

by subgroups and giving us the therapeutic behaviors followed after obtaining the results, to enrich our knowledge and help us in clinical practice.

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Reply to “A welcome to relapse-predictor electrical signs in patients with cardiodefibrillators”

Respuesta a “Una bienvenida a los signos eléctricos predictores de recidivas en pacientes con cardiodesfibriladores”

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To the Editor:

First, we would like to thank the welcome of the author of the letter and then to state some considerations.

The search of premonitory electrical signs to detect risk of malignant ventricular arrhythmias (debut or relapse) in patients with and without automatic implantable cardioverter defibrillator has been on for years. These are much discussed issues on which there is a profusion of publications and controversies in the world. Because of its complexity it is one of the greatest challenges that Cardiology faces and an unsolved problem^{1,2}. Why? Among other things, because of the complexity of arrhythmias that have such diverse processes such as dynamic factors (action potential duration and conduction velocity duration,

electrical memory, electrotonic currents), all of which ranges between stability and instability. Moreover, the degree of heterogeneity of tissues: isotropy, anisotropy, homogeneity, action potential gradients, structural remodeling (fibrosis, infarction), electrical (hypertrophy, myocarditis) and neurological, as well as genetic defects (channelopathies, cardiomyopathies). The greater or lesser risk will depend on the interaction between dynamic factors and heterogeneity of tissues and the spectrum will range from lower vulnerability to higher risk³. Also, as it is known, arrhythmias will occur when everything is favorable in the anatomical and functional substrate, the triggers and essential arrhythmogenic mechanisms, all arranged in order by the autonomic nervous system.

No criteria is absolute, with and without structural

disease, the numerous signs described are generally of low predictive value, low sensitivity and specificity, but together they can achieve an approach to reality and be useful to define high-risk groups but not so useful to identify individuals at risk.

In our work⁴, the number of patients did not allow to divide the group into different subpopulations, but rather to try a general overview of the problem; moreover, many of these signs are shared as indicative of risk in the different subgroups.

It is known that measurements of repolarization vary by: frequency, heart rate, prematurity, conduction velocity, refractoriness, the state of the autonomic nervous system and all of it is absolutely changing; so, the assessment of electrocardiographic markers turns very complex. If there is structural disease, it can develop and change the circumstances; if it does not exist, the arrhythmogenic substrate itself can be modified. The variability of repolarization and all electrical findings is huge but all series reviewed present this situation. However, it is important to approach the problem because these arrhythmias are common after implantation of the devices and are a great conflict by the wear of the equipment, discomfort for the patient and the typical proarrhythmic effects of their shocks.

Regarding heterogeneity, it is universal. It not only exist between groups A and B considered by us, but in all: the underlying disease, the electrical, electrolyte and metabolic status, measurements, time to take the recordings, their number, observers.

The objective of this work was not to consider comorbidity or toxic effects, but only to measure certain electrical signals.

The duration of the QRS complex is not only important as an electrical predictor in dilated cardiomyopathy, but as a risk factor for arrhythmogenic sudden death in general.

In the future, our group or others, you, for example, may make this division into subpopulations and consider other (not exclusively) electric factors.

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