

# Management Techniques for Atrial Fibrillation during the Peri-operative Period: Opinion

Gerhard H. Fromm\*

Department of Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

## Introduction

The most prevalent arrhythmia in humans is atrial fibrillation (AF). The progression of AF, which is initially non-sustained and brought on by trigger activity, leads to permanent AF through changes to the atrial myocardial substrate. By preventing recurrences (rhythm control) or regulating the heart rate during AF, treatment of AF seeks to reduce the risk of stroke and enhance quality of life (rate control). Over the past 20 years, catheter-based, surgical, and hybrid ablation approaches have outperformed medication therapy in terms of controlling rhythm in individuals with AF. The effectiveness of ablation procedures varies widely, with paroxysmal AF having the highest and long-term persistent AF having the lowest efficacy [1].

In clinical practise, atrial fibrillation is typically conducted on symptomatic, young, and otherwise healthy individuals. The overall success rate is good, but there are still a lot of complications and many patients are still taking AADs. Wide variances are seen in the monitoring after ablation. Following ablation, antithrombotic therapy reveals inadequate adherence to recommendations. Many atrial fibrillation patients require the restoration of sinus rhythm to improve their quality of life since they still experience significant symptoms despite ventricular rate management. Rhythm control refers to the acute restoration (cardioversion) and maintenance of sinus rhythm in atrial fibrillation patients [2]. Symptoms, atrial fibrillation type (paroxysmal, persistent, or long-standing persistent), patient comorbidities, overall health state, and anticoagulation status are taken into consideration when deciding whether to attempt rhythm control.

## Description

Many people suffer recurrent atrial fibrillation and need further treatment to keep their sinus rhythm stable over the long term. In general, first-line antiarrhythmic medication therapy is advised, and drug choice is based on the presence or absence of structural heart disease or heart failure, electrocardiographic variables, renal function, and other comorbidities. Although recurrence is prevalent in spite of ongoing advancements in ablation procedures, catheter ablation has been found to significantly minimise recurrent atrial fibrillation, lessen symptoms, and enhance quality of life in individuals who continue to have it despite receiving medication therapy [3]. The most prevalent arrhythmia in people is atrial fibrillation. The progression of AF, which is initially non-sustained and brought on by trigger activity, leads to permanent AF through changes to the atrial myocardial substrate.

By preventing recurrences (rhythm control) or regulating the heart rate

\*Address for Correspondence: Gerhard H. Fromm, Department of Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania, USA, E-mail: Gerharhdf@hotmail.com

**Copyright:** © 2022 Fromm GH. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Date of Submission:** 03 May, 2022, Manuscript No. japre-22-71589; **Editor Assigned:** 04 May, 2022, PreQC No. P-71589; **Reviewed:** 10 May, 2021, QC No. Q-71589; **Revised:** 17 May, 2022, Manuscript No. R-71589; **Published:** 24 May, 2022. DOI: 10.37421/2684-5997.2022.5.146

during AF, treatment of AF seeks to reduce the risk of stroke and enhance quality of life (rate control). Over the past 20 years, catheter-based, surgical, and hybrid ablation approaches have outperformed medication therapy in terms of controlling rhythm in individuals with AF. The effectiveness of ablation procedures varies widely, with paroxysmal AF having the highest and long-term persistent AF having the lowest efficacy. Particularly in patients with persistent AF, treatment to prevent recurrences of AF falls short of expectations [4]. Emerging technologies, such as the use of improved electrocardiographic imaging techniques to detect electrical substrate and document atrial fibrosis using magnetic resonance imaging, are likely to offer important insights into the treatment of individual patients.

The treatment of patients with atrial fibrillation will face significant difficulties in the future (AF). Apart from anticoagulation, medications utilised in AF have not been consistently proved to have an influence on mortality or decrease adverse cardiovascular events, despite the fact that the population with AF is predicted to grow significantly. The use of newer technology and structured, integrated care, among other new methods for managing AF, have the potential to improve clinical phenotyping or lead to more effective stratified therapy and treatment selection [5]. Here, we present the conclusions of the 6<sup>th</sup> Consensus Conference of the European Heart Rhythm Association (EHRA) and the Atrial Fibrillation Network (AFNET), which took place at the European Society of Cardiology Heart House in Sophia Antipolis, France, from January 17 to 19, 2017.

At a meeting of 62 international experts in AF, 13 industry partners, and new approaches to screening and diagnosis, improved AF care integration, clinical pathway development for treating complex patients, stroke prevention strategies, and improved patient selection for heart rate and rhythm control were discussed. In the end, these strategies may produce better results for AF patients. The purpose of this survey was to learn more about how members of the European Heart Rhythm Association electrophysiology research network now treat persistent atrial fibrillation (AF). The survey received replies from thirty centres. Stand-alone pulmonary vein isolation (PVI) was the primary ablation technique for first-time ablation in 67 percent of the centres for persistent but not long-standing AF and in 37 percent of the centres for both persistent long-standing AF. Other approaches used included substrate mapping and isolation of low-voltage regions, insertion of linear lesions, ablation of fractionated electrograms, and progressive approach till AF cessation. However, for any approach, the proportion of centres using these techniques during the initial ablation did not surpass 25%. The majority (80%) of the centres employed an irrigated radiofrequency ablation catheter while doing stand-alone PVI in patients with persistent but not long-standing AF, while 20% of the respondents used a cryoballoon.

## Conclusion

Similar outcomes for the ablation of long-standing persistent AF have been described (radiofrequency 90 percent, cryoballoon 10 percent). As the primary first-time ablation techniques, neither rotor mapping nor one-shot ablation tools were employed. Just 10% of the centres conducted a thorough investigation for non-pulmonary vein triggers. The typical 1-year success rate without antiarrhythmic medication was 50–60%. Only 27% of the centres were aware of their 5-year results. In conclusion, a sizable portion of AF patients receiving ablation are those with chronic AF. In many centres, stand-alone PVI is now the preferred option for first-time ablation in these patients. The large

range in additional technique usage and endpoint selection is a reflection of the ambiguities and lack of information around the most advantageous strategy. In the majority of centres, procedural success rates are low and long-term results remain uncertain.

---

## Conflict of Interest

Author declares no conflicts.

---

## References

1. Tops, Laurens F., Martin J. Schalij, and Jeroen J. Bax. "Imaging and atrial fibrillation: the role of multimodality imaging in patient evaluation and management of atrial fibrillation." *Eur Heart J* 31 (2010): 542-551.
2. Levy, S., G. Breithardt, R.W.F. Campbell, and A.J. Camm, et al. "Atrial fibrillation: Current knowledge and recommendations for management." *Eur Heart J* 19 (1998): 1294-1320.
3. Pritchett, Edward L.C. "Management of atrial fibrillation." *N Engl J Med* 326 (1992): 1264-1271.
4. Lip, Gregory Y.H and Hung-Fat Tse. "Management of atrial fibrillation." *The Lancet* 370 (2007): 604-618.
5. Wyndham, Christopher R.C. "Atrial fibrillation: the most common arrhythmia." *Tex Heart Inst J* 27 (2000): 257.

**How to cite this article:** Fromm, Gerhard H. "Management Techniques for Atrial Fibrillation during the Perioperative Period: Opinion." *J Anesthesiol Pain Res* 5 (2022): 146