

In summary, without denying the appeal of ultrasound imaging as a method for diagnosing the origin of wide-QRS tachycardia, it is important to point out that this case was exceptional, and that an accurate diagnosis can be achieved in clinical practice based on patient history and electrocardiography. We should discard criteria such as hemodynamic tolerance that have no diagnostic value and can lead to inappropriate treatment of a regular wide-QRS tachycardia, with serious clinical and prognostic implications.

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## Echocardiographic Diagnosis of Ventricular Tachycardia: Is There a Problem With Clinical and Electrocardiographic Diagnostic Criteria? Response



### Taquicardia ventricular diagnosticada por ecocardiografía: ¿fallan los criterios diagnósticos clínicos y electrocardiográficos? Respuesta

#### To the Editor,

I am grateful for the interest shown in the published echocardiography images<sup>1</sup> and agree with the authors that hemodynamic stability in some patients during episodes of ventricular tachycardia can lead to a misdiagnosis of wide-QRS supraventricular tachycardia<sup>2</sup>; it is of the utmost importance to differentiate between ventricular and supraventricular origin because of the worse prognosis of ventricular tachycardia.<sup>3</sup> Nonetheless, the many electrocardiographic algorithms in use have not achieved 100% sensitivity or specificity<sup>4</sup>; moreover, even widely accepted tools such as the Brugada and Verecke criteria do not achieve the sensitivity or specificity of the original reports when applied by emergency physicians or even cardiologists.<sup>5,6</sup> Furthermore, the specificity of some criteria can be reduced in patients with complete left bundle branch block, as well as in patients with a structurally normal heart.<sup>4,7</sup>

When present, atrioventricular dissociation is one of the most specific practical criteria for differential diagnosis of ventricular vs supraventricular tachycardia,<sup>7</sup> and some authors have therefore suggested the potential diagnostic usefulness of echocardiography.<sup>8–10</sup> The presented case provides an example.

The authors correctly state that clinical and electrocardiographic criteria can establish a diagnosis of ventricular tachycardia in most cases. However, we should keep in mind that resident and emergency physicians have to reach a diagnosis when confronted with acute cases of patients with hemodynamically stable wide-QRS tachycardia; with the echocardiography images presented, my intention was to remind them that they have an additional tool at their disposal for the diagnosis of atrioventricular dissociation.

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