

QUESTION

A 65-year-old male patient with a long history of hypertension and hyperlipidemia 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 previous myocardial infarction 10 years ago. He is currently on amlodipine, atorvastatin, and aspirin. 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).

Parameter	Value
Heart Rate (bpm)	110
Blood Pressure (mmHg)	180/100
Oxygen Saturation (%)	92
ECG Findings	ST-segment elevation in leads II, III, and aVF
Troponin I	Elevated

During the PPCI procedure, the patient develops a sudden decrease in oxygen saturation and hypotension. The interventional cardiologist identifies a large pericardial effusion on angiography.

ANSWER



The patient is diagnosed with tamponade, a life-threatening complication of PPCI. The tamponade is caused by the rupture of the coronary artery during the procedure, leading to a large pericardial effusion that compresses the heart, impairing its ability to pump blood effectively. The patient is taken to the operating room for emergent pericardial catheterization and drainage of the effusion. Following drainage, the patient's vital signs improve, and the chest pain resolves. The patient is then taken back to the catheterization laboratory for completion of the PPCI procedure.