






Microvascular angina in an unexpected scenario

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Introduction: Ischemic heart disease can be caused by coronary artery stenosis, dysfunction, or both. Most of the coronary vessels are located inside the myocardium and hence unavailable to direct angiographical visualization. Patients with stable microvascular disease are typically female, obese, hypertensive and have positive stress testing results with unremarkable stenoses on coronarography.¹⁻³

Case report: 45-year-old male, with positive family history, was admitted because of typical intermittent chest pain. The laboratory investigations confirmed dyslipidemia. Echocardiography documented normal sized chambers, with preserved left ventricular systolic function (both ejection fraction and global strain) and right ventricular longitudinal function. There were no signs of hypertrophy or valve disease. Treadmill exercise stress test showed significantly positive results: 4 millimeters ST-segment depression in anteroseptolateral ECG leads (**Figures 1 and 2**), as well as hypertensive reaction. Due to all findings and risk factors, coronarography was performed which excluded epicardial coronary stenoses. An optimal medical therapy was prescribed, and the patient was discharged. First ambulatory control showed symptoms had significantly receded. Nuclear stress testing showed a small region of basal inferior wall ischemia. Cardiac magnetic resonance imaging did not show myocardia oedema nor postcontrast imbibition. Further work-up to confirm coronary microvascular dysfunction would include invasive functional coronary testing using or noninvasive tests (stress echocardiography, PET, perfusion CCTA, and CMR).

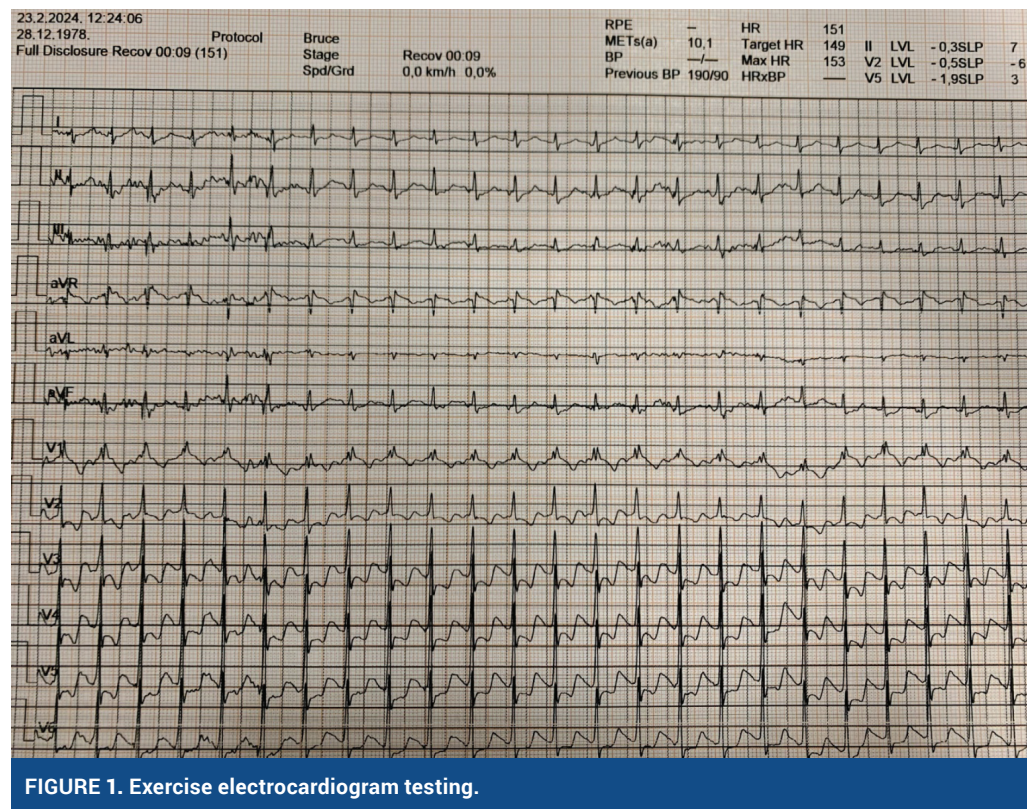


FIGURE 1. Exercise electrocardiogram testing.

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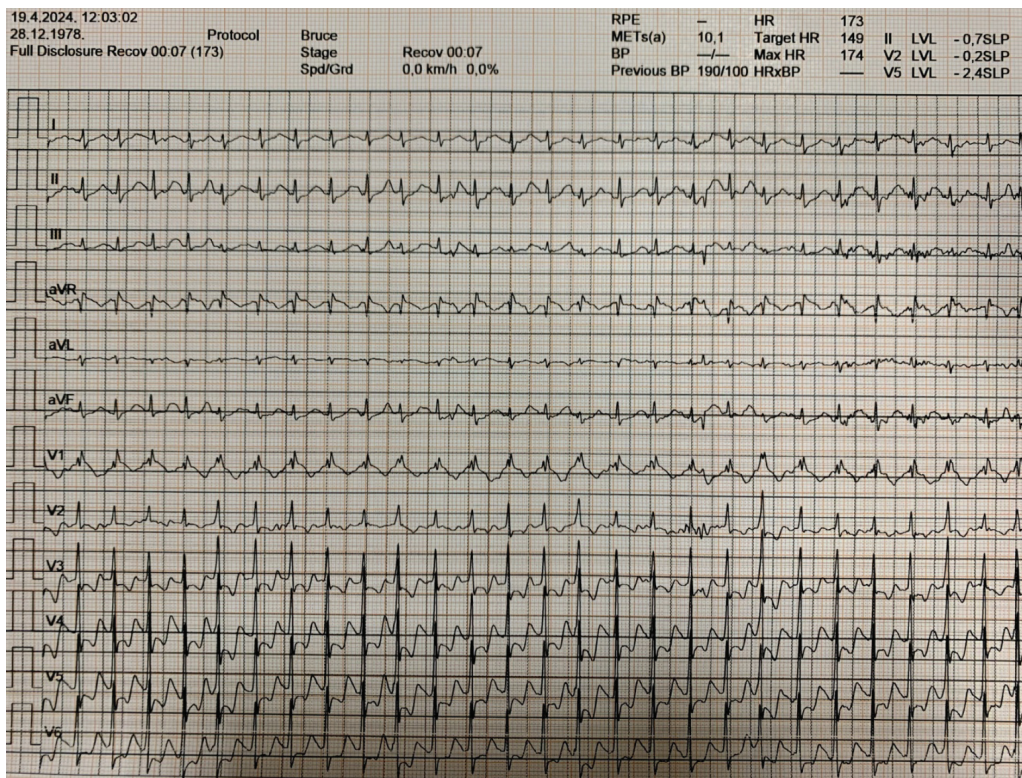


FIGURE 2. Repeated exercise electrocardiogram testing.

Conclusion: Atypical finding of non-obstructive coronary artery disease in a man with multiple risk factors emphasizes the importance of differential diagnosis, optimal medical therapy and in clinical practice still unmet need for functional coronary testing.

LITERATURE

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