

## Ongoing Trials in AF

Atrial Fibrillation (AF) is the most common heart rhythm abnormality. It can cause troubling symptoms and predisposes to serious complications such as stroke. Because it is so common and causes so much disease, AF is an area of intensive research.

### Medical therapy

Dronedarone has been the subject of clinical trials aiming to restore the normal rhythm in patients with AF. It appears to be safe and moderately effective, although there are serious concerns about its use in the context of heart failure. It is not available in the UK at the time of writing. There are several other drugs in early clinical testing.

### Catheter ablation

Catheter ablation for AF is being used increasingly for symptomatic patients, despite taking medications or being unable to tolerate them. Several aspects of this treatment approach are currently being examined and/or studied.

#### 1. Methods used in catheter ablation:

Catheter ablation involves creating small scars in certain areas of the heart by the application of radio-frequency energy from a catheter tip. Trials are currently evaluating how these scars are formed (using other energy sources such as ultrasound beams or freezing) and where they are formed (as the best combination is still uncertain).

#### 2. Ways of guiding catheter ablation:

Catheter ablation has been performed by a doctor standing next to the patient manipulating small wires reaching up to the heart from veins in the leg. There is new technology in the form of a 'robot' which is controlled from a workstation nearby. A similar system involves moving

catheters around inside the heart using magnets stationed outside the body, again controlled at a nearby work station. It is possible to program these systems to perform certain tasks on 'auto-pilot'. Some of these systems are currently being evaluated by comparison to conventional techniques. Guiding the procedure with newer forms of imaging, such as Magnetic Resonance Scanners, are also being tested.

#### 3. Effect of ablation on outcomes:

There is some evidence that the occurrence of stroke and death in patients after catheter ablation for AF is lower than would be expected for those treated medically. The real benefit in stroke and mortality reduction is being evaluated in two large trials called RAAFT and CABANA. These will also examine the safety of stopping warfarin in those traditionally deemed too high risk to stop even after a probable cure of AF. The benefits of catheter ablation of AF in certain groups of patients, such as those with heart failure and those with advanced pacemakers, is also being tested.

### Anticoagulation

People with Atrial Fibrillation are at an increased risk of stroke. In some that risk is high enough to justify anticoagulation or 'thinning the blood'. Currently only warfarin is licensed for this purpose, but warfarin can be troublesome as it requires monitoring with blood tests (to make sure the blood is not under or over 'thinned'). There are other anticoagulants in testing that are more predictable and do not need monitoring, perhaps making them both more convenient and safer.

Author: Dr Ross Hunter, Cardiology Research Fellow  
Professor Richard Schilling, EP  
Endorsed by: Dr Matthew Fay, GP  
Dr Andrew Grace, EP  
Mrs Jayne Mudd, Arrhythmia Nurse Specialist  
Published October 2009