Never forget to consider atrial fibrillation ablation during mitral valve surgery

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Central Message

Meticulous surgical ablation of atrial fibrillation provides excellent results, including improved survival, and must accompany most mitral valve surgeries.

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It is so nice to read an article reporting on 11,381 patients from a national database with atrial fibrillation (AF) undergoing mitral surgery.¹ After rigorous propensity matching, the authors found 1784 pairs of patients (mitral surgery vs mitral surgery and ablation) to compare. We have to thank the authors for their careful statistical analysis of these 3568 cases. During the 12-year study period, 34,267 patients underwent mitral surgery, among them 11,381 patients who initially presented with AF. In other words, 33% of patients undergoing mitral surgery in European countries these days present with AF. The effects of AF on morbidity and mortality are well described.² Can we afford to ignore such a frequent and surgically treatable disease? Unfortunately, this study found that only 21.5% of patients with AF undergoing mitral surgery had a concomitant surgical ablation. This is very low number. Badhwar and colleagues³ found that mitral operations had a rate of concomitant surgical ablation of 68.4% in the United States. The 2017 American Society of Thoracic Surgeons clinical practice guidelines assigned Class I, Level of evidence A for concomitant surgical ablation of AF at the time of mitral surgery, stating that surgical ablation for AF can be performed without additional risk of operative mortality or major morbidity.⁴

The limitation of the article by Suwalski and colleagues¹ is that the authors do not have details of the surgical technique of AF ablation. This is extremely important. No doubt, this simple, standard, safe, and effective procedure can provide excellent results and this should encourage surgeons to perform AF ablation on many patients. Analyzing the literature and my own experience, I believe that cryoablation or a combination of cryoablation and bipolar radiofrequency ablation in the open left atrium—with a box lesion around the pulmonary veins and mitral isthmus line—can be the safe and effective procedure we need.^{5,6}

A recent systematic review and meta-analysis of randomized controlled trials by McClure and colleagues⁷ found that surgical ablation of AF had no significant effect on

mortality. In the present study, the survival benefit was shown on thousands of patients with long-term follow-up and strong statistical analysis. The survival benefit of surgical ablation was maintained in all patients, but the most benefit was appraised in low-risk patients such with European system for cardiac operative risk evaluation score 2 through 5 and younger than age 50 years. By analyzing the results of experienced surgical ablation centers we can find even better results. We have to keep in mind the authors' observation that the ablation benefit for high-risk patients is not so significant. Obviously, there are patients for whom ablation should be abandoned. These are very ill patients, patients with a long history of continued AF, patients with a huge left atrium, and re-do cases. But these patients make up the minority of mitral surgery cases.

Meticulous surgical ablation of AF must accompany most mitral valve surgeries. Let's run big databases in our institutions and countries.

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