

Heart Disease

Multiple Choice (40 questions)

1. The nurse notes that a patient has developed a cough productive for mucoid sputum, is short of breath, has cyanotic hands, and has noisy, moist-sounding, rapid breathing. These symptoms and signs are suggestive of what health problem?

- A) Pericarditis
- B) Cardiomyopathy
- C) Pulmonary edema
- D) Right ventricular hypertrophy

Answer: C

Explanation: As a result of decreased cerebral oxygenation, the patient with pulmonary edema becomes increasingly restless and anxious. Along with a sudden onset of breathlessness and a sense of suffocation, the patients hands become cold and moist, the nail beds become cyanotic (bluish), and the skin turns ashen (gray). The pulse is weak and rapid, and the neck veins are distended. Incessant coughing may occur, producing increasing quantities of foamy sputum. Pericarditis, ventricular hypertrophy, and cardiomyopathy do not involve wet breath sounds or mucus production.

2. The triage nurse in the ED is assessing a patient with chronic HF who has presented with worsening symptoms. In reviewing the patients medical history, what is a potential primary cause of the patients heart failure?

- A) Endocarditis
- B) Pleural effusion
- C) Atherosclerosis
- D) Atrial-septal defect

Answer: C

Explanation: Atherosclerosis of the coronary arteries is the primary cause of HF. Pleural effusion, endocarditis, and an atrial-septal defect are not health problems that contribute to the etiology of HF.

3. Which assessment would be most appropriate for a patient who is receiving a loop diuretic for HF?

- A) Monitor liver function studies
- B) Monitor for hypotension
- C) Assess the patients vitamin D intake
- D) Assess the patient for hyperkalemia

Answer: B

Explanation: Diuretic therapy increases urine output and decreases blood volume, which places the patient at risk of hypotension. Patients are at risk of losing potassium with loop diuretic therapy and need to continue with potassium in their diet; hypokalemia is a consequent risk. Liver function is rarely compromised by diuretic therapy and vitamin D intake is not relevant.

4. The nurse is assessing a patient who is known to have right-sided HF. What assessment finding is most consistent with this patients diagnosis?

- A) Pulmonary edema
- B) Distended neck veins
- C) Dry cough
- D) Orthopnea

Answer: B

Explanation: Right-sided HF may manifest by distended neck veins, dependent edema, hepatomegaly, weight gain, ascites, anorexia, nausea, nocturia, and weakness. The other answers do not apply.

5. The nurse is caring for an adult patient with HF who is prescribed digoxin. When assessing the patient for adverse effects, the nurse should assess for which of the following signs and symptoms?

- A) Confusion and bradycardia
- B) Uncontrolled diuresis and tachycardia
- C) Numbness and tingling in the extremities

D) Chest pain and shortness of breath

Answer: A

Explanation: A key concern associated with digitalis therapy is digitalis toxicity. Symptoms include anorexia, nausea, visual disturbances, confusion, and bradycardia. The other listed signs and symptoms are not characteristic of digitalis toxicity.

6. A nurse in the CCU is caring for a patient with HF who has developed an intracardiac thrombus. This creates a high risk for what sequela?

A) Stroke

B) Myocardial infarction (MI)

C) Hemorrhage

D) Peripheral edema

Answer: A

Explanation: Intracardiac thrombi can become lodged in the cerebral vasculature, causing stroke. There is no direct risk of MI, hemorrhage, or peripheral edema.

7. The nurse is caring for a 68-year-old patient the nurse suspects has digoxin toxicity. In addition to physical assessment, the nurse should collect what assessment datum?

A) Skin turgor

B) Potassium level

C) White blood cell count

D) Peripheral pulses

Answer: B

Explanation: The serum potassium level is monitored because the effect of digoxin is enhanced in the presence of hypokalemia and digoxin toxicity may occur. Skin turgor, white cell levels, and peripheral pulses are not normally affected in cases of digitalis toxicity.

