

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, 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).

During the PPCI procedure, the patient develops a sudden decrease in oxygen saturation and hypotension. The interventional cardiologist identifies a large pericardial effusion, consistent with a complication of the procedure. The patient is transferred to the intensive care unit (ICU) for further management. The patient's vital signs are stable, but he remains hypotensive and has persistent chest pain. The medical team is concerned about the patient's hemodynamic stability and the potential for tamponade. The patient's chest X-ray shows a large pericardial effusion. The patient's laboratory values are as follows:

Parameter	Value
Heart Rate	110 bpm
Blood Pressure	180/100 mmHg
Oxygen Saturation	92% on room air
Troponin I	Elevated

What is the most appropriate next step in the management of this patient?

ANSWER



The patient's presentation is consistent with a large pericardial effusion, which is a complication of PPCI. The patient's hypotension and chest pain are likely due to the effusion compressing the heart and lungs. The most appropriate next step in the management of this patient is to perform a pericardiocentesis to drain the effusion and relieve the tamponade. This procedure involves inserting a needle into the pericardial space to aspirate the fluid. The patient's vital signs should be closely monitored during the procedure, and the effusion should be drained until the patient's hemodynamic status improves and the chest pain resolves.

What is the most appropriate next step in the management of this patient?