Development of an application for automatic creation of Cabrera Sequence from electrocardiography digital image

[OBJECTIVE] To develop an application that will automatically generate the Cabrera sequence from the usual 12-lead electrocardiography (ECG) digital (JPEG) image.

[METHODS] We developed the application using .NET Framework4.5 and Visual Studio 2012 Express for Windows Desktop (Microsoft Corporation). The system tray application ran the following processes at a constant cycle. The 12-lead ECG digital image was broken down into 24 images and pasted around two sectional views of the heart, with 12 vertically flipped waveforms representing the posterior side of the heart. In this image, an ST elevation in the vertically flipped waveforms indicated posterior myocardial infarction. Finally, the application generated the Cabrera sequences of the digital image at every cross section.

[RESULTS] By saving the 12-lead ECG digital images to a specified folder, the application was able to create Cabrera sequences automatically. Additional methods for obtaining the Cabrera sequence from digital images may be possible by using the information obtained from common equipment.