

Care CEUs

Aortic Dissection

1. An aortic dissection that compromises the branch supplying blood to the left arm and the posterior portion of the brain would most likely involve which vessel?

- A. Right subclavian artery
 - B. Brachiocephalic artery
 - C. Left common carotid artery
 - D. Left subclavian artery
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2. Degeneration of which aortic wall layer, composed of smooth muscle, elastin, and collagen, most directly leads to cystic medial degeneration and predisposes a patient to aortic dissection?

- A. Endocardium
 - B. Tunica intima
 - C. Tunica adventitia
 - D. Tunica media
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3. In an emergency department triage setting, which aortic dissection classification system is most useful for rapidly guiding interventions because it is based on whether the ascending aorta is involved?

- A. DeBakey classification
 - B. Stanford classification
 - C. TEM (Type, Entry tear location, Malperfusion) classification
 - D. New York Heart Association (NYHA) classification
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4. A CT scan of the chest in a patient with severe chest pain shows the classic “tennis ball sign” with a visible flap within the aorta. What does this flap represent?

- A. A loculated pericardial effusion compressing the right atrium
 - B. Calcification of the intimal layer due to chronic atherosclerosis
 - C. A mural thrombus occluding the origin of the coronary arteries
 - D. A septum separating the true and false lumens created by the aortic dissection
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5. When counseling a patient about risk factors for aortic dissection, which factor accounts for the majority of cases and increases risk more than 2.5 times compared with those without it?

- A. Uncontrolled hypertension
- B. Male sex
- C. Cigarette smoking

D. Age greater than 65 years

6. A 58-year-old patient with a 30-pack-year smoking history quit smoking 12 years ago. Based on the course content, how does this patient's current risk of aortic dissection compare to that of someone who has never smoked?

- A. Risk remains more than double that of never-smokers regardless of time since quitting
 - B. Risk is comparable to individuals who have never smoked
 - C. Risk is permanently reduced to about half that of current smokers but remains higher than never-smokers
 - D. Risk becomes higher than that of current light smokers due to prior cumulative exposure
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7. A 62-year-old woman presents with abrupt, severe anterior chest pain described as "ripping" that radiates to her neck. Vital signs show hypertension. Based on pain location and quality, which type of aortic dissection is most likely?

- A. Non-A non-B aortic arch dissection sparing the ascending aorta
 - B. Stanford type B dissection
 - C. Stanford type A dissection
 - D. Chronic abdominal aortic aneurysm leak
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8. Several patients present with confirmed acute aortic dissection. Which presentation is most strongly associated with increased short-term mortality according to the course content?

- A. A 74-year-old woman with a type A dissection, systolic blood pressure 80 mm Hg, and a syncopal episode on arrival
 - B. A 55-year-old man with a type B dissection, blood pressure 190/100 mm Hg, and severe back pain but no neurological deficit
 - C. A 60-year-old woman with a type A dissection, blood pressure 135/80 mm Hg, and mild focal weakness of the right arm
 - D. A 68-year-old man with a chronic type B dissection diagnosed incidentally on imaging and normal hemodynamics
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9. A middle-aged patient with known Marfan syndrome presents with abrupt, severe back pain and a normal initial chest X-ray. Using the Aortic Dissection Detection Risk Score (ADD-RS) approach described in the course, which action is most appropriate?

- A. Discharge with NSAIDs for musculoskeletal pain since the chest X-ray is normal
 - B. Order advanced imaging such as CT because the presence of high-risk features gives an ADD-RS of at least 1
 - C. Delay imaging until D-dimer results are available, regardless of the ADD-RS
 - D. Focus on serial cardiac enzymes and ECGs before considering any aortic imaging
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10. A patient with suspected acute aortic dissection is hypertensive at 180/100 mm Hg with no signs of organ malperfusion. Which initial IV medication strategy best aligns with the hemodynamic goals outlined in the course?

- A. Begin a vasopressor infusion to increase systolic blood pressure above 140 mm Hg to maximize organ perfusion
- B. Initiate a short-acting IV beta blocker to maintain heart rate around 60 bpm, then titrate antihypertensives to keep systolic blood pressure between 100–120 mm Hg
- C. Administer large-volume crystalloid boluses to normalize blood pressure before starting any rate-controlling medications
- D. Use potent vasodilators without heart rate control to rapidly reduce systolic blood pressure below 90 mm Hg

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