

## Searching for mechanical abnormalities in subjects with early repolarization pattern: another Holy Grail of cardiac imaging?

Early repolarization pattern (ERP) may not be the entirely benign condition it was initially thought to be. In a recent meta-analysis, it was associated with increased risk and low to intermediate absolute incidence rate of arrhythmia death (1). However, the vast majority of subjects with ERP will never experience any malignant arrhythmia during their lifetime, and therefore, ability to identify any clinical, electro- or echocardiographic predictors of arrhythmia and sudden cardiac death in subjects with ERP is very appealing. Using speckle-tracking echocardiography (STE), Gülel et al. (2) investigated left ventricular (LV) myocardial deformation parameters in a relatively small group of subjects with ERP and concluded that STE did not provide incremental information about risk stratification of these individuals. However, there were some regional differences in LV circumferential and radial deformation parameters between subjects with ERP and controls. The authors should be commended for starting a search for potential mechanical substrate underlying arrhythmic events in subjects with ERP, but further studies are needed before it can be concluded that "there is nothing there." In an ideally designed study, myocardial deformation parameters of subjects with ERP who had survived an arrhythmic event would be compared with those of patients with and without ERP and no arrhythmias. Further, it has been shown that myocardial contraction patterns and mechanical dispersion might be more relevant than absolute strain values when assessing electromechanical interactions (3, 4). In an elegant study, Haugaa KH et al. (5) demonstrated that dispersion of myocardial contraction assessed by strain imaging was increased in patients with long QT syndrome (LQTS), while in a subsequent study, transmural mechanical dispersion was detected in symptomatic LQTS mutation carriers but not in asymptomatic and healthy individuals. Furthermore, it is exciting to learn that some other syndromes widely believed to be purely electrical, such as Brugada syndrome, may also be as-

sociated with structural abnormalities of right ventricle (6, 7). It is yet to be shown whether there might be an analogy with ERP, but until an adequately designed imaging and/or genetic study is carried out, it cannot be concluded that malignant form of ERP is a purely electrical disease.

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