8. The triage nurse in the ED is performing a rapid assessment of a man with

complaints of severe chest pain and shortness of breath. The patient is diaphoretic, pale, and weak. When the patient collapses, what should the nurse do first?

- A) Check for a carotid pulse.
- B) Apply supplemental oxygen.
- C) Give two full breaths.
- D) Gently shake and shout, Are you OK?

Answer: D

Explanation: Assessing responsiveness is the first step in basic life support. Opening the airway and checking for respirations should occur next. If breathing is absent, two breaths should be given, usually accompanied by supplementary oxygen. Circulation is checked by palpating the carotid artery.

9. A patient presents to the ED complaining of increasing shortness of breath. The nurse assessing the patient notes a history of left-sided HF. The patient is agitated and occasionally coughing up pink-tinged, foamy sputum. The nurse should recognize the signs and symptoms of what health problem?

- A) Right-sided heart failure
- B) Acute pulmonary edema
- C) Pneumonia
- D) Cardiogenic shock

Answer: B

Explanation: Because of decreased contractility and increased fluid volume and pressure in patients with HF, fluid may be driven from the pulmonary capillary beds into the alveoli, causing pulmonary edema and signs and symptoms described. In right-sided heart failure, the patient exhibits hepatomegaly, jugular vein distention, and peripheral edema. In pneumonia, the patient would have a temperature spike, and sputum that varies in color. Cardiogenic shock would show signs of hypotension and tachycardia.

10. A patient admitted to the medical unit with HF is exhibiting signs and symptoms of pulmonary edema. The nurse is aware that positioning will promote circulation. How should the nurse best position the patient?

- A) In a high Fowlers position

- B) On the left side-lying position
- C) In a flat, supine position
- D) In the Trendelenburg position

Answer: A

Explanation: Proper positioning can help reduce venous return to the heart. The patient is positioned upright. If the patient is unable to sit with the lower extremities dependent, the patient may be placed in an upright position in bed. The supine position and Trendelenburg positions will not reduce venous return, lower the output of the right ventricle, or decrease lung congestion. Similarly, side-lying does not promote circulation.

11. The nurse has entered a patients room and found the patient unresponsive and not breathing. What is the nurses next appropriate action?

- A) Palpate the patients carotid pulse.
- B) Illuminate the patients call light.
- C) Begin performing chest compressions.
- D) Activate the Emergency Response System (ERS).

Answer: D

Explanation: After checking for responsiveness and breathing, the nurse should activate the ERS. Assessment of carotid pulse should follow and chest compressions may be indicated. Illuminating the call light is an insufficient response.

12. The nurse is providing discharge education to a patient diagnosed with HF. What should the nurse teach this patient to do to assess her fluid balance in the home setting?

- A) Monitor her blood pressure daily
- B) Assess her radial pulses daily
- C) Monitor her weight daily
- D) Monitor her bowel movements

Answer: C

Explanation: To assess fluid balance at home, the patient should monitor daily weights at the same time every day. Assessing radial pulses and monitoring the blood pressure may be done, but these measurements do not provide information about fluid balance. Bowel function is not indicative of fluid balance.

13. The nurse is caring for an 84-year-old man who has just returned from the OR after inguinal hernia repair. The OR report indicates that the patient received large volumes of IV fluids during surgery and the nurse recognizes that the patient is at risk for left-sided heart failure. What signs and symptoms would indicate left-sided heart failure?

- A) Jugular vein distention
- B) Right upper quadrant pain
- C) Bibasilar fine crackles
- D) Dependent edema

Answer: C

Explanation: Bibasilar fine crackles are a sign of alveolar fluid, a sequela of left ventricular fluid, or pressure overload. Jugular vein distention, right upper quadrant pain (hepatomegaly), and dependent edema are caused by right-sided heart failure, usually a chronic condition.

14. A patient with HF is placed on a low-sodium diet. Which statement by the patient indicates that the nurses nutritional teaching plan has been effective?

