

WAVELET TRANSFORM IN ANALYSIS OF HIGH-RESOLUTION ECG

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Abstract

The method for analysis of high-resolution ECG signals with use of wavelet transform is presented. As a wavelet a modified Morlet function was used. The method was verified on test signals composed of sinus waves as well as ECG test signal with simulated late potentials. Wavelet transform method was studied on two post infarction patients groups: with and without ventricular tachycardia. A quantitative parameter WF (wavelet factor) based on area under the time-frequency representation was proposed for results evaluation. Mean values of this parameter for studied groups were significantly different.

Keywords: high-resolution ECG, frequency analysis, wavelet transform