

Atrial fibrillation: to ablate or medicate?

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Epidemiology

- Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia, occurring in 1–2% of the general population.
- Its prevalence is estimated to at least double in the next 50 years as the population ages

Rate vs rhythm control

- Thus far, there has been no clear differences in all-cause mortality (AFFIRM) or cardiovascular morbidity and mortality (RACE)
- However, it is clear that some patients with AF are significantly impaired
- Previous trials used questionnaires to measure general quality of life but not AF-specific

Rate vs rhythm control

- Problems with rhythm control that offset the benefit of sinus rhythm
 - AFFIRM – deleterious effects of antiarrhythmic drugs
 - RACE – underlying heart disease impacts prognosis more than AF itself
- The ATHENA study (dronedarone) is a first signal that safely maintained sinus rhythm may prevent relevant outcomes in AF

Determining factors

- Symptoms (most important) – need to be systematic
- Duration
- Older age
- Associated cardiovascular diseases
- Other medical conditions – OSA, etc
- LA size

Antiarrhythmic drug therapy to maintain NSR

- Treatment is motivated by attempts to reduce AF-related symptoms
- Efficacy of antiarrhythmic drugs to maintain sinus rhythm is modest
- Clinically successful antiarrhythmic drug therapy may reduce rather than eliminate recurrence of AF
- If one antiarrhythmic drug 'fails', a clinically acceptable response may be achieved with another agent
- Drug-induced proarrhythmia or extra-cardiac side effects are common
- Safety rather than efficacy considerations should primarily guide the choice of antiarrhythmic agent

Catheter ablation therapy

- In general, catheter ablation should be reserved for patients with AF which remains symptomatic despite optimal medical therapy, including rate and rhythm control

Catheter ablation (cont)

- Whether to undertake an ablation procedure in a symptomatic patient should take into account:
 - The stage of atrial disease (i.e. AF type, LA size, AF history)
 - The presence and severity of underlying cardiovascular disease
 - Potential treatment alternatives (antiarrhythmic drugs, rate control)
 - Patient preference

Catheter ablation (cont)

- Death occurred in 1:1,000 patients and was due to tamponade in 8 patients, stroke in 5, and atrio-esophageal fistula in 5

SVT and AF

- Up to 10% of patients with only AF as documented arrhythmia has inducible SVT and ablation of SVT alone results in no further atrial fibrillation
- To start, should ask patients if they experience regular palpitations with occasional termination with Valsalva prior to episodes of atrial fibrillation

Summary

- In PAF, catheter ablation provides better rhythm control than AAD (77% vs 52%) (JAMA 2010;303:333-340)
- Current guidelines support catheter ablation therapy after 1 failed AAD
- For persistent, longstanding AF – major symptoms and other comorbidities should be considered – as several attempts may be required/complications increased