Review of: "Ionic remodelling following myocardial infarction explains phenotypic variability in ECG and arrhythmic substrate but not in ejection fraction"

Natalia Arteyeva

Potential competing interests: The author(s) declared that no potential competing interests exist.

The manuscript ***'Ionic remodelling following myocardial infarction explains phenotypic variability in ECG and arrhythmic substrate but not in ejection fraction'*** describes the results of simulation study of the impact of ionic remodelling on spatio-temporal dispersion of repolarization, ECG morphology and ejection fraction variability after myocardial infarction. Using novel electromechanical human biventricular model allowed to study electrophysiological and mechanical parameters of the heart simultaneously, which is a new and a very promising approach.

The mechanisms underlying T-wave inversion, Brugada phenocopy, and tall upright T-waves in the acute post-infarction stage, as well as T-waveforms in the chronic stage were demonstrated. The simulations showed that the increase in local dispersion of repolarisation, which is associated with arrhythmic risk, is independent from the reduction of LV ejection fraction.

Thus, this simulation study contributes much to understanding of ECG genesis as well as to justification of markers for risk stratification.