



LETTER TO THE EDITOR

QRS dispersion is better than QRS duration for predicting response to cardiac resynchronization therapy



KEYWORDS

Heart failure;
Cardiac
electrophysiology;
Cardiac pacing

To the Editor:

We closely read the review article about the pathophysiology and clinical applications of cardiac resynchronization therapy (CRT) by Sideris et al.¹

The article appropriately stated that cardiac dyssynchrony is complex and multifactorial, particularly when QRS duration, which indicates the time required for the activation of the entire ventricular muscle, is significantly prolonged.¹ Patients with left bundle branch block (LBBB) tend to have the widest QRS; thus, as supported by clinical trials, LBBB is a necessary criterion for CRT in patients with chronic heart failure, with the exception of patients without LBBB who have a QRS duration >150 ms.^{1,2} However, the identification of patients who would respond favorably to CRT is uncertain.³

Several clinical trials have been conducted to identify predictive factors of adequate response to CRT; a number of these trials have failed. Echocardiographic variables have been useful; nevertheless, electrocardiogram data could provide important clues for prediction, even when QRS duration (essential for applying CRT) is not the best electrical predictor of response to this procedure.

Tereshchenko et al.³ proposed a novel measure of electrical dyssynchrony based on the sum of QRS and T waves. Our group is studying QRS dispersion and we have found promising preliminary results.⁴

A pubmed search for "QRS dispersion" in the article title returned only 2 articles^{5,6}; after matching these two words, 5 articles were found, but one of the articles was not related to this topic.

The aim of this letter is not to criticize the research conducted by Sideris et al.¹ but to note that QRS dispersion could be better than QRS duration and could probably become a useful electrocardiographic tool for predicting which patients will adequately respond to CRT. Thus, we propose that in addition to duration, QRS dispersion should be measured in future investigations to achieve better predictive indexes for electrical therapy.

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