Commentary: To ablate or not, where lies the risk?

Scott Goldman, MD

From the Lankenau Heart Group, Lankenau Heart Institute, Main Line Health, Wynnewood, Pa.

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Address for reprints: Scott Goldman, MD, Lankenau Medical Center, Surgery, Suite 356, 100 E Lancaster Ave, Wynnewood, PA 19096 (E-mail: goldmans@mlhs.org).

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Central Message

Where lies the risk when deciding whether to add surgical ablation to mitral valve surgery in patients with atrial fibrillation?

See Article page 1519.

In this issue of the *Journal*, Kim and colleagues¹ report on a series of patients with rheumatic mitral valve disease and atrial fibrillation (AF). Among 1229 of these patients with AF, 812 underwent concomitant surgical ablation (SA) and 417 underwent valve surgery alone. Although the study was not randomized, these data were carefully analyzed. To shed more light on the analysis, propensity matching was performed.

As I reviewed this article, several facts became evident. First, and very important to note, is that the addition of SA was very effective in maintaining sinus rhythm. This led to a significant decrease in thromboembolic events. Of interest, this observation held even for patients maintained on warfarin therapy. Of the thromboembolic events observed, 69.7% were strokes, and 79.8% of these were permanent. Late mortality was mostly related to this complication. In both the unadjusted and matched data, the addition of SA to rheumatic mitral valve surgery led to a significantly increased survival.

Kim and colleagues¹ point out that patients with rheumatic valve disease may not respond as well to SA as those with degenerative mitral disease.

Another matter to consider is that there was no short-term penalty in performing SA. That is, there was no difference in early outcomes between the groups: No difference in early mortality. No difference in bleeding. No difference in early stroke. No difference in low cardiac output.

The current rate, among US surgeons, of SA in patients with AF undergoing mitral valve repair is 61.5%.^{2,3} As of 2017, patients with AF undergoing any cardiac surgical procedure should undergo SA, as recommended in the *Society of Thoracic Surgeons Clinical Practice Guidelines*.⁴

Why is it that SA is often omitted from mitral valve operations? Might it be a concern regarding the increase in ischemic time required to perform SA, that this additional ischemic time could cause worse early results? The data in the article and reports of others^{1,3-5} point out that here is no penalty in mortality, bleeding, early stroke, or low cardiac

output in patients undergoing SA. There was a small increase in the requirement for a permanent pacemaker.

Is there a lack of comfort for cardiac surgeons with performing concomitant SA? Perhaps more opportunities should be made available for training to perform SA. With currently accessible devices, the procedure can be performed efficiently and effectively, even when done with a minimally invasive approach.

Do our cardiologist colleagues embrace the concept that there is a clear benefit to performing SA? Can a lack of enthusiasm by the referring physician prevent the surgeon from adding SA when indicated? Again, more education and a heart team approach to the patient with valvular heart disease may correct this situation.

This report is yet one more piece of evidence that clearly supports the benefits of adding SA to mitral valve operations in patients with AF. Thromboembolism leading to stroke not only causes mortality but also results in permanent disability. Preventing this devastating outcome should be in the forefront in our goals for these patients. Just fixing the valve is not enough.

When deciding whether to ablate or not one must consider “Where lies the risk?”. As evidenced by the study of Kim and colleagues,¹ the risk to the patient is not in adding SA but in omitting it.

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