- A) I will have a ham and cheese sandwich for lunch.
- B) I will have a baked potato with broiled chicken for dinner.
- C) I will have a tossed salad with cheese and croutons for lunch.
- D) I will have chicken noodle soup with crackers and an apple for lunch.

Answer: B

Explanation: The patients choice of a baked potato with broiled chicken indicates that the teaching plan has been effective. Potatoes and chicken are relatively low in sodium. Ham, cheese, and soup are often high in sodium.

15. The nurses comprehensive assessment of a patient who has HF includes

evaluation of the patients hepatojugular reflux. What action should the nurse perform during this assessment?

- A) Elevate the patients head to 90 degrees.
- B) Press the right upper abdomen.
- C) Press above the patients symphysis pubis.
- D) Lay the patient flat in bed.

Answer: B

Explanation: Hepatojugular reflux, a sign of right-sided heart failure, is assessed with the head of the bed at a 45-degree angle. As the right upper abdomen (the area over the liver) is compressed for 30 to 40 seconds, the nurse observes the internal jugular vein. If the internal jugular vein becomes distended, a patient has positive hepatojugular reflux.

16. The nurse overseeing care in the ICU reviews the shift report on four patients. The nurse recognizes which patient to be at greatest risk for the development of cardiogenic shock?

- A) The patient admitted with acute renal failure
- B) The patient admitted following an MI
- C) The patient admitted with malignant hypertension
- D) The patient admitted following a stroke

Answer: B

Explanation: Cardiogenic shock may occur following an MI when a large area of the myocardium becomes ischemic, necrotic, and hypokinetic. It also can occur as a result of end-stage heart failure, cardiac tamponade, pulmonary embolism, cardiomyopathy, and dysrhythmias. While patients with acute renal failure are at risk for dysrhythmias and patients experiencing a stroke are at risk for thrombus formation, the patient admitted following an MI is at the greatest risk for development of cardiogenic shock when compared with the other listed diagnoses.

17. When assessing the patient with pericardial effusion, the nurse will assess for pulsus paradoxus. Pulsus paradoxus is characterized by what assessment finding?

- A) A diastolic blood pressure that is lower during exhalation

- B) A diastolic blood pressure that is higher during inhalation
- C) A systolic blood pressure that is higher during exhalation
- D) A systolic blood pressure that is lower during inhalation

Answer: D

Explanation: Systolic blood pressure that is markedly lower during inhalation is called pulsus paradoxus. The difference in systolic pressure between the point that is heard during exhalation and the point that is heard during inhalation is measured. Pulsus paradoxus exceeding 10 mm Hg is abnormal.

18. The cardiac monitor alarm alerts the critical care nurse that the patient is showing no cardiac rhythm on the monitor. The nurses rapid assessment suggests cardiac arrest. In providing cardiac resuscitation documentation, how will the nurse describe this initial absence of cardiac rhythm?

- A) Pulseless electrical activity (PEA)
- B) Ventricular fibrillation
- C) Ventricular tachycardia
- D) Asystole

Answer: D

Explanation: Cardiac arrest occurs when the heart ceases to produce an effective pulse and circulate blood. It may be caused by a cardiac electrical event such as ventricular fibrillation, ventricular tachycardia, profound bradycardia, or when there is no heart rhythm at all (asystole). Cardiac arrest may also occur when electrical activity is present, but there is ineffective cardiac contraction or circulating volume, which is PEA. Asystole is the only condition that involves the absolute absence of a heart rhythm.

19. The nurse is reviewing a newly admitted patients electronic health record, which notes a history of orthopnea? What nursing action is most clearly indicated?

- A) Teach the patient deep breathing and coughing exercises.
- B) Administer supplemental oxygen at all times.
- C) Limit the patients activity level.
- D) Avoid positioning the patient supine.

Answer: D

Explanation: Orthopnea is defined as difficulty breathing while lying flat. This is a possible complication of HF and, consequently, the nurse should avoid positioning the patient supine. Oxygen supplementation may or may not be necessary and activity does not always need to be curtailed. Deep breathing and coughing exercises do not directly address this symptom.

