**PROVIDING EQUIPOISE
IN THE MANAGEMENT
OF PATIENTS AFTER
SURGICAL ABLATION
WITH THE COX-MAZE IV**

Reply to the Editor:

We thank McClure and colleagues¹ for their contributions to the field of stroke prevention in atrial fibrillation and for their interest in our study on oral anticoagulation (OAC) after the Cox-Maze IV operation.² These colleagues make 4 comments in their letter to the Editor¹ that require a response: (1) the impact of small sample size on conclusions, (2) their accounting of strokes and the group without OAC, (3) the need to follow the guidelines and continue OAC, and (4) the applicability of left atrial appendage occlusion studies to guide clarity on OAC management after surgical ablation. We believe our respected colleagues may have misinterpreted our study and its role in the current literature.

First, we fully acknowledge the comment that a study such as ours² is indeed not powered to provide definitive conclusions regarding the superiority of no OAC after surgical ablation. In fact, it is clearly stated that our findings arose from a quality-improvement initiative by a team highly experienced in the Cox-Maze IV operation observing less than a 1% per year stroke rate without OAC.² It is clearly stated that ours was a descriptive analysis on our personal experience managing Cox-Maze IV recipients with excellent outcomes. It is clearly stated that the intent was for our findings to be hypothesis generating without statements or recommendations other than to insert equipoise into the management premise that all patients after surgical ablation require anticoagulation.

Second, the authors seem to have misread our article because they erroneously state that our cohort had 176 patients on OAC and 57 off OAC with 4 strokes. The reality was the converse. There were 176 patients who did not receive OAC and 57 who received OAC for protocolized medically justified reasons, such as mechanical prostheses. Furthermore, there was only 1 stroke in the no OAC cohort, for a stroke rate of 0.6%.

Third, the authors state that all patients after surgical ablation should remain on OAC “per guidelines,” suggesting that our experience may not be adherent.¹ However, the fact is that there are no guidelines for anticoagulation management after surgical ablation. All current guidelines are for catheter-based ablation. Moreover, the most recent 2017 Heart Rhythm Society consensus statement³ clearly notes: “At the present time, there is little to no evaluable evidence for or against the merits of anticoagulation following surgical ablation when the left atrial appendage has been

FIGURE 1. After successful Cox-Maze IV and left atrial appendage obliteration, oral anticoagulation is not benign.

surgically obliterated. In the absence of current evidence, the decision to anticoagulate and the duration of treatment should be made on an individual basis weighing the risks and benefits of anticoagulation in the postsurgical patient.” Our study² stemmed from a quality improvement initiative that sought to determine the necessity of OAC after Cox-Maze IV when a patient experienced complications after postoperative OAC (Figure 1). Currently, across North America, practice varies and many patients who are intolerant to OAC after a Cox-Maze IV are discharged on antiplatelet therapy only. Therefore, our study² and our current practice follow the most current guidelines by individualizing the decision to anticoagulate with excellent results.

Fourth, we agree with our colleagues that the body of literature studying left atrial occlusion devices does not support OAC discontinuation. However, these studies of patients with uncorrected atrial fibrillation, although important and interesting, have no bearing on patients in sinus rhythm after a Cox-Maze IV and a surgically obliterated left atrial appendage. Because it is now a Class I recommendation to perform surgical ablation in conjunction with appendage obliteration on patients undergoing both open or closed atrial cardiac operations,³⁻⁵ we agree with our colleagues that the results of the Left Atrial Appendage Occlusion III Study may provide added information limited to patients not able to undergo ablation and may

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corroborate our most recent analysis from the Society of Thoracic Surgeons database.⁶

Finally, we have been very satisfied with our guideline-adherent policy of selective anticoagulation after successful Cox-Maze IV. It streamlines care, and within the limits of our current large institutional experience, it has virtually eliminated hemorrhagic strokes and delayed tamponade. We once again would call on a randomized controlled trial to further evaluate our hypothesis for this mode of postoperative management.

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CAN THE MAZE BE ALL THE RAGE?

Reply to the Editor:

Murashita and colleagues¹ recently published a provocative notion in their article “Oral Anticoagulation May Not Be Necessary for Patients Discharged in Sinus Rhythm After the Cox Maze IV Procedure.” The idea of withholding oral anticoagulation after

surgical ablation for atrial fibrillation and concomitant valve surgery is intriguing, yet conflicting. In response to the study of Murashita and colleagues,¹ McClure and colleagues² adamantly refuted the concept of withholding oral anticoagulation. They postulated that limitations in study size and design vitiated any meaningful conclusion. Furthermore, McClure and colleagues² substantiated their position by citing 2 recent meta-analyses: one regarding surgical ablation and the other regarding left atrial appendage closure.^{3,4} Both meta-analyses support ongoing anticoagulation, because the risks of stroke were not reduced by either therapy. These results are likewise intriguing but must be viewed within the limitations of meta-analyses. Although these studies have reached significant conclusions, the deductive reasoning deserves additional scrutiny as it translates to the work of Murashita and colleagues.¹

First, Murashita and colleagues¹ emphatically stated their results to be “hypothesis generating only.” They were circumspect regarding their limitations and reiterated the need for subsequent studies. Second, they uncovered a potential handicap of the CHADS₂ (congestive heart failure, hypertension, age ≥ 75 years, diabetes mellitus, stroke [double weight]) scoring system as a therapeutic guide for oral anticoagulation after surgical ablation. Third, they shed light on the bleeding risks in patients 75 years of age and older. Finally, and perhaps most impressively, they established a fairly homogeneous model—a Cox maze IV series with 99% normal sinus rhythm at discharge, an incredible platform for building subsequent prospective studies. We acknowledge that the work of Murashita¹ and colleagues does not meet landmark criteria; nonetheless, it is engaging and insightful. We thank McClure and colleagues² for their critique, which permits a finer dissection of this study. We look forward to the future work in this space.

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