Electrocardiogram signal analysis for diagnosis of coronary artery disease: body surface mapping

Record Status
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Citation

Authors’ conclusions
Electrocardiogram (ECG) signal analysis technologies represent enhanced versions of the standard resting or exercise ECG. ECG signal analysis systems entail specialized software that conducts complex analyses of the biosignals recorded by an ECG. Such systems may also use more electrodes than the standard 12. ECG signal analysis technologies are used in diagnosis of coronary artery disease (CAD), including acute coronary syndrome (ACS). These systems were developed to enable more efficient identification of patients who should undergo further, more invasive testing (coronary angiography) and earlier identification of patients who would benefit from early treatment with thrombolytic medications. The form of ECG signal analysis referred to as body surface mapping (BSM), or body surface potential mapping (BSPM), typically uses 80 electrodes to map signals over the entire torso, and produces a three-dimensional (3D) computerized, color-coded, torso-shaped model of areas where normal and abnormal signals are detected. In the United States, BSM is currently used only in research; it creates a 3D model based on vectorcardiographic information from the standard 12 ECG leads.

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