

QUESTION

A 65-year-old male with a long history of hypertension and hyperlipidemia presents to the emergency department with acute-onset chest pain and shortness of breath. The patient reports a tearing sensation in the chest that radiates to his back. Physical examination reveals a blood pressure of 180/100 mmHg in the right arm and 90/60 mmHg in the left arm. There is a new murmur of aortic regurgitation. An electrocardiogram (ECG) shows sinus tachycardia. A computed tomography (CT) scan of the chest with contrast reveals a dissection of the descending aorta. The patient is diagnosed with aortic dissection and is transferred to the intensive care unit for further management.

Question	Answer	Explanation
What is the most likely cause of the patient's chest pain?	Aortic dissection	The patient's symptoms, including tearing chest pain radiating to the back, and the physical findings of aortic regurgitation and unequal blood pressures in the arms, are highly suggestive of aortic dissection. The CT scan confirms this diagnosis.
What is the most appropriate initial management for this patient?	Control of blood pressure	Controlling blood pressure is the primary goal in the initial management of aortic dissection to reduce the risk of further tearing and rupture. Beta-blockers are typically the first-line agents.
What is the most likely complication of aortic dissection?	Stroke	Stroke is a common complication of aortic dissection, particularly if the dissection extends to the cerebral arteries. Other complications include aortic rupture, myocardial infarction, and renal failure.

ANSWER: Aortic dissection

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Question	Answer	Explanation
What is the primary function of the respiratory system?	Gas exchange	The primary function of the respiratory system is to facilitate the exchange of oxygen and carbon dioxide between the lungs and the rest of the body.
What is the most common cause of respiratory failure?	Chronic obstructive pulmonary disease (COPD)	COPD is the most common cause of respiratory failure, characterized by chronic inflammation and obstruction of the airways.
What is the most common cause of acute respiratory distress syndrome (ARDS)?	Septic shock	Septic shock is a common cause of ARDS, a severe lung injury characterized by widespread inflammation and respiratory failure.

ANSWER: Gas exchange

QUESTION: What is the most common cause of respiratory failure?