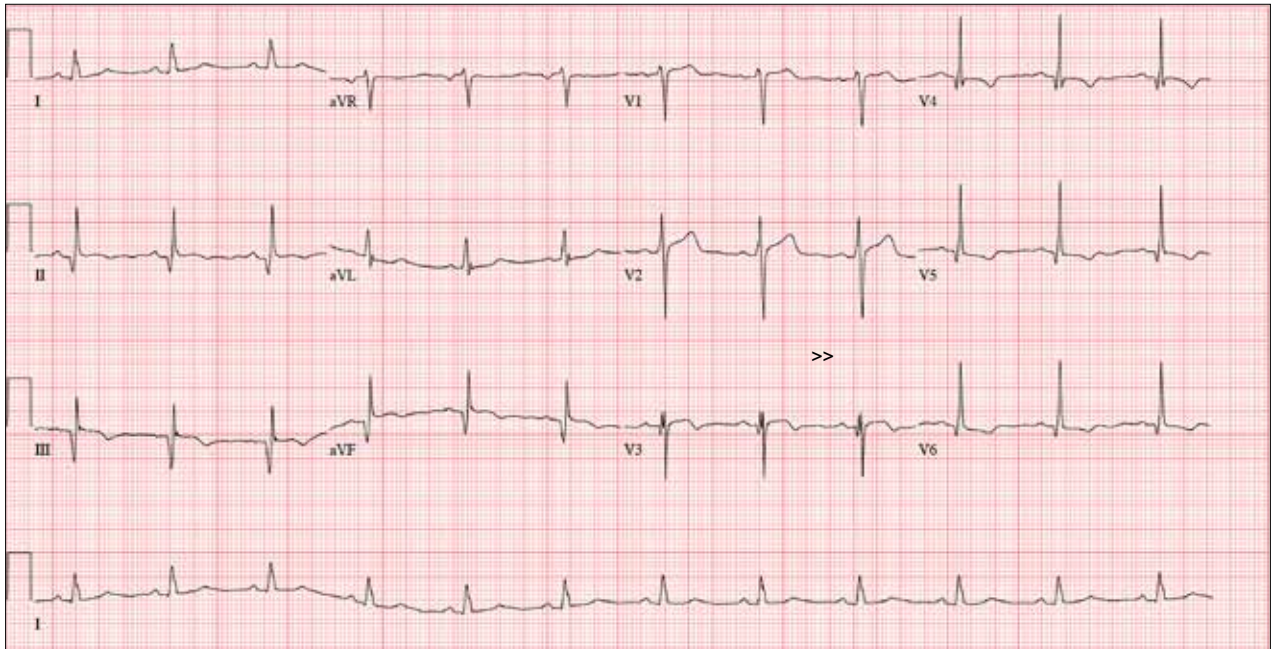


The Ups and Downs of One Man's Life



A 58-year-old man is concerned that his previously documented coronary atherosclerosis may be progressing. Three days ago, he experienced a dull heaviness in his chest but did not have pain, diaphoresis, shortness of breath, or dyspnea on exertion. Yesterday, he developed sharp substernal chest pain while walking uphill to his office from the parking lot. The pain subsided when he stopped to catch his breath but returned last night as he was pushing the recycling bin from his garage out to the curb. When he rested, it resolved, and he has not experienced any pain so far today.

For more than 30 years, the patient smoked 2.5 packs of cigarettes per day. At age 55, he had an inferior myocardial infarction (MI), prompting him to reduce his smoking habit to less than one pack per day. He was never able to quit completely, though, despite nicotine patches, medication, and hypnosis. For the past six months, he has been under considerable stress, as his business—an automobile parts distrib-

utorship he co-owns—filed for bankruptcy; he is now smoking heavily again (2 packs/d) as a result. He is married but separated. He drinks a six-pack of beer over the span of one week. He tried recreational marijuana while in college but denies previous or current illicit drug use.

Apart from the inferior MI and coronary atherosclerosis, the patient's medical history is remarkable for hypertension, type 2 diabetes, and tobacco abuse. Surgical history is remarkable for a drug-eluting stent placed in the proximal left anterior descending (LAD) coronary artery, laparoscopic cholecystectomy, an amputated left fifth finger from a woodworking accident, and a childhood tonsillectomy.

His current medications include metoprolol XL, isosorbide dinitrate, amlodipine, and metformin. He has no known drug allergies but develops urticaria when chlorhexidine surgical scrub solution is used on his skin.

The review of systems is remarkable for recent weight gain (10 lb over the past two



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months) and a productive smoker's cough that improves during the day. The patient denies any urinary or gastrointestinal symptoms, as well as any symptoms suggestive of diabetic neuropathy or endocrine dysfunction.

Vital signs include a blood pressure of 158/94 mm Hg; pulse, 70 beats/min; respiratory rate, 14 breaths/min⁻¹; and temperature, 97.4°F. His height is 67 in and his weight, 254 lb. On physical exam, you note an obese male who smells of cigarette smoke. He wears corrective lenses, and the funduscopic exam is remarkable for arteriovenous nicking.

The thyroid is normal sized without nodules. A faint carotid bruit is present in the left carotid artery. The lung fields reveal coarse rales that change but do not disappear with vigorous coughing. The cardiac

exam reveals a regular rate at 70 beats/min, with a soft early diastolic murmur heard at the left lower sternal border. There are no gallops or extra heart sounds.

The abdomen is obese but soft, with no palpable masses. Old surgical scars representing port placement for laparoscopic surgery are evident. The extremities show no evidence of swelling or edema. The fingers of the right hand are stained with nicotine, and a left fifth digit is missing beyond the proximal interphalangeal joint. Peripheral pulses are strong and equal bilaterally. The neurologic exam is grossly normal, with no focal signs. The patient has good sensation in both feet.

An ECG shows a ventricular rate of 72 beats/min; PR interval, 158 ms; QRS duration, 106 ms; QT/QTc interval, 400/438 ms; P axis, 33°; R axis, 38°; T axis, -15°. What is your interpretation?

ANSWER

The correct interpretation includes normal sinus rhythm, evidence of a previous inferior MI, an anterior MI, and lateral ischemia (evidenced by ST- and T-wave abnormalities in the lateral chest leads).

Normal sinus rhythm is demonstrated by the presence of a P wave for every QRS complex and a QRS complex for every P wave, with a consistent PR interval of 72 beats/min. The Q waves in leads II, III, and aVF indicate an old inferior MI.

Progression of proximal LAD stenosis and an anterior MI is evidenced by the ST segment elevations in leads V₁ to V₃' and lateral ischemia is represented by ST- and T-wave abnormalities in leads V₄ to V₆. Note that there are also Q waves in leads V₄ to V₆, which suggest a previously undiagnosed lateral MI. **CR**

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