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Commentary: Atrial fibrillation? Go hybrid

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The gold standard surgical treatment for atrial fibrillation (AF) is the Cox maze procedure described in the 1980s.¹ The Cox procedure is a technically complex procedure that was routinely adopted only by few dedicated surgeons. Nowadays, the majority of AF ablations are catheter-based. Because both approaches (surgical and catheter-based) have limitations and sometimes suboptimal efficacy, the hybrid and convergent technique has been proposed with encouraging results.

Varzaly and colleagues² performed a systemic review and meta-analysis to summarize our understanding of the safety and efficacy of hybrid AF ablation. By pooling 22 studies (925 patients and 19 months of mean follow-up) they reported favorable outcomes and acceptable complication rates associated with the hybrid approach.

Surgery for AF allows direct visualization of the myocardium and a more precise and probably more complete lesions set. Also, surgery permits direct visualization of the adjacent structures (eg, the phrenic nerve) and concomitant left atrium appendage exclusion. Perhaps the biggest surgical caveat is the impossibility to map while ablating to ensure pulmonary vein isolation and block across the lesion lines. Catheter-based approaches are less invasive, may access sites unreachable from epicardium (eg, the cavotricuspid isthmus), and allow intraprocedural mapping. The hybrid approach takes the best of the 2 approaches and may achieve better AF control. Although no comparison with other approaches is made, the

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CENTRAL MESSAGE

Atrial fibrillation is a complex disease. It needs a tailored and multifaceted treatment and strict collaboration between cardiothoracic surgeons and electrophysiologists.

results of work presented by Varzaly and colleagues² are promising. However, some points need further discussion.

- The treatment for AF is very heterogeneous, with different ablation lines and sources of energy; hence, results may vary across studies, as demonstrated in the forest plots of Varzaly and colleagues'² meta-analysis, with little effect size clustering and significant numerical heterogeneity.
- AF is a volatile outcome. To better evaluate the efficacy and effectiveness of the procedures (catheter based vs surgical vs combined/hybrid) we should shift the focus to clinical outcomes and patients' quality of life.

AF is a complex disease. As such, it needs a tailored and multifaceted treatment and strict collaboration between cardiothoracic surgeons and electrophysiologists.

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