Noninvasive Electrical Diagnosis of Cardiac Abnormalities

Computational Electrocardiology Group

Myocardial Ischemia

Pathophysiology

Myocardial Ischemia: Imbalance between the blood supplied to the heart and its metabolic demand

Causes:
- Coronary Artery Disease
- Blood Clot
- Arterial Inflammation
- Coronary Spasm

Noninvasive Diagnosis

Ischemic ECG: Often appears normal or non-specific

30% - 50% Error Rate

70% - 80% Sensitivity

Premature Ventricular Contractions (PVCs)

PVCs: Abnormal electrical impulse that causes a premature and uncoordinated contraction

30% - 50% Error Rate

70% - 80% Sensitivity

Treatment

Ablation Therapy

Ablation Catheter

Heart Muscle

Tissue Ablation

Drug Therapy

Abnormal electrical activity starting with a small cluster of cells

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