

Automatic Detection of Characteristic Points in Impedance Cardiogram

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Estimation of stroke volume and several other cardiovascular indices using impedance cardiography requires error-free detection of the characteristic points in the impedance cardiogram. A technique for automatic detection of points B, C, and X is presented. It is a time-domain technique and it uses R peaks in the simultaneously recorded ECG as reference points. It does not require estimation of the baseline and run-time selection of the processing parameters. Use of the technique on pre-exercise and post-exercise recordings from healthy subjects and cardiac patients showed that the points were detected with a high sensitivity and a low detection error.