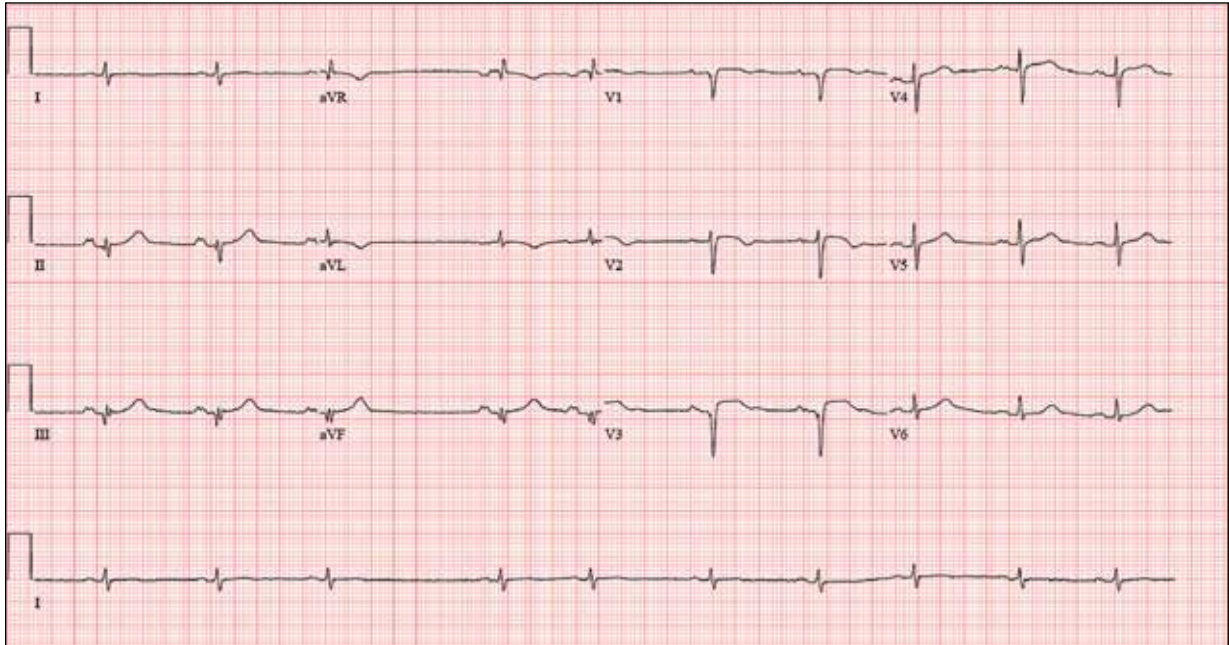


Man Shovels Path to Angina



While shoveling gravel several days ago, a 62-year-old man developed exertional angina. Though he stopped to rest, the pain persisted and radiated to his left arm. He called out for help, and his neighbor called 911. The patient was transported via ACLS ambulance to the hospital, where he ruled in for an anterior myocardial infarction (MI). Cardiac catheterization revealed left anterior descending coronary artery stenosis, which was treated with a drug-eluting stent.

One week after discharge, he

presents for his first follow-up appointment. He is enrolled in a cardiac rehabilitation program but isn't scheduled to start for another week. He has not experienced chest pain or discomfort following his MI, and he says he is diligently taking his β -blocker and nitrates.

This retired Army (Airborne division) officer's past surgical history is remarkable for multiple fractures in his lower extremities, sustained while skydiving. His past medical history is remarkable for malaria, yellow fever, and hepatitis. Prior to his MI, he had no history of cardiac disease or symptoms.

He is divorced and has no children. His parents are alive and well, with no known cardiac disease. His paternal grandfather died of a stroke associated with atrial fibrillation, but he does not know how his other grandparents died.

The patient was a smoker until five years ago. He consumes two or three glasses of Scotch per week, typically on the weekends. He denies recreational drug use and "doesn't believe in" holistic or herbal medications.

Current medications include metoprolol, isosorbide dinitrate, and clopidogrel. He has no known drug allergies.

The review of systems is remarkable for fatigue, which he attributes to β -blocker use. His right groin is sore following his interventional procedure, but the discomfort is resolving.

Vital signs include a blood pressure of 110/64 mm Hg; pulse, 60 beats/min; respiratory rate, 14 breaths/min⁻¹; and temperature, 97.6°F.

On physical exam, his weight is 224 lb and his height is 74 in. He is in good spirits and no distress. The HEENT exam is remarkable for corrective lenses. There is no



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evidence of thyromegaly or jugular venous distention. The lungs are clear; there are no murmurs, rubs, or gallops, and the abdomen is soft and nontender without organomegaly. The right groin has resolving ecchymosis and a small, palpable, organized hematoma. Peripheral pulses are strong bilaterally, and the neurologic exam is intact.

A follow-up ECG shows a ventricular rate of 61 beats/min; PR

interval, 176 ms; QRS duration, 88 ms; QT/QTc interval, 402/404 ms; P axis, 71°; R axis, -82°; and T axis, 84°. What is your interpretation of the ECG?

ANSWER

The correct interpretation includes sinus rhythm with blocked premature atrial complexes, left-axis deviation, and serial changes of an evolving anterior MI.

The presence of a P wave with-

out a QRS between the third and fourth QRS complex represents a blocked premature atrial complex. The fifth QRS complex also indicates a premature atrial complex; however, it is not blocked.

Left-axis deviation is evidenced by the R axis of -82°. The loss of an R wave in V_1 , the poor R-wave progression in V_2 and V_3 , and the ST-T wave changes are all consistent with an evolving anterior MI. **CR**