Extensive pathological ST-T segment abnormalities in an asymptomatic middle-aged male: diagnostic and differential diagnosis considerations

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Introduction: ST-T segment changes are frequently observed in clinical practice and reflect alterations in ventricular repolarization, ranging from physiological and benign to nonspecific or specific indicators of serious cardiac conditions. The most clinically relevant ST-T segment changes are those linked to acute and chronic coronary syndromes, pericarditis, hypertrophic cardiomyopathy, among others[1]. It is crucial to correlate ECG changes with clinical symptoms and laboratory findings (such as high-sensitivity troponin, C-reactive protein, electrolytes), and use all available data to formulate conclusions, establish a diagnosis, and develop a treatment plan.

Case report: We present the case of an asymptomatic middle-aged male with an unremarkable medical history and no significant comorbidities, in whom extensive "pathological" ST-T segment abnormalities were identified during a routine examination (**Figure 1**). A comprehensive stepwise diagnostic evaluation, including laboratory tests, echocardiography, exercise stress testing, multislice computed tomography (MSCT) coronary angiography, and cardiac magnetic resonance imaging (MRI), revealed no underlying pathological correlates for the observed ECG ST-T changes[2]. During a nearly two-year follow-up, the patient remained asymptomatic, with preserved exercise tolerance, including moderate-intensity recreational sports, and persistent "fixed" ECG abnormalities.

Conclusion: A review of the available literature1 did not reveal any condition or disease that could account for the observed ST-T segment changes in the patient described. Given this finding, we conclude the summary with the intriguing question: "What is the correct diagnosis?"

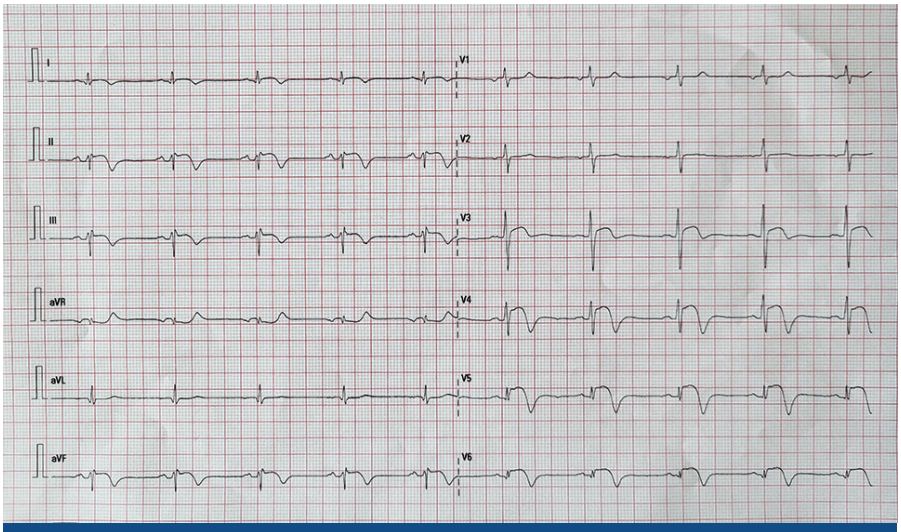

FIGURE 1. Electrocardiographic ST segment and T wave changes.

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LITERATURE

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