Atrial fibrillation: Epidemiology, morbidity and mortality

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Approximately 4.5 million people in the European Union have paroxysmal or persistent atrial fibrillation[2]. Atrial fibrillation (AF) is the most common cardiac arrhythmia with its prevalence of 0.4% to 1% in the general population[1].
The prevalence of AF increases markedly over the age of 60 years afflicting 3-5 % of the population aged 65 to 75 years[3 4 5] increasing to 8% in those older than 80 years[6 7]. The median age of AF patients is about 75 years and it is estimated that approximately 70% are between 65 and 85 years old. Prevalence figures for AF are probably underestimated because AF may be undiagnosed if sporadic and if not associated with significant symptoms.
Symptoms include palpitations, fatigue, dyspnoe, chest discomfort or worsening of preexisting cardiac conditions, such as heart failure or angina pectoris. Declining functional capacity has been demonstrated in patients in whom sinus rhythm cannot be maintained[8]. Although stroke accounts for much of the functional impairment associated with AF, quality of life is clearly impaired in patients with AF[9].
"Lone AF" generally refers to younger individuals without demonstrable cardiovascular or pulmonary disease[10], whereas "nonvalvular AF" is reserved for patients without rheumatic mitral valve disease or prosthetic heart valve. The frequency of "lone AF" varies from 10% to over 30% of all cases of AF, but is most frequent among patients with paroxysmal AF[10 11 6 12 13]. These patients have a favourable prognosis with respect to thromboembolism and mortality.
Atrial fibrillation is, however, often an electrical manifestation of underlying cardio-vascular disease. Specific conditions associated with AF are hypertension, ischemic heart disease, congestive heart failure, valvular heart disease and diabetes, and its frequency increases with the severity of many of these conditions[3 14].
AF is associated with an increased long-term risk of stroke, heart failure, and all-cause mortality, especially in women[16 17]. The rate of thromboembolic stroke among patients with nonvalvular AF is approximately 5% per year, which is 2 to 7 times that of people without AF[7 11 20 18 16]. If transient ischemic attacks and clinically "silent" strokes are included, the rate exceeds 7% per year for nonvalvular AF[15 21]. The stroke risk increases 17-fold if patients have rheumatic heart disease and AF, compared with age-matched controls[22]. The risk of stroke attributable to AF is related to age with an annual risk of 1.5% in the age group 50-59 years and 23.5% in those aged 80 to 89 years[7].
The mortality rate of patients with AF is twice as high as that of patients in normal sinus rhythm and related to the severity of underlying cardiovascular disease[18 19]. In several heart failure trials, AF was an independent risk factor for mortality and major morbidity[23-26], which emphasizes the need for randomized trials to investigate the impact of AF and its treatment on the prognosis in heart failure. The mechanism(s) by which AF contributes to increased mortality rate is currently uncertain and no treatment of AF has to date resulted in a lower overall death rate.

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