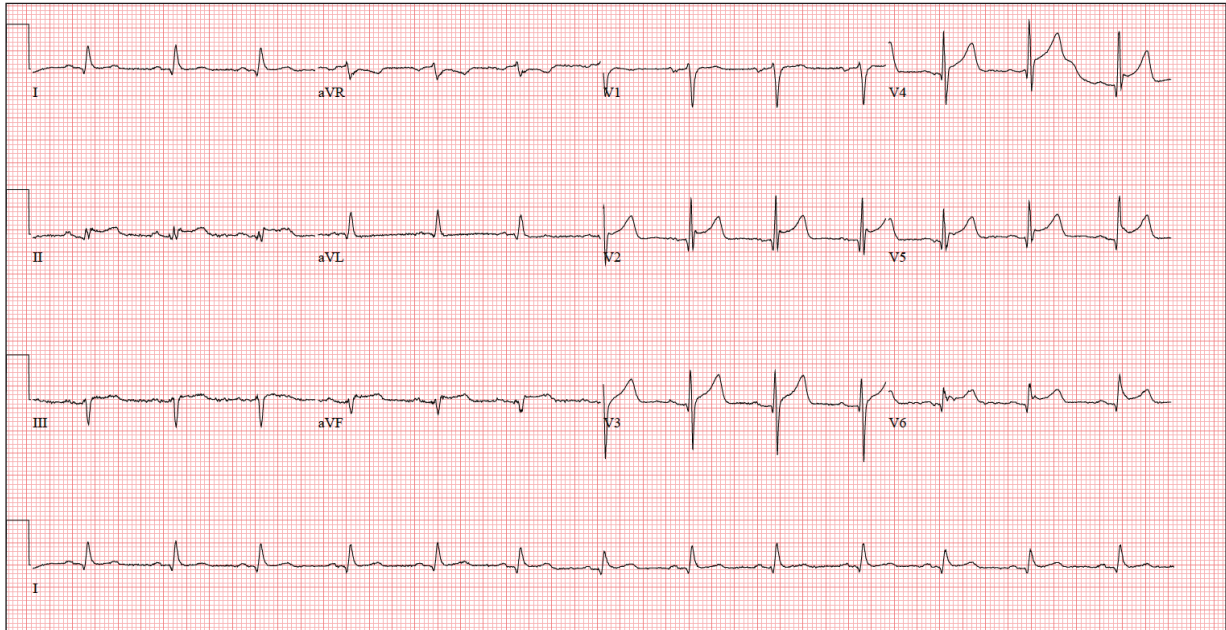


During Veggie Harvest, Chest Pain Hits



A 48-year-old man arrives at your facility via emergency medical service (EMS). He is alert, oriented, and cooperative but reports substernal chest pain despite receiving two nitroglycerin tablets from the paramedics.

The problem started while the patient was working in his garden, harvesting tomatoes and peppers but not doing anything particularly strenuous. The abrupt onset of chest pain caused him to stand up to catch his breath; he imme-

diately became diaphoretic. The pain rated 10 out of 10 in severity and made him feel as if he'd been stabbed in the chest. After 10 minutes of persistent pain, he called to his neighbor, who contacted 911.

The EMS arrived within six minutes. The paramedics found the patient conscious, profusely diaphoretic, and in severe pain; he was clutching his chest with his right fist. IV access was obtained, oxygen started, and sublingual nitroglycerin and aspirin given. The patient declined morphine due to a previous anaphylactic reaction to it.

The pain subsided significantly, and the patient was loaded for transfer. During the 17-minute trip, his chest pain increased, and a second nitroglycerin tablet was given. It provided less relief than the previous one had.

Medical history is remarkable for hypertension, smoking, adult-onset diabetes, and morbid obesity. The man has a primary care provider but hasn't been seen in six years. He admits he is noncompliant with his medications because he just doesn't like to take drugs—in fact, he hasn't taken any of his prescribed medications for the past two years. He has never had chest pain prior to this event. Surgical history is remarkable for a cholecystectomy and a right knee replacement.

His (unfilled) prescribed medications include a β -blocker, metformin, and a calcium channel blocker. He is allergic to morphine sulfate. He smokes marijuana on a daily basis because it calms his nerves.

Review of systems is remarkable for multiple ulcers on the patient's legs. He says he doesn't



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Confusion Follows Malaise and Pain

A 70-year-old woman is brought to the emergency department by her family for evaluation of acute altered mental status. According to the family, the patient has been complaining of general malaise, back pain, and severe joint pain for the past few days. Her confusion has increased in the past 24 hours. Medical history is significant for hypertension.

Physical exam reveals an elderly female who appears somewhat uncomfortable. Vital signs are normal. Overall, her exam is stable. She has tenderness throughout her back and several of her joints, but no abnormal effusion or swelling is noted.

While the patient is in triage, baseline labwork is ordered. The results indicate a serum creatinine of 1.83 mg/dL; serum calcium, 16.7 mg/dL; and serum magnesium, 1.4 mEq/L. Radiograph of the skull is obtained. What is your impression?



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see answer on page 18 >>



require a cane for ambulation but prefers to walk with one. He also describes himself as a “nervous worrier,” hence his use of marijuana.

Physical examination reveals an alert, anxious, and apprehensive man. His weight is 342 lb and his height, 70 in. He is afebrile and diaphoretic. Vital signs include a blood pressure of 164/98 mm Hg; pulse, 80 beats/min; respiratory rate, 20 breaths/min⁻¹; and temperature, 97.4°F.

Pertinent physical findings include no evidence of jugular venous distention or thyromegaly, clear lung sounds bilaterally, a

regular rate and rhythm with distant muffled heart sounds, and no extra heart sounds or murmurs. The abdomen is obese, soft, and nontender. The peripheral pulses are equal bilaterally, and there is 2+ pitting edema present to the level of the knees. Multiple shallow ulcers are present on both lower legs, and a deep ulcer is present on the inferior surface of the left foot.

After the patient is attached to telemetry monitoring and blood samples are drawn for analysis, an ECG is obtained. It reveals a ventricular rate of 80 beats/min; PR interval, 162 ms; QRS duration,

106 ms; QT/QTc interval, 370/426 ms; P axis, 51°; R axis, -20°; and T axis, 70°. What is your interpretation of this ECG?

ANSWER

This ECG is representative of an acute anterior MI. This is evidenced by ST segment elevation in leads V₂ through V₄. Inferolateral injury is indicated by ST elevations in leads II, III, and aVF, as well as in leads V₅ and V₆.

Infarction was confirmed via laboratory data. Subsequent cardiac catheterization documented occlusion of the proximal left anterior descending artery. **CR**

ECGCHALLENGE