sinus rhythm.[1]

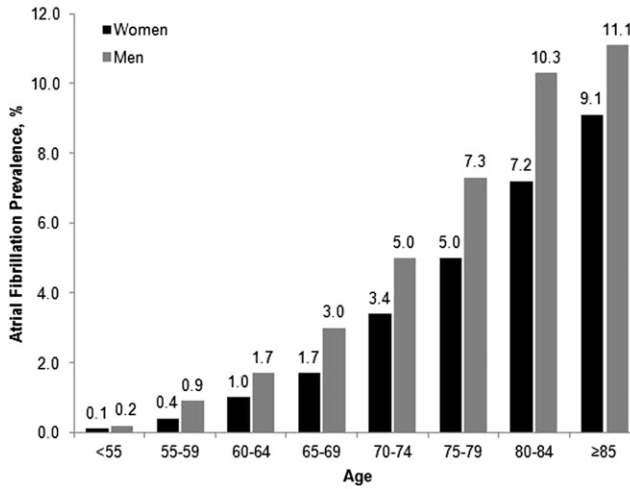

Fig. 1. The prevalence of AF by age and sex. (*Data from* Go AS, Hylek EM, Phillips KA, et al. Prevalence of diagnosed atrial fibrillation in adults: national implications for rhythm management and stroke prevention: the AnTicoagulation and Risk Factors in Atrial Fibrillation (ATRIA) Study. JAMA 2001;285(18):2370–5.)