20. The nurse is planning the care of a patient with HF. The nurse should identify what overall goals of this patient's care?

- A) Improve functional status
- B) Prevent endocarditis.
- C) Extend survival.
- D) Limit physical activity.
- E) Relieve patient symptoms.

Answer: A, C, E

Explanation: The overall goals of management of HF are to relieve the patient's symptoms, to improve functional status and quality of life, and to extend survival. Activity limitations should be accommodated, but reducing activity is not a goal. Endocarditis is not a common complication of HF and preventing it is not a major goal of care.

21. The nurse is reviewing the medication administration record of a patient diagnosed with systolic HF. What medication should the nurse anticipate administering to this patient?

- A) A beta-adrenergic blocker
- B) An antiplatelet aggregator
- C) A calcium channel blocker
- D) A nonsteroidal anti-inflammatory drug (NSAID)

Answer: A

Explanation: Several medications are routinely prescribed for systolic HF, including ACE inhibitors, beta-blockers, diuretics, and digitalis. Calcium channel blockers,

antiplatelet aggregators, and NSAIDs are not commonly prescribed.

22. The nurse is caring for a patient with systolic HF whose previous adverse reactions preclude the safe use of ACE inhibitors. The nurse should anticipate that the prescriber may choose what combination of drugs?

- A) Loop diuretic and antiplatelet aggregator
- B) Loop diuretic and calcium channel blocker
- C) Combination of hydralazine and isosorbide dinitrate
- D) Combination of digoxin and normal saline

Answer: C

Explanation: A combination of hydralazine and isosorbide dinitrate may be an alternative for patients who cannot take ACE inhibitors. Antiplatelet aggregators, calcium channel blockers, and normal saline are not typically prescribed.

23. A patient with a diagnosis of HF is started on a beta-blocker. What is the nurses priority role during gradual increases in the patients dose?

- A) Educating the patient that symptom relief may not occur for several weeks
- B) Stressing that symptom relief may take up to 4 months to occur
- C) Making adjustments to each days dose based on the blood pressure trends
- D) Educating the patient about the potential changes in LOC that may result from the drug

Answer: A

Explanation: An important nursing role during titration is educating the patient about the potential worsening of symptoms during the early phase of treatment and stressing that improvement may take several weeks. Relief does not take 4 months, however. The nurse monitors blood pressure, but changes are not made based on short-term assessment results. Beta-blockers rarely affect LOC.

24. The nurse is performing a physical assessment on a patient suspected of having HF. The presence of what sound would signal the possibility of impending HF?

- A) An S₃ heart sound

- B) Pleural friction rub
- C) Faint breath sounds
- D) A heart murmur

Answer: A

Explanation: The heart is auscultated for an S₃ heart sound, a sign that the heart is beginning to fail and that increased blood volume fills the ventricle with each beat. HF does not normally cause a pleural friction rub or murmurs. Changes in breath sounds occur, such as the emergence of crackles or wheezes, but faint breath sounds are less characteristic of HF.

25. An older adult patient with HF is being discharged home on an ACE inhibitor and a loop diuretic. The patients most recent vital signs prior to discharge include oxygen saturation of 93% on room air, heart rate of 81 beats per minute, and blood pressure of 94/59 mm Hg. When planning this patients subsequent care, what nursing diagnosis should be identified?

- A) Risk for ineffective tissue perfusion related to dysrhythmia
- B) Risk for fluid volume excess related to medication regimen
- C) Risk for ineffective breathing pattern related to hypoxia
- D) Risk for falls related to hypotension

Answer: D

Explanation: The combination of low BP, diuretic use, and ACE inhibitor use constitute a risk for falls. There is no evidence, or heightened risk, of dysrhythmia. The patients medications create a risk for fluid deficit, not fluid excess. Hypoxia is a risk for all patients with HF, but this is not in evidence for this patient at this time.

