EDITORIAL

Catheter ablation as first-line therapy for symptomatic paroxysmal AF

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CATHETER ABLATION IS MORE EFFECTIVE THAN ANTIARRHYTHMIC DRUG THERAPY IN REDUCING the recurrence of any atrial arrhythmias including symptomatic atrial arrhythmias in patients with symptomatic paroxysmal atrial fibrillation (AF), a meta-analysis has found.[1]

AF has a high prevalence and can be the cause of considerable morbidity and mortality. While management strategies often focus on the important issue of anticoagulation to reduce the risk of thromboembolic stroke the impact of symptoms from the arrhythmia on the patient's life must not be underestimated.

From a rhythm control perspective catheter ablation has been shown to be more effective than antiarrhythmic drugs in reducing both the burden of AF and rate of recurrence when drug therapy is not tolerated or has failed. However, there is now increasing interest in the role of catheter ablation as first-line therapy to achieve better holistic care for patients.

'First-line treatment with catheter ablation is superior to antiarrhythmic drug therapy in symptomatic paroxysmal AF'

This systematic review and meta-analysis looked at the efficacy and safety of catheter ablation compared with antiarrhythmic drugs as a first-line management strategy in patients with symptomatic paroxysmal AF. The investigators carried out an electronic search of Medline, the Cochrane Library and Embase for randomised controlled trials published between 1 January 2000 and 19 March 2021. Six studies met the inclusion criteria. Three of these trials (RAAFT, RAAFT-2 and MANTRA-PAF) used radiofrequency ablation, while the remainder (EARLY-AF, STOP-AF and CRYO-FIRST) used cryoballoon ablation.

The primary efficacy endpoint was the first documented recurrence of atrial arrhythmias, defined as AF/atrial flutter/atrial tachycardia. The primary safety endpoint was a composite of all serious adverse events. Secondary endpoints included recurrence of symptomatic atrial arrhythmias, use of healthcare resources and treatment crossovers.

A total of 609 patients, 70% men, mean age 56.1 years, received catheter ablation first line and 603, 67% men, mean age 56.7 years, were treated with antiarrhythmic drug therapy.

Overall, 212 patients in the ablation group had a recurrence of atrial arrhythmias compared with 318 in the antiarrhythmic drug therapy group. Catheter ablation reduced the relative risk of recurrent atrial arrhythmias compared with drug therapy by 36%; risk ratio (RR) 0.64 (95% CI: 0.51-0.80, P < 0.01).

Importantly, the recurrence of symptomatic atrial arrhythmias was also significantly lower in the ablation group compared with the drug therapy group (109 vs 186). Catheter ablation reduced the relative risk of recurrent symptomatic atrial arrhythmias compared with drug therapy by 47%; RR 0.53 (95% CI: 0.35-0.79; P < 0.01).

The use of healthcare resources was reported in four studies. There was significantly less use of healthcare resources in the ablation group (126 vs 185) RR 0.65 (95% CI: 0.48-0.89; P < 0.01).

The risk of all serious adverse events was not statistically significantly different between the two groups, 107 in the ablation group and 126 in the drug therapy group; RR 0.87 (95% CI: 0.58-1.30; P = 0.49).

There was a 79% reduction in the crossover rate during follow-up among patients randomised to ablation compared with antiarrhythmic drug therapy; RR 0.21 (95% CI: 0.13- 0.32; P < 0.01).

The study authors conclude: 'Our meta-analysis demonstrates that first-line treatment with catheter ablation is superior to antiarrhythmic drug therapy in patients with symptomatic paroxysmal AF, as it significantly reduces the recurrence of any atrial arrhythmias and symptomatic atrial arrhythmias, and healthcare resource utilisation with comparable safety profile, thus benefitting both patients and healthcare systems.'

This study sends a clear message to clinicians to think about ablation earlier rather than later in the management of paroxysmal atrial fibrillation.

REFERENCE
1 Imberti JF, Ding WY, Kotalczyk A et al. Catheter ablation as first-line treatment for paroxysmal atrial fibrillation: a systematic review and meta-analysis. *Heart* 2021;107:1630-36

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