

UCLA

UCLA Previously Published Works

Title

Response to Letter Regarding "Impact of Local Ablation on Inter-Connected Channels Within Ventricular Scar

Permalink

<https://escholarship.org/uc/item/8hj888vb>

Journal

Circulation Arrhythmia and Electrophysiology, 7(2)

ISSN

1941-3149

Authors

Tung, Roderick
Mathuria, Nilesh S
Nagel, Rich
et al.

Publication Date

2014-04-01

DOI

10.1161/circep.114.001467

Peer reviewed

Response to Letter Regarding “Impact of Local Ablation on Inter-Connected Channels Within Ventricular Scar: Mechanistic Implications for Substrate Modification”

We would like to thank Dr Berruezo et al for their interest in our article.¹ The findings of our work are indeed consistent with the scar dechanneling approach in patients with arrhythmogenic right ventricular cardiomyopathy described by this accomplished group in 2012 and can be considered as a validation of that work. However, it is important to understand 2 important differences between these 2 studies. The aim of our study, which was primarily mechanistic, was to use a double access technique to monitor the remote effects of (1) a single ablation lesion and (2) to provide quantitative data with regard to remote effects within scar using known distances on a multipolar mapping catheter.

We think that the elimination of abnormal electrograms demonstrated by a simultaneous mapping catheter is more compelling than the technique of remapping, which has limitations. Inherent to electrophysiological mapping, the absence of proof in electrogram identification is not proof of absence. Second, although Berruezo et al described the distances between the core of confluent scars that comprised a channel, this still does not provide a precise quantification of the remote effects of a single radiofrequency application unless rigorous remapping is performed after every single ablation lesion. In their study, remapping was only performed in less than half (5 of 11) of patients after a cumulative lesion set that was delivered progressively downstream until later potentials were eliminated. Accordingly, we only claimed that our work was the first demonstration of ablation effect outside the radius of a radiofrequency lesion.

Beyond these differences in scope and methodology as discussed above, we want to acknowledge and apologize for this important reference omission. The work by Berruezo et al deserves and warrants a citation in our Methods section. This omission highlights the importance of thorough proficiency of the literature, which necessitates unrelenting scholarly review of articles, both internally and externally. We would urge the readership to view these 2 studies

as supportive and mutually validating evidence of a more targeted method to homogenize arrhythmogenic scar and that the article from Berruezo et al is temporally the earlier description of this concept. We again wish to thank Dr Berruezo for pointing out our oversight and for the excellent work that consistently comes out of their group that continues to advance our working knowledge and shared passion for the ablation of ventricular tachycardia.

Disclosures

None.

Roderick Tung, MD

UCLA Cardiac Arrhythmia Center

UCLA Health System

David Geffen School of Medicine at UCLA

Nilesh S. Mathuria, MD

St. Luke's Health System

Texas Heart Institute

Houston

Rich Nagel, AS

Ravi Mandapati, MD

Eric F. Buch, MD

Jason S. Bradfield, MD

Marmar Vaseghi, MD, MS

Noel G. Boyle, MD, PhD

Kalyanam Shivkumar, MD, PhD

UCLA Cardiac Arrhythmia Center

UCLA Health System

David Geffen School of Medicine at UCLA

References

1. Tung R, Mathuria NS, Nagel R, Mandapati R, Buch EF, Bradfield JS, Vaseghi M, Boyle NG, Shivkumar K. Impact of local ablation on inter-connected channels within ventricular scar: mechanistic implications for substrate modification. *Circ Arrhythm Electrophysiol*. 2013;6:1131–1138.