

QUESTION

1. A 60-year-old male patient with a long history of hypertension and diabetes mellitus presents to the emergency department with a 2-day history of severe, crushing chest pain. The pain is described as a heavy weight on his chest and is exacerbated by exertion. He has a history of smoking 20 cigarettes per day for 30 years. His medical history is significant for a myocardial infarction 10 years ago, which was treated with percutaneous coronary intervention. He is currently on aspirin, beta-blockers, and statins. On arrival, he is found to be diaphoretic and has a heart rate of 110 bpm, blood pressure of 180/100 mmHg, and oxygen saturation of 92% on room air. ECG shows ST-segment elevation in leads II, III, and aVF. Troponin I is elevated. The patient is diagnosed with an acute ST-segment elevation myocardial infarction (STEMI) and is taken to the catheterization laboratory for primary percutaneous coronary intervention (PPCI).

2. During the PPCI procedure, the patient develops a sudden drop in blood pressure and ST-segment depression in leads V1-V4. The interventional cardiologist suspects a complication. The patient is transferred to the intensive care unit (ICU) where he remains hypotensive and tachycardic. The patient's condition is unstable, and the medical team is concerned about the possibility of a major complication. The patient's family is informed of the situation, and they request a second opinion. The patient's condition continues to deteriorate, and the medical team is unable to stabilize him. The patient is eventually pronounced dead.

3. The patient's family is informed of the patient's death and is asked to provide a statement for the medical examiner. The family is distressed and requests a copy of the patient's medical records. The medical team provides the records, and the family is informed of the patient's condition at the time of death.

ANSWER

1. The patient's symptoms and ECG findings are consistent with an acute ST-segment elevation myocardial infarction (STEMI). The patient's history of hypertension, diabetes mellitus, and smoking are risk factors for atherosclerosis. The patient's previous myocardial infarction and percutaneous coronary intervention (PCI) suggest a high risk for a second event. The patient's presentation with severe, crushing chest pain, diaphoresis, and tachycardia is typical of a STEMI. The ECG shows ST-segment elevation in leads II, III, and aVF, which is consistent with an inferior wall MI. The elevated troponin I level confirms the diagnosis of a STEMI. The patient is taken to the catheterization laboratory for primary percutaneous coronary intervention (PPCI).

2. The patient's sudden drop in blood pressure and ST-segment depression in leads V1-V4 during the PPCI procedure are concerning signs. The interventional cardiologist suspects a complication, and the patient is transferred to the intensive care unit (ICU). The patient's condition is unstable, and the medical team is unable to stabilize him. The patient's family is informed of the situation, and they request a second opinion. The patient's condition continues to deteriorate, and the medical team is unable to stabilize him. The patient is eventually pronounced dead.

3. The patient's family is informed of the patient's death and is asked to provide a statement for the medical examiner. The family is distressed and requests a copy of the patient's medical records. The medical team provides the records, and the family is informed of the patient's condition at the time of death.