Chapter # 16: Cardiovascular Emergencies

1. Deoxygenated blood from the body returns to the:
   A) right atrium.
   B) right ventricle.
   C) left atrium.
   D) left ventricle.

2. Angina pectoris occurs when:
   A) a coronary artery is totally occluded by plaque.
   B) myocardial oxygen demand exceeds supply.
   C) one or more coronary arteries suddenly spasm.
   D) myocardial oxygen supply exceeds the demand.

3. The electrical impulse generated by the heart originates in the:
   A) bundle of His.
   B) coronary sinus.
   C) sinoatrial node.
   D) atrioventricular node.

4. A patient with atherosclerotic heart disease experiences chest pain during exertion because:
   A) the coronary arteries suddenly spasm and cause a marked reduction in myocardial blood flow.
   B) the lumen of the coronary artery is narrowed and cannot accommodate increased blood flow.
   C) tissues of the myocardium undergo necrosis secondary to a prolonged absence of oxygen.
   D) the ragged edge of a tear in the coronary artery lumen causes local blood clotting and arterial narrowing.

5. Risk factors for AMI that cannot be controlled include:
   A) excess stress.
   B) hyperglycemia.
   C) family history.
   D) lack of exercise.
6. Signs and symptoms of a hypertensive emergency would MOST likely be delayed in patients who:
A) have chronic hypertension.
B) regularly take illegal drugs.
C) have had a stroke in the past.
D) are older than 40 years of age.

7. A 49-year-old male presents with an acute onset of crushing chest pain and diaphoresis. You should:
A) administer up to 324 mg of baby aspirin.
B) administer up to three doses of nitroglycerin.
C) obtain vital signs and a SAMPLE history.
D) assess the adequacy of his respirations.

8. Which of the following is NOT a common sign or symptom associated with malfunction of an implanted cardiac pacemaker?
A) A rapid heart rate
B) Syncope or dizziness
C) Heart rate less than 60 beats/min
D) Generalized weakness

9. A patient in cardiac arrest is wearing an external defibrillator vest, which is interfering with effective chest compressions. The EMT should:
A) leave the battery attached to the monitor and remove the vest.
B) remove the battery from the monitor and leave the vest in place.
C) perform ventilations only and allow the vest device to defibrillate.
D) remove the battery from the monitor and then remove the vest.

10. A dissecting aortic aneurysm occurs when:
A) all layers of the aorta suddenly contract.
B) a weakened area develops in the aortic wall.
C) the inner layers of the aorta become separated.
D) the aorta ruptures, resulting in profound bleeding.

11. A 66-year-old female with a history of hypertension and diabetes presents with substernal chest pressure of 2 hours' duration. Her blood pressure is 140/90 mm Hg, her pulse is 100 beats/min and irregular, her respirations are 22 breaths/min, and her oxygen saturation is 92%. The patient does not have prescribed nitroglycerin, but her husband does. You should:
A) administer oxygen, give her 324 mg of aspirin, and assess her further.
B) obtain a SAMPLE history and contact medical control for advice.
C) give her high-flow oxygen, attach the AED, and transport at once.
D) give her one nitroglycerin and reassess her systolic blood pressure.
12. Nitroglycerin is contraindicated in patients:
   A) who have taken up to two doses.
   B) who have experienced a head injury.
   C) with a history of an ischemic stroke.
   D) with a systolic blood pressure less than 120 mm Hg.

13. When preparing to obtain a 12-lead ECG, the “LL” and “RL” electrodes should be placed:
    A) on the lower abdomen.
    B) anywhere on the arms.
    C) on the thighs or ankles.
    D) on either side of the chest.

14. A patient tells you that he has a left ventricular assist device (LVAD). Which of the following conditions should you suspect that he has experienced?
    A) Thoracic aortic aneurysm
    B) Acute myocardial infarction
    C) Uncontrolled hypertension
    D) Obstructive lung disease

15. The EMT should use an AED on a child between 1 month and 8 years of age if:
    A) he or she is not breathing and has a weakly palpable pulse.
    B) his or her condition is rapidly progressing to cardiac arrest.
    C) pediatric pads and an energy-reducing device are available.
    D) special pads are used and the child has profound tachycardia.

16. Most AEDs are set up to adjust the voltage based on the impedance, which is the:
    A) resistance of the body to the flow of electricity.
    B) direction that the electrical flow takes in the body.
    C) actual amount of energy that the AED will deliver.
    D) distance between the two AED pads on the chest.

17. After the AED has delivered a shock, the EMT should:
    A) assess for a carotid pulse.
    B) immediately resume CPR.
    C) re-analyze the cardiac rhythm.
    D) transport the patient at once.
18. You and your partner arrive at the scene of a middle-aged man who collapsed about 5 minutes ago. He is unresponsive, apneic, and pulseless. Bystanders are present, but have not provided any care. You should:
   A) begin high-quality CPR and apply the AED as soon as possible.
   B) have your partner perform CPR while you question the bystanders.
   C) perform two-rescuer CPR for 5 minutes and request ALS backup.
   D) immediately apply the AED pads and analyze his cardiac rhythm.

19. Prior to attaching the AED to a cardiac arrest patient, the EMT should:
   A) contact medical control.
   B) dry the chest if it is wet.
   C) perform CPR for 30 seconds.
   D) assess for a pulse for 20 seconds.

20. Which of the following signs is commonly observed in patients with right-sided heart failure?
   A) Labored breathing
   B) Dependent edema
   C) Pulmonary edema
   D) Flat jugular veins