

Response to Letter to the Editor regarding ‘Characteristics and outcomes of ventricular tachycardia and premature ventricular contractions ablation in patients with prior mitral valve surgery’

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Abstract

We would like to thank the authors for their letter and interest in our manuscript. We appreciate their valuable comments. The authors have raised the following important points: 1. The heterogeneity of our cohort with mitral valve surgery (MVS) 2. Elucidating the characteristics and causes of ventricular arrhythmias (VA) in patients with primary versus secondary mitral disease as well as in those with ischemic versus non-ischemic heart disease 3. The paucity of cardiac magnetic resonance imaging (MRI) as a limitation of the study 4. The need for careful evaluation of patients prior to ablation since most arrhythmias did not originate from the perimitral area.

Response to Letter to the Editor regarding ‘Characteristics and outcomes of ventricular tachycardia and premature ventricular contractions ablation in patients with prior mitral valve surgery’.

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We would like to thank the authors for their letter and interest in our manuscript. We appreciate their valuable comments. The authors have raised the following important points:

1. The heterogeneity of our cohort with mitral valve surgery (MVS)
2. Elucidating the characteristics and causes of ventricular arrhythmias (VA) in patients with primary versus secondary mitral disease as well as in those with ischemic versus non-ischemic heart disease
3. The paucity of cardiac magnetic resonance imaging (MRI) as a limitation of the study

4. The need for careful evaluation of patients prior to ablation since most arrhythmias did not originate from the perimitral area.

Response:

1. We agree that our cohort is heterogeneous in terms of the etiology of mitral pathology. However, our cohort is one of the least heterogeneous in the literature addressing VAs ablation in patients MVS as most prior studies evaluated arrhythmias in patients with heart surgery or valve surgery in general as discussed in the introduction section in our manuscript.(1) Although mitral regurgitation is classified into primary and secondary as proposed by the American College of Cardiology and the American Heart Association (ACC/AHA) guidelines, different classifications and subgroups exist based on causes, mechanisms, and leaflet motion, which might cause confusion due to overlapping terminologies.(2, 3) We concur that the study of VA outcomes based on the specific mechanism of mitral disease would be a welcome addition to the literature.
2. We did compare patients with coronary artery disease (CAD) to patients without CAD. As discussed in our manuscript, MVS patients with a history of CAD showed a trend of better VA recurrence-free survival compared with those without CAD history.(1)
3. Cardiac MRI was not routinely obtained before ablation in our cohort. We agree that MRI would have provided additional information on our cohort - indeed our current practice is to incorporate imaging studies in our preprocedural planning.
4. We found that most VAs were not related to the perimitral area. We agree with Dural et. al that comprehensive evaluation of these patients and careful review of echocardiography, cardiac MRI, and prior ablation findings is very important.

In summary, while our manuscript adds insight into the mechanisms and outcomes of ventricular arrhythmias in patients with prior MVS, further (ideally prospective) studies utilizing preprocedural imaging including echocardiography, advanced cardiac imaging etc. coupled with comprehensive 3D electroanatomical mapping are required. Direct comparison of those with primary versus secondary mitral valve pathology would be intriguing given that secondary valve disease is a result of a diseased ventricle and may yield differing outcomes.

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