Letter by Berruezo et al Regarding Article, “Impact of Local Ablation on Interconnected Channels Within Ventricular Scar: Mechanistic Implications for Substrate Modification”

We have read with interest the article of Tung et al.1 The authors conclude that substrate ablation by targeting relatively earlier late potentials can eliminate remote areas of slow conduction. We agree with this affirmation. However, the authors also claim that this is the first demonstration of the merits of substrate ablation by targeting the conducting channel entrance into the scar. We are compelled to point out that this is not the case.

Two years ago, on December 28, 2011, Circulation: Arrhythmia and Electrophysiology published an article2 in which our group presented a scar dechanneling technique for the substrate ablation of patients with ventricular tachycardias.2 The article described and characterized 2 types of conducting channels identified during substrate mapping in sinus rhythm: voltage channels and late potential channels. We also described how to recognize the conducting channel entrances that would be the ablation target for radiofrequency application. The conducting channel entrance was defined as the electrogram in which the isolated delayed component showed the shortest delay between the far-field component and the local activation component of the slow conduction path (Figures 3 and 4 in that article). The conducting channel activation sequence also showed that conducting channel entrances are mostly (80%) located at the edge of the scar.

The criteria used to identify this ablation target were validated and the effectiveness tested by the observation that a few RF applications at the conducting channel entrance eliminated most electrograms with isolated delayed components in the scar at some distance from the radiofrequency delivery site (our Figures 3, 4, and 7). Therefore, we demonstrated that targeting the conducting channel entrance reduces the extent of radiofrequency application required to eliminate the substrate for ventricular tachycardia, increasing the efficiency and decreasing procedural requirements. Whereas, the capacity to eliminate multiple remote electrograms with the scar dechanneling technique has been shown to be especially useful in ensuring the safety of epicardial ablation.2,3

Therefore, we feel an obligation to point out that the concept of eliminating the scar conducting channels by applying radiofrequency at the entrance, which we called scar dechanneling, should be acknowledged as being first described by our group nearly 2 years ago.

Disclosures

None.

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