

TOPICS IN ATRIAL FIBRILLATION

"Rate-Control" versus "Rhythm-Control"



I am frequently asked: 'What is the best treatment for atrial fibrillation?'. This depends upon the particular patient. There are many treatment options for atrial fibrillation and the overall strategies range from allowing atrial fibrillation to persist but control the ventricular rate ('Rate-Control') or maintaining sinus rhythm ('Rhythm-Control'). And within each of these general strategies are many options, such as medications, device therapies, and ablation. **(Please see www.afibcenter.org for further details on treatment options).**

Multiple prospective, randomized clinical trials (PIAF, *Lancet* 2000;356:1789-1794, AFFIRM, *NEJM* 2002;347:1825-1833; RACE, *NEJM* 2002;347:1834-1840; STAF, *JACC* 2003;41:1690-1696) have not shown a mortality benefit for either strategy. The overall goals of atrial fibrillation treatment are to reduce symptoms (palpitations, chest discomfort, fatigue or tiredness, dyspnea, limited physical endurance, loss of sense of well-being), prevent thromboembolic events, and reduce or eliminate detrimental effects on cardiac performance.

There are good treatment options for atrial fibrillation, but the therapy must be individualized.

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WHAT'S NEW IN ATRIAL FIBRILLATION:

Amiodarone versus Sotalol for Atrial Fibrillation (SAFE-T). Singh, BN, et al. *N Engl J Med* 2005;352:1861-72.

This is a double-blind, placebo-controlled trial randomizing 665 patients with persistent atrial fibrillation to amiodarone (267), sotalol (261), or placebo (137). Follow-up ranged from 1 to 4.5 years, with primary end point--time to recurrence of atrial fibrillation (AF) beginning on day 28, and secondary end points included quality of life and exercise capacity assessments. *Findings:* Amiodarone appears superior for maintaining sinus rhythm. Although, both drugs have similar efficacy in patients with ischemic heart disease, the median time to recurrence of AF was nearly 7 times longer in the amiodarone group ($P < 0.001$ for comparisons).

Outpatient Treatment of Recent-Onset Atrial Fibrillation with the "Pill-in-the-Pocket" Approach. Alboni, P, et al. *N Engl J Med* 2004;351:2384-91.

This study evaluated the feasibility and safety of self-administered oral loading of flecainide (300 mg) and propafenone (600 mg) in terminating atrial fibrillation (AF) of recent onset outside the hospital. A total of 210 of 268 treated patients (initial treatment was in a hospital setting) were enrolled for out-of-hospital treatment; 165 patients

had recurrent AF episodes (618 episodes). *Findings:* Mean follow-up was 15 ± 5 months. A total of 569 episodes of AF were treated and 94% were terminated within 6 hours (mean time was 113 ± 84 minutes). The efficacy was equal between flecainide and propafenone.

Radiofrequency Ablation vs Antiarrhythmic Drugs as First-line Treatment of Symptomatic Atrial Fibrillation. Wazni, OM, et al. *JAMA* 2005;293:2634-40.

The objective of this study was to determine whether pulmonary vein isolation (PVI) by radiofrequency ablation is feasible as first-line therapy for treating patients with symptomatic atrial fibrillation. A total of 70 patients were randomized to undergo PVI ($n = 33$) or receive antiarrhythmic drug treatment ($n = 37$). Follow-up was for 1 year. *Findings:* Mean patient age was 53 and 96% were paroxysmal. Three patients were lost to follow-up. At the end of 1-year, 13/35 (37%) who received antiarrhythmic drugs were free from symptomatic AF compared to 28/32 (87%) who underwent PVI with radiofrequency ablation.

ASK THE EXPERT – Does obesity or being overweight have anything to do with the development of atrial fibrillation (AF)?



This is an interesting question. A recent study (Wang, et al. *JAMA* 2004;292:2471-2477) evaluated more than 5282 patients who were followed prospectively as part of the Framingham Heart Study to explore the association between obesity and developing AF. The researchers hypothesized that increased body weight may be associated with development of AF, perhaps related to increased left atrial (upper left heart chamber) size. Body Mass Index, an accepted and frequently used measure of appropriate weight for height, has been shown to be a powerful determinant of left atrial size.

Study participants, who were free of AF at the start of the study, were divided into three categories of weight: normal ($BMI < 25$) overweight ($BMI 25-30$) and obese ($BMI > 30$). A large proportion of the men (68%) and women (47%) were considered overweight or obese, based on BMI. During a mean of 13.7 years 526 participants developed AF.

Even after taking into account other conditions such as hypertension, diabetes, and prior heart attack, the researchers found that obesity ($BMI > 30$) was associated with a 50% increased risk of developing AF. Echocardiography measures revealed a significant increase in left atrial size in obese men and women compared with those with normal BMI. This increased left atrial size is an important precursor of AF.

So it appears that obesity is one risk factor for developing AF.

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