Exam: Cardiovascular Emergencies

This exam is written by Nancy Caroline. Emergency in the Streets. We use it because this is the preferred textbook for COPR training.

Questions: 50
Pass: 70%
One mark per question.

1. Distension of the external jugular veins signals:
    a. considerable back pressure from the left side of the heart through the systemic circulation.
    b. considerable back pressure from the right side of the heart through the systemic circulation.
    c. considerable back pressure from the left side of the heart through the pulmonary circulation.
    d. considerable back pressure from the right side of the heart through the pulmonary circulation.

2. Angina occurs when:
    a. the supply of oxygen to the left ventricle is insufficient to meet the demand.
    b. the supply of oxygen to the myocardium is greater than the demand.
    c. the supply of oxygen to the right ventricle is greater than meet the demand.
    d. the supply of oxygen to the myocardium is insufficient to meet the demand.

3. You are traveling to the hospital with an unconscious patient, you should be checking the pulse every_____.
    a. 15 seconds
    b. 5 minutes
    c. 60 seconds
    d. 15 minutes

4. Defibrillation works best if it takes place within _____ of the onset of cardiac arrest.
    a. 5 minutes
    b. 4 minutes
    c. 3 minutes
    d. 2 minutes

5. When the pressure in the capillaries exceeds a certain level, fluid passes through the walls of the capillary vessels and into the alveoli. This condition is called what?

a. Right-sided heart failure
b. Left-sided heart failure
c. Pulmonary edema
d. Pulmonary embolism

6. Which is the treatment plan for a 49 year old male experiencing a myocardial infarction?
    a. O2, ASA, IV, ECG, Nitro
    b. ECG, ASA, O2, IV, Nitro, ALS
    c. IV, ECG, ASA, 02, Nitro, ALS
    d. High fowlers, ECG, Nitro, ASA, IV

7. The wall between the right and left ventricle is called the:
    a. Sinus
    b. Septum
    c. Node
    d. Myocardium

8. Pleuritic chest pain occurs:
    a. in waves or spasms.
    b. at rest.
    c. after exertion.
    d. with breathing.

9. An oriented male patient complains of chest tightness. His pulse is 56 BPM and regular, respirations at 16, BP 158/98, oxygen saturation 97%. You would:
    a. not administer oxygen.
    b. administer oxygen via nasal cannula at 2 lpm.
    c. administer oxygen via a NRB at 12 lpm.
    d. administer oxygen via a Simple face mask at 8 lpm.

10. The blood vessel that returns oxygenated blood from the lungs to the heart is the:
    a. Vena cava
    b. Coronary artery
    c. Pulmonary artery
    d. Pulmonary vein

11. The purpose of Aspirin when given to a patient with chest pain is to:
    a. relieve pain.
    b. thin the blood.

c. prevents platelets from sticking together.
d. open the blocked blood vessel.

12. You are alone in the back of the ambulance when your patient suddenly becomes unresponsive and pulseless. You should:
    a. notify the receiving hospital of the incoming code.
    b. perform compressions.
    c. apply the defibrillator.
    d. ventilate.

13. Nitroglycerin possesses which of the following effects when administered to patients with suspected cardiac chest pain?
    a. Vasodilation and increased myocardial oxygen supply.
    b. Vasodilation and decreased myocardial oxygen supply.
    c. Vasoconstriction and increased cardiac workload.
    d. Vasoconstriction and increased cardiac oxygen demand.

14. The chest pain associated with cardiac compromise often described as:
    a. sharp
    b. stabbing
    c. pressure
    d. cramping

15. You are assessing a 66 year old woman with severe pressure in her chest. As you initiate oxygen therapy, your partner should:
    a. notify medical control
    b. measure the blood pressure
    c. obtain a sample history
    d. gather patients medications

16. Which of the following are side effects of Nitroglycerin?
    a. Nausea
    b. Anxiety
    c. Hypertension
    d. Headache

17. When applied, the AED looks for shockable rhythms in the patient. What specific rhythms will trigger a shock in the AED?
    a. Pulseless ventricular tachycardia and ventricular fibrillation.
    b. Asystole and ventricular fibrillation.

c. Asystole and ventricular tachycardia.
d. Pulseless electrical activity, ventricular tachycardia, ventricular fibrillation and asystole.

