

Rhythm control treatment strategies for atrial fibrillation: current consensus and future possibilities

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Introduction

Atrial fibrillation (AF) is a disease of ageing, with a prevalence of 3% among people >20 years of age.^{1,2} Around 10–40% of AF patients are hospitalised annually. Budget-wise, direct AF care consumes 1% of total health spending in the UK.¹ AF is the cause of many debilitating conditions such as stroke and other thrombotic disorders.³

Materials and methods

A systematic search for evidence was carried out by investigating online resources: MEDLINE, CINAHL, PUBMED, EMBASE, ScienceDirect and HDAS. Terms used in research included ‘rhythm control’, ‘management strategies’, ‘AAD’, ‘antiarrhythmic strategies’, ‘atrial fibrillation’, ‘AF’, ‘ablat*’, ‘non-pharmacological’. A specific search was done through National Institute for Health and Care Excellence (NICE), European Society of Cardiology (ESC), American College of Cardiology (ACC) / American Heart Association (AHA) guidelines as well. Research was limited to the past 10 years to provide more contemporary evidence.

Results and discussion

For infrequent paroxysms, a ‘no-drug-treatment’ strategy or a ‘pill-in-the-pocket’ strategy is followed.⁴ In heart failure patients, both amiodarone and sotalol are favoured, whereas dronedarone is contraindicated. Also, in ischaemic or structural heart disease, the use of class 1C antiarrhythmic drugs (AADs) is not recommended (Fig 1).³ Komatsu *et al* noted that disopyramide is more effective for night-time AF while flecainide and pilsicanide are better for daytime episodes. The main challenge with AADs is their adverse effects profile.⁵

Catheter ablation (CA) techniques, when compared with AADs, have better quality of life outcomes and fewer clinical events and are usually recommended after a failed trial of AAD treatment.^{3,6,7} There are different techniques for CA but pulmonary vein isolation remains the cornerstone of treatment.⁸ The main limitation for CA treatment is its anatomically sinister complications and adverse events.

Surgical ablation (SA), whether open or thoracoscopic, showed better freedom-from-AF profile when compared

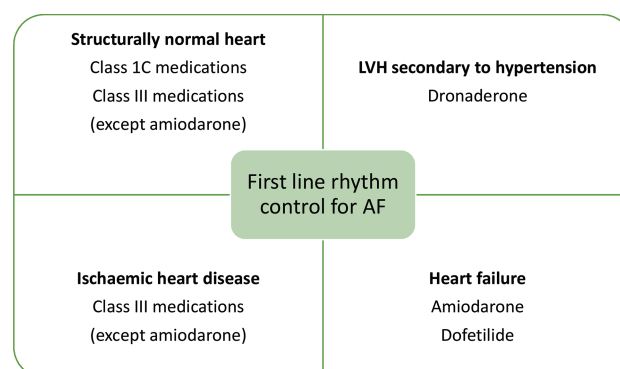


Fig 1. Rhythm control strategies in atrial fibrillation; second line treatment is catheter ablation and then, if unsuccessful, amiodarone can be started.¹⁰ Class III medications = dronedarone, dofetilide and sotalol; LVH = left ventricular hypertrophy.

with CA but with almost double the rate of adverse events.⁹ It can have a role in concomitant mitral valve surgery and AF maze operation.⁹ The main challenge with SA is the lack of well-conducted randomised trials, and also in the differences between rhythm monitoring protocols which may result in different measured outcomes. Hybrid treatment approaches show promise in tackling AF rhythm therapy.

Generally, the consensus of NICE, ESC, ACC/AHA recommends that an initial trial of AADs is followed, if failed or contraindicated, by CA. A surgical approach should be considered if there is a concomitant cardiac surgery or after two failed CA attempts.^{3,6,7}

Conclusion

There is no clear best method for rhythm control treatment, which is further complicated by a significant gap in evidence for different ablation and surgical techniques. Although hybrid approaches can give hope for better outcomes, there needs to be more research to determine that potential. Finally, a remarkable opportunity exists for researchers in AF as illustrated in this study, which can be tackled in future research for better clinical outcomes in AF patients. ■

Conflicts of interest

None declared.

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