Myocardial Infarction and Heart Failure

Bader M Almutairy

**Objectives**

At the end of the unit, students will be able to:

1. Recognize the risk factors, symptoms, complications, and causes of Myocardial Infarction and Heart Failure
2. List signs and symptoms that indicate a client is experiencing the sudden incident of MI and HF
3. Discuss the correct tools that use for diagnosing a client with MI
4. Explain the therapeutic effects of cardiac medications, the appropriate use, and side effects of medications commonly used for patients who have experienced MI or HF
5. Plan and implement care for clients who have experienced MI including appropriate teaching

**Target Group**

Students at the second year in “Adult One - Myocardial Infarction and Heart Failure.”

**Blueprint**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Objectives  | Number ofQuestions | K1 | K2 | Number of Questions | Points possible  |
| Recognize the risk factors, symptoms, complications, and causes of Myocardial Infarction and Heart Failure  | 9 | 5 | 4 | MCQs: 15 Each worth 1 | 15 |
| List signs and symptoms that indicate a client is experiencing the sudden incident of MI and HF | 9 | 8 | 1 | T/F: 5 Each worth 1 | 5 |
| Discuss the correct tools that use for diagnosing a client with MI.  | 3 | 3 |  | Short answers: 5Each worth 1  | 5 |
| Explain the therapeutic of cardiac medications, the appropriate use, and side effects of medications commonly used for patients who have experienced MI or HF | 4 |  | 4 | Matching question: 5 Each worth 1  | 5 |
| Plan and implement care for clients who have experienced MI including appropriate teaching  | 5 | 2 | 3 |  Total points: 30 |

**K1:** the lowest two levels of cognition (Knowledge, comprehension)

**K2**: the upper four levels of cognition (analyze, apply, synthesis, evaluation)

The Unit of Myocardial Infarction and Heart Failure

**Student Name:**

**Date of the test: 10-16-14. Time: 45 minutes.**

Test Instruction:

This test contains 30 questions which are distributed into four sections. You may use the pencil to fill the answer sheet by shade and write the correct answers on the answer sheet. Please sign your name and student identification number in the top of both the exam and answer sheet. Students may leave the exam when they finish and leave the class quietly.

**Section One:**

**Multiple Choice Questions:** Read the questions carefully and circle the best answer in the answer sheet.

1. The nurse is assessing a client in the Emergency Room for the sign and symptoms of Myocardial Infection. Which assessment finding is commonly associated with a Myocardial Infarction? (Knowledge).
	1. Chest pain
	2. Dyspnea
	3. Edema
	4. Palpitations

“Modified from amy’s nursing blog, 2013.”

1. The patient is admitted with left-sided heart failure and a blood pressure of 220/118. What is the most effective drug in decreasing the blood pressure and reducing afterload? (Application)
	1. Dopamine (Intropin)
	2. Verapamil (Calan)
	3. Propranolol (Inderal)
	4. Sodium nitroprusside (Nipride)

Modified from amy’s nursing blog, 2013.”

1. The nurse is teaching a client who has experienced a MI about why the MI occurred. What is the most common cause of a MI? (Analyze)
	1. Aneurysm Ventricular
	2. Heart failure
	3. Coronary artery thrombosis
	4. Renal failure

Modified from amy’s nursing blog, 2013.”

1. The nurse is caring for a client who has experienced a MI and has a history of Type 2 diabetes. The client will have a cardiac catheterization. The nurse teaches the client which regular medication must be held for 48 hours before and after the cardiac catheterization? (Analyze)
	1. Metformin
	2. Regular Insulin
	3. Glipizide
	4. Repaglinide

“Modified from Silvestri, 2011, p. 823”

1. A client arrives in the Emergency Department experiencing shortness of breath, sweating and pain radiating into the area of the jaw. What is the priority nursing action? (Apply)
	1. Metformin
	2. Regular Insulin
	3. Glipizide
	4. Administering O2

“Modified from amy’s nursing blog, 2013.”

1. The nurse is teaching a client who was recently diagnosed with MI. What is the most common complication of MI that the nurse should teach the client? (Knowledge)
	1. Cardiogenic shock
	2. Heart failure
	3. Arrhythmias
	4. Pericarditis

“Modified from amy’s nursing blog, 2013.”

1. The client is admitted to the CCU with an acute anterior wall myocardial infarction. The client’s heart rate is 106 and his blood pressure is 78/49. What is the most probable reason for the patient’s low blood pressure? (Evaluation)

Stroke volume is decreased due to:

1. Decreased diastolic filling time from the increased heart rate.
2. Decreased contractility from the myocardial infarction.
3. Hypovolemia from excessive diaphoresis during the myocardial infarction.
4. Decreased anxiety from the sedative given in the emergency room.

 “Modified from amy’s nursing blog, 2013.”

1. The nurse is providing care for the client with MI, who was admitted recently to the hospital. Which patient care goal is priority for the second day of care? (Apply)
	1. Management of severe chest pain
	2. Teaching risk factors for development of MI
	3. Beginning a cardiac rehabilitation program
	4. Performing personal self-care activities without pain

“Modified from amy’s nursing blog, 2013.”

1. The nurse is teaching the client with MI the healthy and perfect nutrition that should the client follow during a sever condition. The nurse is teaching a client about eating in the immediate post MI period. What should the nurse include on the teaching plan? (Knowledge)
	1. Avoid gassy food
	2. Small, easily digested meals
	3. Food with low salt
	4. Low calories food

“Modified from amy’s nursing blog, 2013.”