18. If the P-R interval is greater than 0.20 seconds it is considered_____.
    a. saw-toothed
    b. shortened
    c. prolonged
    d. inverted

19. What is the rhythm?



    a. Sinus tach with unifocal PVC's
    b. Sinus tach with multifocal PVC's
    c. Third degree heart block
    d. Atrial arrhythmia

20. When an AED is applied and it advises "no shock indicated" what do you do next?
    a. CPR x 2 mins, then re-analyze
    b. Re-check pulse, give 2 breaths, re-analyze
    c. 2 breaths, then start CPR x 2 mins
    d. CPR x 2, 2 breaths, then re-analyze

21. What are the signs and symptoms of Acute Aortic Dissection?
    a. Maximum pain from onset, could radiate between the shoulder blades.
    b. A pain that waxes and wanes, with AMS.
    c. Hypertension with radiating pain.
    d. Warm, diaphoretic skin with narrow pulse.

22. Leads 1, 2, and 3 are bipolar leads. Bipolar leads contain a positive and negative pole.
    a. True
    b. False

23. Which are the signs and symptoms of Cardiogenic Shock?
    a. Slow respirations, thready pulse, skin is pale, cool & diaphoretic.

b. Slow respirations, brady pulse, skin is flush, warm & diaphoretic.
c. Rapid respirations, thready pulse, skin is pale, cool & dry.
d. Rapid respirations, racing pulse, skin is pale, cool & diaphoretic.

24. A patient is presenting with Acute Coronary Syndrome, what is your oxygenation treatment plan?
a. Non-rebreather at 12-15 lpm to help with ischemia
b. Nasal cannula to maintain the Sp02 level above 94%
c. All cardiac patients receive O2, therefore NRB at 15 lpm
d. Administer only if needed to maintain the Sp02 level above 94%

25. Which of the following sign and symptoms best describes an Aortic Dissection? Select all that apply, all or none.
a. Back pain often involved between the shoulders blades
b. Increases with time
c. Sudden onset
d. May have stroke like symptoms
e. Pain may waxes and wanes
f. Equal peripheral pulses

26. Depolarization is the process of discharging active cardiac muscle fibers.
a. True
b. False

27. Right-sided heart failure most commonly happens due to the left-sided failure. Right-sided heart failure may also occur as a result of:
a. pulmonary embolism or pulmonary effusion.
b. pulmonary hypertension or shock.
c. pulmonary embolism or pulmonary hypertension.
d. pulmonary edema or pulmonary hypertension.

28. A heart rate of 55 would indicate cardiac signaling from which pacemaker?
a. Purkinje fibers
b. AV junction
c. Right bundle branch
d. SA node

29. A sudden rise in the systemic vascular resistance can impair:
a. the cardiac output and cause cardiac ischemia.
b. cardiac depolarization and causes cardiac ischemia.

c. the peripheral pressure and cause a false high Sp02.
d. the blood pressure and cause cardiac injury.

30. Which statement about the heart is most correct?
a. Endocarditis is a common and serious infection of the most outer layer of the heart.
b. Myocarditis is a less severe infection of the myocardial tissue that may present with or without symptoms.
c. Surrounding the heart is a tough, fibrous sac called the epicardium.
d. The tricuspid valve separates the left atrium from the left ventricle.

