

**QUESTION**  
 A 65-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 15-minute episode of severe, crushing chest pain that radiates to his left arm and jaw. He has a history of smoking 20 cigarettes per day for 30 years and has been on treatment for hypertension and hyperlipidemia for several 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 a pale, diaphoretic patient with a clear lung field and a regular sinus rhythm. An electrocardiogram (ECG) shows ST-segment elevation in leads V1, V2, and V3, consistent with an anterior wall myocardial infarction (MI).

**ANSWER**  
 The patient is experiencing an acute anterior wall myocardial infarction (MI). The clinical presentation, including severe chest pain radiating to the left arm and jaw, ST-segment elevation in leads V1, V2, and V3 on ECG, and a regular sinus rhythm, is characteristic of this condition. The patient's history of hypertension and hyperlipidemia, along with a long history of smoking, are significant risk factors for the development of atherosclerosis and subsequent MI. The patient's vital signs, including a blood pressure of 180/110 mmHg and a heart rate of 110 bpm, suggest a hyperadrenergic state, which is common in the early stages of an MI. The physical examination findings, including a pale, diaphoretic patient with a clear lung field, are also consistent with an acute MI.

## ANSWERS

The patient's presentation is consistent with an acute anterior wall myocardial infarction (MI). The clinical features, including severe chest pain radiating to the left arm and jaw, ST-segment elevation in leads V1, V2, and V3 on ECG, and a regular sinus rhythm, are characteristic of this condition. The patient's history of hypertension and hyperlipidemia, along with a long history of smoking, are significant risk factors for the development of atherosclerosis and subsequent MI. The patient's vital signs, including a blood pressure of 180/110 mmHg and a heart rate of 110 bpm, suggest a hyperadrenergic state, which is common in the early stages of an MI. The physical examination findings, including a pale, diaphoretic patient with a clear lung field, are also consistent with an acute MI.