

Rhythm control vs. Rate Control Strategy in the Era of Revolutionary Catheter Ablation Therapy for Atrial Fibrillation

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Atrial fibrillation (AF) is the most common type of supraventricular tachyarrhythmia and is associated with an increased risk of strokes, heart failure, and cardiovascular mortality. The main therapeutic strategies include rate control, rhythm control, and prevention of recurrences and thromboembolic events. Safety and efficacy considerations are important in optimizing the choice of rhythm control therapy for AF. Currently, amiodarone is the most efficient presently available compound for SR maintenance, but the drug has extra-cardiac adverse effects and complex pharmacokinetics that limit its widespread application. Dronedarone has shown benefits for the important clinical endpoints, including cardiovascular mortality in specific AF populations (ATHENA). However, the limited long-term efficacy of the drug and that many patients discontinue therapy because of side effects has led to the development of a non-pharmacologic therapy to achieve rhythm control.

During the past decade, catheter ablation of AF has evolved rapidly from a highly experimental unproven procedure, to its current status as a commonly performed ablation procedure in many major hospitals throughout the world. The efficacy and safety is supported by the results of multiple randomized trials by comparing antiarrhythmic drugs to catheter ablation. Currently, there is no evidence thus far that successful AF ablation will result in reduced strokes and cardiovascular mortality from the prospective randomized trials as compared with the rate control strategy, but a large prospective worldwide trial is already underway (CABANA and EAST). If proven safe and effective for the long-term cardiovascular outcome, catheter ablation may replace pharmacological therapy for rhythm control.