Atrial fibrillation: to ablate or medicate?

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

R. Cappato, H. Calkins and S.A. Chen et al., JACC 53 (2009), pp. 1798–1803
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.

Europace, Sept 2010
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