

We appreciate the favorable evaluation of our work and useful suggestions of the Reviewer. We revised the manuscript according to the comments. Text amendments are highlighted (yellow).

Reviewer

The paper of Artyeva is complete. It reports the pathophysiologic background of repolarization heterogeneity and the way to measure it. Some point could further improve the review: -The author well describes the main physiologic and pathophysiologic aspects of repolarization heterogeneity.

Comment 1

However, only some of the electrocardiographic parameters are reported and the pathophysiologic correlates are not well described.

Response

Indeed, an insufficient amount of electrocardiographic parameters of ventricular repolarization was reported. In the revised text, the number of T-wave indices was significantly expanded.

Comment 2

A table summarizing the available parameters with their ability to evaluate repolarization heterogeneity, cut-offs, advantages and limitations could be useful.

Response

A table summarizing T-wave indices with their ability to evaluate different aspects of repolarization heterogeneity, and their cut-off values was added to the paper (Table 1). The advantages and limitations of ECG indices are discussed in the text of the paper (section “DISPERSION OF REPOLARIZATION: TEMPORAL AND SPATIAL, ITS ECG-REFLECTION AND CLINICAL SIGNIFICANCE”).

Comment 3

A figure representing the main methods used for repolarization heterogeneity calculation should be added.

Response

Unfortunately, we did not quite understand what the reviewer meant by the «methods used for repolarization heterogeneity calculation», so we could not add such a picture.

The revised text contains references to methods of T_{end} calculation:

“Although, a serious problem in using T_{peak}-T_{end} for diagnostics is the discrepancy between the cut-off values resulting from different T-end determining (baseline, or tangent methods) as well as different number of ECG leads involved in calculations.”

and methods for calculating a vector cardiogram based on standard ECGs:

“The spatial characteristic of RH is T-vector of vectorcardiogram – a three-dimensional total electric vector of ventricular repolarization, which can be calculated on the basis of standard ECG set^[100]”.

In Conclusion, it is stated that a complete picture of repolarization heterogeneity requires using of different ECG-indices reflecting different heterogeneity aspects.