

Extensive Subendocardial Ischemia: A Predictive Electrocardiogram

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A 75-year-old male with a history of hypertension and dyslipidemia presented with several weeks of exertional dyspnea and underwent a nuclear stress test for evaluation of his exertional dyspnea. After the administration of Lexiscan during the stress test, the patient developed dyspnea and had ST segment elevation in the lead aVR and widespread, diffuse ST-segment depressions in the leads I, II, III, aVF, and V2-V6. His dyspnea and electrocardiogram changes resolved after several minutes into recovery. He underwent a coronary angiogram that revealed an occluded left anterior descending artery, severe left main disease, and moderate right coronary artery disease. He eventually underwent three-vessel coronary artery bypass graft surgery for multivessel coronary disease with significant left main disease. ■

A coronary angiogram revealed an occluded left anterior descending artery, severe left main disease, and moderate right coronary artery disease.

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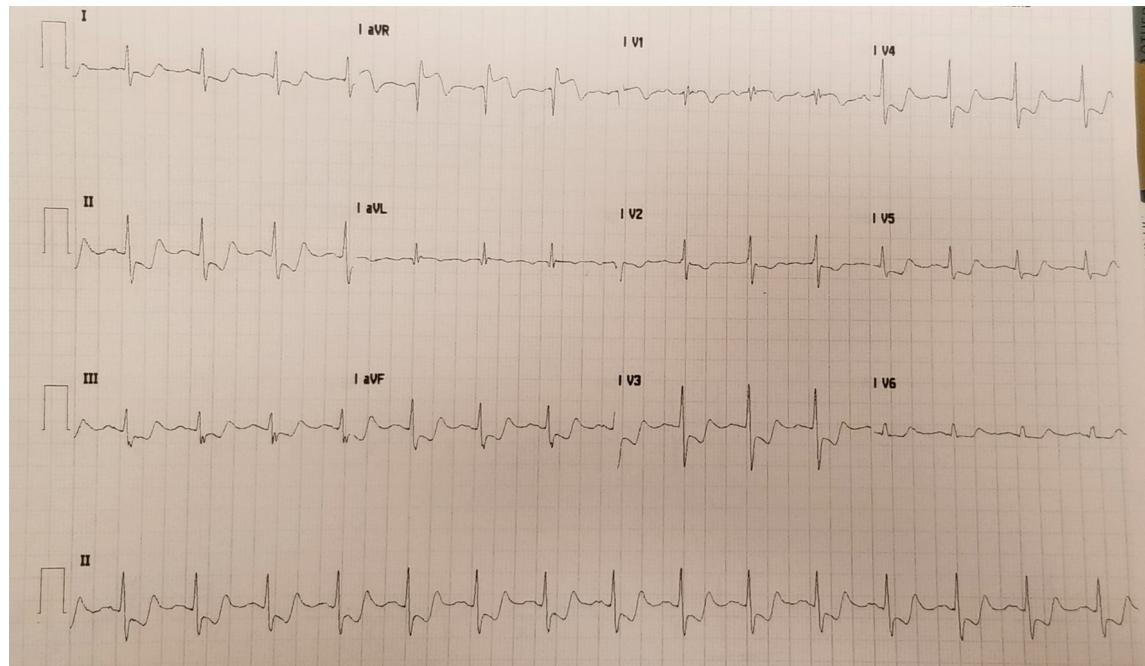


Figure. ST-segment depression in eight or more leads, along with ST-segment elevation in leads aVR and V1, especially occurring during ischemic symptoms, has a very high predictive accuracy of left main or three-vessel disease, or tight proximal left anterior descending (LAD) coronary artery stenosis. This electrocardiogram is suggestive of extensive subendocardial ischemia. ST-segment elevation in aVR is more prominent than in V1, suggesting critical left main coronary disease. Urgent angiography should be performed.



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