31. The pressure under which a ventricle fills is called afterload.
a. True
b. False

32. Which is the natural chemical mediator in the sympathetic nervous system?
a. Acetylcholine
b. Cholinergic
c. Norepinephrine
d. Beta

33. Sinus tachycardia may result from a variety of causes. Select all that apply, all or none.
a. an AMI
b. Alcohol
c. Hypovolemia
d. Parasympathetic response

34. Cardiac Tamponade will present with a set of specific signs and symptoms, these are?
a. Hypertension, irregular heart beat, JVD.
b. Biot's breathing, flat neck veins, muffled heart tones.
c. JVD, hyperresonance in the lungs, hypotension.
d. Muffled heart tones, hypotension, JVD.

35. Which is not a component required to have adequate tissue perfusion?
a. Fluid
b. Pump
c. Vessels
d. Pressure

36. The amount of blood pumped out by either ventricle in a single contraction. Normally 60-100ml but the healthy heart has considerable spare capacity and can increase by 50%.

a. Stroke Volume
b. Heart Rate
c. Cardiac Output
d. Sinoatrial Conduction

37. Metoprolol is a sympathetic beta-blocker, opposing the actions of beta-stimulating agents.
a. True
b. False

38. Chronic dyspnea may be a warning of:
a. impending left-sided heart failure.
b. impending right-sided heart failure.
c. impending shock.
d. impending systemic vascular constriction.

39. Anorexia, nausea, vomiting or belching frequently accompanies:
a. AAA
b. COPD
c. MI
d. P.E

40. A patient is experiencing a terrible headache x 3 days, is flush in the face and has been out of his Ramipril for 4 days. What diagnosis should you start to consider?
a. Unstable Angina
b. Hypertensive emergency
c. Left-sided heart failure
d. Cardiogenic Shock

41. The amount of blood that is pumped out by either ventricle in one minute is:
a. Blood Pressure
b. Heart Rate
c. Stroke Volume
d. Cardiac Output

42. Nitroglycerin's direct effects are to first cause vasodilation. An initial dose of 0.4mg or 0.8mg may be repeated:
a. As needed until the pain subsides
b. 3 to 5 minute intervals
c. 2 to 5 minute intervals

d. 3 to 6 minute intervals

43. What is the preferable position to keep a patient when managing right-sided heart failure?

a. Trendelenburg position
b. High-fowler's position
c. Semi-fowler's position
d. Supine

44. You decide to do a 12 lead on your 71 year old patient with radiating chest pain. Where do you place the RED lead?

a. Right ankle or lower leg
b. Left lower abdomen
c. Right lower abdomen
d. Left ankle or lower leg

45. You are performing CPR on a 50 year old patient. You have restored ROSC, your partner secures the airway with a supraglottic airway device. Within what time frame should you consider replacing it with an Endotracheal tube?

a. In the first hour
b. At 30 minutes
c. Immediately
d. Do not remove the supraglottic airway device

46. Your post-cardiac arrest patient presents with V-fib on the AED, you give one shock, there is no change. What do you do next?

a. Check the pulse for no more than 10 seconds
b. CPR X 2 minutes
c. IV access for ALS assistance
d. 2 breaths with a BVM

47. If resuscitation is truly futile, a physician may cease resuscitation with rules to expectations. Select all of the expectations that apply, all or none.

a. Hanging
b. Drowning
c. Homicide
d. Toxicology
e. Suicide

48. Why is full recoil on chest compressions important?

a. Allow for a moment of rest on the ventricles
b. Allows for the heart to completely fill with blood.
c. Allows for a possible moment of pulmonary function
d. Allows for rest on the chest

49. Your partner is driving as you perform CPR on your patient in the back of the ambulance. You are using an iGEL on the airway. You are going lights and sirens, and the cardiac trauma team has been notified. What is your ventilation rate for this patient while using a BVM at 100% oxygen?

a. 8
b. 16
c. 12
d. 10

50. When treating an Aortic Dissection what is the pressure goal?

a. The goal is to keep them from becoming mentally altered.
b. 90 mmHg
c. 120 mmHg
d. 100 mmHg