1. The client is admitted to the critical care unit with lift side heart failure. The client has 3+ pitting edema on the sacrum; client’s blood pressure is 176/98; and the client’s lungs have bilateral crackles. The client is complaining of shortness of breath and chest discomfort. Based on this information, how would the nurse assess the client’s preload status? (Comprehension)
	1. Too little related to hypertension
	2. Too little related to crackles
	3. Too much related to heart failure
	4. Too much related to chest discomfort

“Modified from amy’s nursing blog, 2013.”

1. The client is admitted to the ER with a sub sternal diagnosis of chest pain. A history is taken; serum CK and LDH isoenzymes and serum lipid studies are ordered, as is a 12-lead ECG. What result is most significant in diagnosing a myocardial infarction during the first 12 hours of chest pain? . (Application)
	1. ECG—inverted T waves
	2. Serum enzymes—elevated LDH4
	3. Serum enzymes—elevated CK-MB
	4. Patient history—sub sternal chest pain

“Modified from Silvestri, 2011, p. 823”

1. The client is admitted to the hospital with MI, and the nurse is monitoring the vital signs of the client. Suddenly, the client starts coughing with pink sputum secretion develops an increased heart rate. Which gives the nurse further support of the client’s symptoms? (Comprehension)
	1. Stridor
	2. Crackles
	3. Scattered rhonchi
	4. Diminished breath sound

“Modified from Silvestri, 2011, p. 823”

1. The nurse is writing a care plan for a client with heart failure~~.~~ Administration of which medication will be included in the plan of care? (Apply)
	1. Diltiazem (Cardizem)
	2. Digoxin (Lanoxin)
	3. Propranolol (Inderal)
	4. Metoprolol (Lopressor)

“Modified from amy’s nursing blog, 2013.”

1. The nurse in home care visits a client with HF who is receiving digoxin (Lanoxin). The nurse will plan to assess for which conditions related to the medication? (Evaluate)
	1. Thrombocytopenia and weight gain
	2. Anorexia, and visual disturbances
	3. Diarrhea and hypotension
	4. Fatigue and muscle twitching

“Modified from amy’s nursing blog, 2013.”

1. The nurse is receiving client with congestive heart failure in the hospital. The nurse admits a client with congestive heart failure to the hospital. Which nursing diagnoses should the nurse indicate for the patient? Choose all that apply (apply).
	1. Ineffective tissue perfusion related to decreased peripheral blood flow secondary to decreased cardiac output
	2. Activity intolerance related to increased cardiac output
	3. Decreased cardiac output related to structural and functional changes
	4. Impaired gas exchange related to decreased sympathetic nervous system activity

“Modified from amy’s nursing blog, 2013.”

**Section Two:**

**Short Answer:** Read the questions and write the appropriate answers on the answer sheet.

1. List the three secondary effects of right side heart failure. (Knowledge)
2. What is the main cause of Myocardial infarction? (Comprehension)
3. What is the most common symptom related to the left side heart failure? (Comprehension)
4. The most common tool used to determine the location of MI is? (Knowledge)
5. What is the best nursing response to client with MI who is fearful of dying? (Application)

“Modified from nurse labs, 2013.”

**Section Three:**

**True and False:** Read the statement and choose the appropriate answer on the answer sheet. Note: Write the full words on the answer sheet (True or False)

1. Dyspnea is the second most common symptoms of MI (Knowledge)
2. Pulmonary Edema is an early sign of heart failure (Knowledge)
3. Morphine is administered to a client with a diagnosis of MI to decrease the oxygen demand of the heart. (Apply)
4. The blood level of glucose and fatty acids are decreased after MI~~.~~ (Comprehension)
5. Malfunction of the left ventricle leads to left side heart failure. (Knowledge)

“Modified from nurse labs, 2013.”

**Section four**

**Matching**: Match the terms in Column A with the suitable explanation of the term in Column B. (Knowledge)

|  |  |
| --- | --- |
| Column A | Column B |
| 1. Jugular vein distention
2. Cardiac enzymes
3. Digoxin toxicity
4. Apical pulse
5. Heart failure

  | \_\_ Tool used to diagnose MI \_\_ Can cause visual disturbance, green halo sign\_\_ Assessing accurately the heart rate before administering digoxin\_\_ Decreased preload and afterload and reduced myocardial oxygen consumption\_\_ Result of heart failure \_\_ Usually as a result of MI  |

 “Modified from nurse labs, 2013.”

Answer Key

**Part One:**

|  |  |
| --- | --- |
| * 1. A
	2. D
	3. C
	4. A
	5. D
	6. C
	7. B
 | * 1. D
	2. B
	3. C
	4. C
	5. B
	6. B
	7. B
	8. A, C
 |

**Part Two:**

|  |
| --- |
| * 1. Weight gain, nausea, and decreasing urine output
	2. Reduction of blood flow through one of coronary arteries
	3. Crackles
	4. Electrocardiogram
	5. Tell me about your feelings now
 |

**Part Three:**

|  |
| --- |
| * 1. True
	2. False
	3. True
	4. False
	5. True
 |

**Part Four:**

|  |
| --- |
| * 1. Is resulting of heart failure
	2. Tool that used to diagnose MI
	3. Leads to the visual disturbance, green halo sign
	4. Assessing accurately the heart rate before administering digoxin
	5. Usually as a result of MI
 |

References

Amy’s Nursing Blog. (2013). Students nursing study blog. *Cardiac- MI and HF.*  Retrieved from http://amy47.com/nclex-style-practice-questions/cardiac-mi-and-hf/

Nurse Labs. (2013). Medical surgical nursing exam 16: *Cardiovascular nursing (60 items)*. Retrieved from http://nurseslabs.com/medical-surgical-nursing-exam-16-cardiovascular-nursing-60-items/

 Silvestri, L., A. (2011). Cardiovascular disorder. Saunder, *Comprehensive review for the NCLEX-RN* (pp. 804-808). St. Louis. Missouri: National council of state boards of nursing Inc.