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Commentary: Evidence or anecdote?

Vijay S. Patel, MD, and Richard Lee, MD, MBA

Atrial fibrillation (AF), the most common arrhythmia, continues to increase in prevalence, with a significant impact on patient morbidity, mortality, and health care costs.¹ The coexistence of AF and heart failure (HF) portends an even greater deleterious impact on long-term patient outcomes.²

It was a pleasure to read the article by Khiabani and colleagues,³ “Surgical ablation of atrial fibrillation in patients with heart failure,” in this issue of the *Journal*. The article is well organized, with a description of the subset of AF patients with HF composing the tachycardia-induced cardiomyopathy (TIC) population, followed by discussions of the medical and catheter ablation strategies currently deployed for their management and outcomes, patient selection for the biatrial Cox-maze IV procedure (CMP-IV) for SA, and rationale for advancing a stand-alone surgical ablation (SA) strategy for patients diagnosed with TIC refractory to a medical and/or catheter ablation strategy. The authors recommend offering concomitant SA to patients with AF and HF diagnosed with correctable structural heart disease; the perioperative and long-term benefits of this strategy have been well described.^{4,5}

An important and pivotal clinical practice message is the need to distinguish patients with HF as a result of AF (eg, the TIC cohort) from those who develop AF due to irreversible HF. This cannot be overemphasized. The article provides an algorithmic approach for diagnostic and therapeutic management before and after surgical referral. The diagnostic guidance emphasizes the exclusion of patients with irreversible etiology for HF, including dilated cardiomyopathy, cardiac fibrosis, and infiltrative cardiac diseases, and highlights the utility of cardiac magnetic

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resonance imaging to exclude patients unlikely to benefit from an ablation procedure. Regarding their operative approach, the article emphasizes the importance of the CMP-IV procedure, which is technically less challenging and yet associated with comparable outcomes to the classic Cox-maze procedure.⁶ Unfortunately, they provide no details specific to their choice of sternotomy versus right thoracotomy, operative procedure, descriptions of lesions, discussion of alternate energy sources beyond their preferred radiofrequency and cryoablation energy devices, and outcomes with other less invasive SA procedures without biatrial lesions.

A retrospective report from this highly experienced center (>15 years) includes 34 patients primarily with persistent and/or long-standing AF who underwent a standalone CMP-IV procedure. They report 94% freedom from recurrent atrial tachyarrhythmia at 2 years, improvement of left ventricular ejection fraction and New York Heart Association functional classification, and low complication rate.⁷ These results are comparable to the few similar retrospective reports from other highly experienced centers.⁸⁻¹⁰ Collectively, they represent a small volume of patients, and the authors do not explain the lack of referrals. Despite these favorable outcomes, there is a lack of conclusive large retrospective or prospective randomized multicenter clinical studies. The absence of this data may be due to resistance within the medical and specialty physician community to refer patients for stand-alone SA; knowledge, experience, and adoption of the CMP-IV procedure by the larger surgical community; and the perceived greater risks with no persuasive median or long-term outcomes data.

Whether this is considered evidence or anecdote, the authors must be commended for making a convincing argument and, in their opinion, future Society Guidelines

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should incorporate the concomitant or stand-alone CMP-IV procedure for the management of eligible patients with AF or HF with or without correctable structural heart disease, respectively. The article provides a valuable clinical framework to potentially serve many more patients with biatrial CMP-IV procedure, and their appeal is worthy of consideration by the Society's Guidelines Committee.

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Commentary: “Chicken or the egg”: The causality dilemma of atrial fibrillation and congestive heart failure

Gabor Bagameri, MD, and John M. Stulak, MD

In their article in this issue of the *Journal*, Khiabani and colleagues¹ advocate surgical ablation of atrial fibrillation (AF) in patients with heart failure (HF). AF and HF can coexist, which can lead to a vicious cycle, with both being a potential cause and/or consequence. This association between AF and HF was appreciated long ago and raises

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The success and clinical impact of stand-alone or concomitant surgical ablation of atrial fibrillation (AF) in the presence of heart failure are directly related to whether AF is a cause of or the result of heart failure.

the question of “atrial fibrillation or heart failure?” in a way similar to that in the folk paradox of the “chicken or the egg” first proposed by ancient Greek philosophers to describe the problem of determining cause and effect. However, unlike with the chicken and the egg, determining causality in the case of AF in HF is critical for success.

The pathophysiological relationship between AF and HF is complex and variable and while it has been extensively

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