

RESPONSE TO LETTER TO THE EDITOR

Response by Miranda-Arboleda et al to Letter Regarding Article, “Young Male With Incessantly Wide Complex Tachycardia: What Is the Substrate of the Arrhythmia?”

In Response:

We thank Wang and Zhao for their interest in our recently published article.¹ We agree that the emergency department ECG is very suggestive of ventricular tachycardia, specifically of fascicular ventricular tachycardia (verapamil sensitive); however, the initial management with vagal maneuvers and adenosine, although usually reserved for supraventricular atrioventricular reciprocating tachycardias, can also provide diagnostic information by demonstrating atrioventricular dissociation and suggesting a ventricular substrate.

Regarding the inducibility from the atria, one of the electrophysiological characteristics of fascicular ventricular tachycardia and other related ventricular tachycardias, such as the false tendon mediated, is that they can be reproduced with atrial stimulation. This can be achieved by either triggering the automaticity of the substrate or by inducing a change in the conduction properties of the tissue, inducing a reentry circuit.^{2,3}

During the electrophysiological study, isoproterenol infusion enhanced the abnormal automaticity of the substrate that was also triggered by stimulation protocols.⁴ Entrainment maneuvers from the right atrium helped establish the diagnosis, and the activation map with a focal pattern was confirmed. A pace map from the apical segment of the right ventricular septum reproduced the ventricular tachycardia morphology with a surface ECG 12/12 match.

Finally, Drs Wang and Zhao comments on a concerning issue, the possibility of sudden cardiac death after a refractory ventricular arrhythmia. Our patient had a comprehensive cardiovascular workup that showed no structural or electric abnormality. In cases like this, one makes the diagnosis of idiopathic ventricular tachycardia with a long-term positive response of $\approx 97\%$.² As Dr Wang mentions, follow-up should be carefully performed before considering an implantable cardiac defibrillator. These sorts of arrhythmias in patients with a structurally normal heart are usually very well tolerated, and implantable cardiac defibrillators can lead to inappropriate shocks along with the common problem of inappropriate discharges.

We again thank Dr Wang and colleagues for their interest, and we hope all the issues have been well addressed.

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ARTICLE INFORMATION

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Disclosures

None.

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