

QUESTION

A 65-year-old male patient with a long history of hypertension and hyperlipidemia presents to the emergency department with acute chest pain. The patient reports a 15-minute episode of severe, crushing chest pain that radiates to the left arm and jaw. He has a history of smoking 20 cigarettes per day for 30 years and has been on treatment for hypertension and hyperlipidemia for several years. The patient is currently on a beta-blocker, a calcium channel blocker, and a statin. He has no known allergies and is on no other medications. The patient's vital signs are stable, and he is in no acute distress. The physical examination is unremarkable. The electrocardiogram (ECG) shows ST-segment depression in leads II, III, and aVF, and ST-segment elevation in leads V1, V2, and V3. The patient's chest X-ray is normal. The patient's blood work shows a troponin I level of 0.15 ng/mL, a creatine phosphokinase-MB level of 150 U/L, and a D-dimer level of 1.2 µg/mL. The patient's medical history is significant for hypertension, hyperlipidemia, and a recent diagnosis of acute coronary syndrome (ACS).

Parameter	Value
Troponin I	0.15 ng/mL
Creatine phosphokinase-MB	150 U/L
D-dimer	1.2 µg/mL

QUESTION

ANSWER

The patient's presentation is consistent with a non-ST-elevation myocardial infarction (NSTEMI). The ECG findings of ST-segment depression in leads II, III, and aVF, and ST-segment elevation in leads V1, V2, and V3 are characteristic of a subendocardial infarction. The patient's troponin I level is elevated, which is consistent with myocardial injury. The patient's chest X-ray is normal, which is expected in a non-ST-elevation myocardial infarction. The patient's medical history is significant for hypertension, hyperlipidemia, and a recent diagnosis of acute coronary syndrome (ACS). The patient is currently on a beta-blocker, a calcium channel blocker, and a statin. The patient's vital signs are stable, and he is in no acute distress. The physical examination is unremarkable. The patient's blood work shows a troponin I level of 0.15 ng/mL, a creatine phosphokinase-MB level of 150 U/L, and a D-dimer level of 1.2 µg/mL. The patient's medical history is significant for hypertension, hyperlipidemia, and a recent diagnosis of acute coronary syndrome (ACS).