

QUESTION

1. A 60-year-old male patient with a long history of hypertension and hyperlipidemia presents to the emergency department with a 2-hour history of severe, crushing chest pain. The pain is described as a heavy weight on his chest and is not relieved by rest or nitroglycerin. He has a history of smoking 20 cigarettes per day for 30 years. His vital signs are: blood pressure 180/110 mmHg, heart rate 110 bpm, respiratory rate 20 breaths per minute, and oxygen saturation 92% on room air. Physical examination reveals diaphoresis, tachycardia, and a third heart sound (S3) at the left lower lung base. ECG shows ST-segment elevation in leads V1, V2, and V3. Laboratory tests show a troponin I level of 0.15 ng/mL and a creatine phosphokinase-MB level of 120 U/L. The patient is diagnosed with an acute anterior wall myocardial infarction.

ANSWER

The patient is presenting with symptoms and signs consistent with an acute myocardial infarction (MI). The crushing chest pain, diaphoresis, and tachycardia are classic symptoms. The ST-segment elevation on ECG and the elevated troponin and CK-MB levels confirm the diagnosis. The patient's history of hypertension and hyperlipidemia, along with his long-term smoking, are significant risk factors for atherosclerosis and subsequent MI. The presence of an S3 gallop suggests left ventricular failure, which is a common complication of an anterior wall MI. Immediate reperfusion therapy, such as primary percutaneous coronary intervention (PCI) or fibrinolytic therapy, is indicated to restore blood flow to the infarcted area and minimize myocardial damage.

DISCUSSION