26. The nurse is performing an initial assessment of a client diagnosed with HF. The nurse also assesses the patients sensorium and LOC. Why is the assessment of the patients sensorium and LOC important in patients with HF?

- A) HF ultimately affects oxygen transportation to the brain.
- B) Patients with HF are susceptible to overstimulation of the sympathetic nervous system.
- C) Decreased LOC causes an exacerbation of the signs and symptoms of HF.

D) The most significant adverse effect of medications used for HF treatment is altered LOC.

Answer: A

Explanation: As the volume of blood ejected by the heart decreases, so does the amount of oxygen transported to the brain. Sympathetic stimulation is not a primary concern in patients with HF, although it is a possibility. HF affects LOC but the reverse is not usually true. Medications used to treat HF carry many adverse effects, but the most common and significant effects are cardiovascular.

27. Cardiopulmonary resuscitation has been initiated on a patient who was found unresponsive. When performing chest compressions, the nurse should do which of the following?

- A) Perform at least 100 chest compressions per minute.
- B) Pause to allow a colleague to provide a breath every 10 compressions.
- C) Pause chest compressions to allow for vital signs monitoring every 4 to 5 minutes.
- D) Perform high-quality chest compressions as rapidly as possible.

Answer: A

Explanation: During CPR, the chest is compressed 2 inches at a rate of at least 100 compressions per minute. This rate is the resuscitators goal; the aim is not to give compressions as rapidly as possible. Compressions are not stopped after 10 compressions to allow for a breath or for full vital signs monitoring.

28. The nurse is providing patient education prior to a patients discharge home after treatment for HF. The nurse gives the patient a home care checklist as part of the discharge teaching. What should be included on this checklist?

- A) Know how to recognize and prevent orthostatic hypotension.
- B) Weigh yourself weekly at a consistent time of day.
- C) Measure everything you eat and drink until otherwise instructed.
- D) Limit physical activity to only those tasks that are absolutely necessary.

Answer: A

Explanation: Patients with HF should be aware of the risks of orthostatic hypotension. Weight should be measured daily; detailed documentation of all forms of

intake is not usually required. Activity should be gradually increased within the parameters of safety and comfort.

29. The nurse is educating an 80-year-old patient diagnosed with HF about his medication regimen. What should the nurse to teach this patient about the use of oral diuretics?

- A) Avoid drinking fluids for 2 hours after taking the diuretic.
- B) Take the diuretic in the morning to avoid interfering with sleep.
- C) Avoid taking the medication within 2 hours consuming dairy products.
- D) Take the diuretic only on days when experiencing shortness of breath.

Answer: B

Explanation: Oral diuretics should be administered early in the morning so that diuresis does not interfere with the patients nighttime rest. Discussing the timing of medication administration is especially important for elderly patients who may have urinary urgency or incontinence. The nurse would not teach the patient about the timing of fluid intake. Fluid intake does not need to be adjusted and dairy products are not contraindicated.

30. The nurse is addressing exercise and physical activity during discharge education with a patient diagnosed with HF. What should the nurse teach this patient about exercise?

- A) Do not exercise unsupervised.
- B) Eventually aim to work up to 30 minutes of exercise each day.
- C) Slow down if you get dizzy or short of breath.
- D) Start your exercise program with high-impact activities.

Answer: B

Explanation: Eventually, a total of 30 minutes of physical activity every day should be encouraged. Supervision is not necessarily required and the emergence of symptoms should prompt the patient to stop exercising, not simply to slow the pace. Low-impact activities should be prioritized.

31. The nurse is creating a care plan for a patient diagnosed with HF. When addressing the problem of anxiety, what interventions should the nurse include in the

care plan? Select all that apply.

- A) Facilitate the presence of friends and family whenever possible.
- B) Teach the patient about the harmful effects of anxiety on cardiac function.
- C) Provide supplemental oxygen, as needed.
- D) Provide validation of the patients expressions of anxiety.
- E) Administer benzodiazepines two to three times daily.

