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CARDIOLOGY BOARD REVIEW MANUAL

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Management of Atrial Fibrillation

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Management of Atrial Fibrillation

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I. INTRODUCTION

Atrial fibrillation (AF) is the most common sustained tachyarrhythmia in adults. The incidence of AF increases with age and with several comorbid diseases including hypertension, coronary atherosclerosis, pulmonary disease, valvular heart disease, and cardiomyopathy of any etiology.

The treatment of AF is fairly complex and requires recognition of contributing disease states, assessment of thromboembolic versus hemorrhagic risk, ventricular rate control, and decision making about the restoration of sinus rhythm. Fortunately, several randomized trials have been published that were designed to test the efficacy of specific treatment strategies; results from these trials have given the clinician better decision-making tools.

This is the first of a 2-part review of AF. The first part reviews the epidemiology and pathophysiology of AF as well as features associated with higher risk of recurrent arrhythmia and thromboembolism. Specific subsets of patients with comorbid illnesses are presented. An algorithm for rhythm management is provided. In the second part of this review ("Atrial Fibrillation: Case Studies and Treatment"), assessment of thromboembolic risk will be discussed in greater detail. Pharmacologic and non-pharmacologic methods to address rate and rhythm control will be reviewed. The second part concludes with several case presentations and relevant discussion. The second part will be published in the

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Volume 7, Part 4.

II. EPIDEMIOLOGY

The epidemiology of AF is difficult to define because of its often paroxysmal and occult nature. When a single electrocardiogram (ECG) in people older than 25 years is used to define AF; the prevalence is between 0.15% and 1.5%.¹⁻⁹ When a medical record review for paroxysmal AF is also used, the prevalence increases to 6% of men and 3% of women older than 65 years, and up to 16% of men and 12% of women older than 75 years.^{10,11} The frequency with which AF is intermittent varies in the literature from 25% in a patient-based study to 90% in otherwise healthy AF patients applying for life insurance.¹² This discrepancy in detection of paroxysmal AF is important given the nearly equal risk for thromboembolic events in paroxysmal and chronic AF in some studies.^{13,14}

Multiple studies have revealed a decreased risk of AF for women compared with age-matched men.^{1,7,10} Although AF is more prevalent in men in every age group, women account for more than 50% of AF cases because of their superior survival.¹ Women, however, have only made up approximately 25% of the participants in randomized, prospective trials of anticoagulation for AF.¹⁴ The epidemiology of AF in African American and Latino populations is less well defined.