

Letter to the Editor

Atrial electromechanical coupling parameters should be kept in mind during the assessment of atrial arrhythmia risk

Dear Editor,

We read the article entitled 'Paroxysmal atrial fibrillation in myotonic dystrophy type 1 patients: P wave duration and dispersion analysis' with great interest¹. In this research, they revealed that P wave dispersion (PWD) was significantly increased in patients with myotonic dystrophy type 1 (MD) compared to control subjects.

MD is a genetic disorder affecting both the heart muscles and the cardiac conduction system. It can lead to conduction disturbances requiring pacemaker implantation and tachyarrhythmias such as atrial fibrillation (AF)². PWD is a non-invasive electrocardiographic indicator for the prediction of AF. However, due to the technical problems in the measurements, its intra- and inter-observer variabilities are high^{3,4}. As a relatively new tool, atrial electromechanical coupling (EMC) parameters show both the electrophysiological properties of the atria and the mechanical responses of the atrial muscle to the electrical impulses⁵. In order to measure atrial EMC parameters, tissue Doppler sample volume is placed to the left side of the left atrium, to the right side of the right atrium and to the interventricular septum at the level of atrioventricular annulus consecutively. The time interval from the onset of P-wave on ECG to the beginning of the late diastolic wave is obtained. This interval is defined as the PA. The differences between the PA values are defined as electromechanical delays. Increases in atrial EMC intervals may suggest an inhomogeneous propagation of sinus impulses in the different sites of the atria. During the course of MD, histopathological changes in atrial tissue and conduction system such as inflammation, fibrosis and enlargement may lead to heterogeneity in atrial conduction system. If it was measured in this study, atrial EMC parameters might have been found altered in patients with MD. Thus, it might strengthen the data obtained in this valuable study.

Conflict of Interest

The Authors declare that they have no conflict of interests.

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