Answer: A, C, D

Explanation: The nurse should empathically validate the patients sensations of anxiety. The presence of friends and family are frequently beneficial and oxygen supplementation promotes comfort. Antianxiety medications may be necessary for some patients, but alternative methods of relief should be prioritized. As well, medications are administered on a PRN basis. Teaching the patient about the potential harms of anxiety is likely to exacerbate, not relieve, the problem.

32. The critical care nurse is caring for a patient who is in cardiogenic shock. What assessments must the nurse perform on this patient? Select all that apply.

- A) Platelet level
- B) Fluid status
- C) Cardiac rhythm
- D) Action of medications
- E) Sputum volume

Answer: B, C, D

Explanation: The critical care nurse must carefully assess the patient in cardiogenic shock, observe the cardiac rhythm, monitor hemodynamic parameters, monitor fluid status, and adjust medications and therapies based on the assessment data. Platelet levels and sputum production are not major assessment parameters in a patient who is experiencing cardiogenic shock.

33. The nurse is caring for a patient who has developed obvious signs of pulmonary edema. What is the priority nursing action?

- A) Lay the patient flat.

- B) Notify the family of the patients critical state.
- C) Stay with the patient.
- D) Update the physician.

Answer: C

Explanation: Because the patient has an unstable condition, the nurse must remain with the patient. The physician must be updated promptly, but the patient should not be left alone in order for this to happen. Supine positioning is unlikely to relieve dyspnea. The family should be informed, but this is not the priority action.

34. A cardiac patients resistance to left ventricular filling has caused blood to back up into the patients circulatory system. What health problem is likely to result?

- A) Acute pulmonary edema
- B) Right-sided HF
- C) Right ventricular hypertrophy
- D) Left-sided HF

Answer: A

Explanation: With increased resistance to left ventricular filling, blood backs up into the pulmonary circulation. The patient quickly develops pulmonary edema from the blood volume overload in the lungs. When the blood backs up into the pulmonary circulation, right-sided HF, left-sided HF, and right ventricular hypertrophy do not directly occur.

35. A patient who is at high risk for developing intracardiac thrombi has been placed on long-term anticoagulation. What aspect of the patients health history creates a heightened risk of intracardiac thrombi?

- A) Atrial fibrillation
- B) Infective endocarditis
- C) Recurrent pneumonia
- D) Recent surgery

Answer: A

Explanation: Intracardiac thrombi are especially common in patients with atrial fibrillation, because the atria do not contract forcefully and blood flows slowly and turbulently, increasing the likelihood of thrombus formation. Endocarditis, pneumonia, and recent surgery do not normally cause an increased risk for intracardiac thrombi formation.

36. Diagnostic imaging reveals that the quantity of fluid in a clients pericardial sac is dangerously increased. The nurse should collaborate with the other members of the care team to prevent the development of what complication?

- A) Pulmonary edema
- B) Pericardiocentesis
- C) Cardiac tamponade
- D) Pericarditis

Answer: C

Explanation: An increase in pericardial fluid raises the pressure within the pericardial sac and compresses the heart, eventually causing cardiac tamponade. Pericardiocentesis is the treatment for this complication. Pericarditis and pulmonary edema do not result from this pathophysiological process.

37. The nurse is caring for a patient with severe left ventricular dysfunction who has been identified as being at risk for sudden cardiac death. What medical intervention can be performed that may extend the survival of the patient?

- A) Insertion of an implantable cardioverter defibrillator
- B) Insertion of an implantable pacemaker
- C) Administration of a calcium channel blocker
- D) Administration of a beta-blocker

Answer: A

Explanation: In patients with severe left ventricular dysfunction and the possibility of life-threatening dysrhythmias, placement of an implantable cardioverter defibrillator (ICD) can prevent sudden cardiac death and extend survival. A pacemaker, a calcium channel blocker, and a beta-blocker are not medical interventions that may extend the survival of the patient with left ventricular dysfunction.
