

QUESTION

1. A 50-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 sharp, tearing pain that radiates to his back. His vital signs are stable, and physical examination is unremarkable. An electrocardiogram (ECG) shows sinus tachycardia. Laboratory tests reveal a troponin I level of 0.15 ng/mL and a creatine phosphokinase-MB (CK-MB) level of 15 U/L. A computed tomography (CT) scan of the chest shows a small amount of pleural effusion on the left side. The patient is diagnosed with aortic dissection.

Parameter	Value	Reference Range
Troponin I	0.15 ng/mL	< 0.05 ng/mL
CK-MB	15 U/L	< 5 U/L
ECG	Sinus tachycardia	Normal sinus rhythm
CT Scan	Small left pleural effusion	None

2. The patient is started on intravenous beta-blockers and is transferred to the medical intensive care unit. The patient's condition is stable, and he is discharged on oral beta-blockers and statins.

ANSWER

The patient's presentation is consistent with aortic dissection, a life-threatening condition characterized by a tear in the inner layer of the aorta. The sharp, tearing chest pain that radiates to the back is a classic symptom. The ECG findings of sinus tachycardia and the elevated troponin I and CK-MB levels support the diagnosis. The CT scan finding of a small left pleural effusion is also consistent with aortic dissection. The patient's history of hypertension and hyperlipidemia are risk factors for this condition.

The management of aortic dissection involves the use of beta-blockers to reduce the shear stress on the aortic wall. The patient's condition is stable, and he is discharged on oral beta-blockers and statins. The patient's long history of hypertension and hyperlipidemia highlights the importance of long-term medical management and lifestyle modifications to reduce the risk of cardiovascular events.