

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

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ATI Scenario: MI

To Be Completed Before the Simulation

Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation

Medical Diagnosis: Myocardial Infarction

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

The heart is a 4 chambered organ that has 3 layers. They are the endocardium, myocardium, and epicardium. There are two atria's, and two ventricles that are separated by the septum. The ventricular myocardium is thicker than the myocardium, because it needs to pump blood with a great force of blood to the entire body. The myocardium of the heart has its own blood supply which is called coronary circulation. The blood flows through two major coronary arteries. The left supplies blood to the aorta and divides into the left anterior descending artery and the left circumflex artery. The right coronary artery arises from the aorta and it supplies the right atrium and the right ventricle and part of the posterior wall of the left ventricle. The AV node and bundle of his receives blood supply from the right coronary artery. The conduction system of the heart has special tissue that is responsible for creating and transporting electrical impulses or action potential. The electrical impulse begins in the SA node, which is known as the pacemaker of the heart, and travels to the interatrial pathways to depolarize the atria, which results in a contraction. It then travels to the AV node and the bundle of his and then the left and right bundle branches. The left bundle branches deliver an impulse to the ventricles through the purkinje fibers, and this generates a contraction to the heart. Afterload is the peripheral resistance against what the left ventricle must pump. Preload is the volume of blood stretching the ventricles at the end of diastole before the next contraction. Cardiac reserve is the ability to respond to those demands by altering CO. Cardiac output is the amount of blood pumped by each ventricle in 1 minute, and calculated by the amount of blood ejected from the ventricle with each heartbeat.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

Coronary artery disease normally begins with atherosclerosis of the heart. Atherosclerosis is characterized by lipid deposits within the intima of the arteries. The lipids cause an injury to the walls of the arteries called the endothelium and produce inflammation. The injury then causes a fatty streak which is stage one of CAD. The fatty streak then turns into a fibrous plaque. The final stage of CAD is a complicated lesion which the most dangerous stage, because this is where the plaque grows and becomes unstable. When chest pain occurs from ischemia is prolonged and not reversible immediately, acute coronary syndrome might develop. This is caused by a decline of the once stable atherosclerotic plaque that ruptures. This might produce a partially blocked vessel (NSTEMI) with a thrombus, or a totally blocked vessel (STEMI). A myocardial infarction occurs because of an abrupt stoppage of blood flow through the coronary artery. The blockage is due to platelet aggregation forming a thrombus. The acute MI process evolves overtime, from hours to a few days. Collateral circulation is what varies the severity of the MI. Collateral circulation develops over time and forms a different pathway for the blood to flow.

To Be Completed Before the Simulation

Anticipated Patient Problem: Impaired cardiac output

Goal 1: Pt will have strong peripheral pulses, cap refill less than 3 seconds, and a HR between 60-100 bpm during my time of care.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess HR, BP, RR, and pulse oxygen q 4hr.	Administer fluids and apply O2 as ordered.
Assess skin color, cap refill, edema, moisture, and temperature q 4hr.	Administer diuretics as ordered.
Assess weight daily.	Educate on low sodium diet q shift.
Assess lung sounds q shift.	Encourage semi-fowlers position PRN.
Assess UO every hour	Encourage fluid intake of 2000ml every day.
Assess heart rhythm on cardiac monitor q 4hr, PRN.	Administer ACE's, ARB's, or any antiarrhythmics as ordered.

Goal 2: Patient will display adequate breathing as evidenced by appropriate oxygen saturation level of 92% or greater and absence of adventitious breath sounds.

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute pain: Chest

Goal 1: Pt will have a pain score of 0/10 on numeric pain scale, during my time of care.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess BP, HR, RR, and pulse ox q 4hr	Encourage slow deep breaths PRN
Assess pain score on numeric pain scale, and PQRST q4hr	Administer nitro, or morphine as ordered.
Assess cardiac biomarkers (troponin, BMP, CK-MB) q shift/PRN	Educate on new diet and lifestyle changes q shift.
Assess knowledge of condition.	Educate on signs and symptoms of MI q shift
Assess clotting factors q shift, PRN	Administer aspirin, or heparin as ordered.
Assess factors that alleviate pain q shift.	Encourage diversional activities, like listening to music, reading, or watching tv.

Goal 2: Pt will report any chest pain on numeric pain scale during my time of care.

To Be Completed During the Simulation:

Actual Patient Problem: Impaired cardiac output

Clinical Reasoning: oxygen 87%, stridor, SOB, distressed Goal: Pt will be able to verbalize modifiable risk factor changes . tachycardia with PVC's dusky nail bed color, ashen skin, uo 48ml/hour, chest pain, st elevation like diet and exercise during my time of care.

Met: Unmet:

Goal: Pt will have a HR between 60-100 during my time of care Met: Unmet:

Actual Patient Problem: Impaired gas exchange

Clinical Reasoning: oxygen 87% with non-rebreather, stridor, wheezes, SOB

Goal: Pt will have a pulse oxygen saturation of greater than or equal to 95% during my time of care.

Met: Unmet:

Goal: R.D. will not have any stridor or wheezes in any lobe anterior, or posterior bilaterally during my time of care. Met: Unmet:

Additional Patient Problems: Deficient knowledge, risk for allergic reaction, acute pain, risk for electrolyte imbalance, risk for bleeding

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient's response to the intervention?

Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
Impaired cardiac output	1722	Pt states it feels like my chest is being squeezed and it is hard to breathe. Pain is 8/10 on numeric pain scale. HR 104, bp 96/56, 94% on 4L	1730	Monitor heart rhythm	1730	Ekg shows st elevation
Impaired cardiac output, deficient knowledge	1735	Resting in bed, with family at bed side HR 104, bp 102/68, 97% on 4L via NC	1735	Dr. Patterson teaches heart catheterization procedure	1735	Shows understanding of procedure
Impaired gas exchange, impaired cardiac output	1755	Resting in bed, ready for procedure, 96% on 4L oxygen via NC is on patient	1755	Transfer to Cath lab	1840	Vs stable throughout procedure HR 96, RR 14, BP 112/66, 98% on 2L via NC
Impaired gas	1900	Resting in bed in	1900	Teaches patient to	1905	Feeling itchy over

exchange, impaired cardiac output, risk for allergic reaction		ICU, laying flat, pt states chest squeezing from earlier is gone, 98% on 2L oxygen via NC, HR 98		keep right leg straight and to lay flat in bed for at least 2 hours, also taught if pt feels like he needs to cough to put gentle pressure on puncture site, taught importance of notifying if there is any chest pain or chest tightening.		arm and chest.
Risk for allergic reaction, impaired gas exchange	1910	Resting in bed laying flat, still complains of itching in chest and arm, wheezing in his chest posterior, and anteriorly, bilaterally	1910	Administer diphenhydramine 25mg iv, applied non-rebreather face mask at 15l/min	1910	States he cannot catch his breath, showing intermittent stridor, oxygen saturation 87% with non-rebreather at 15l/min, HR 116, RR 20
Risk for allergic reaction, impaired cardiac output	1910	Nail beds are dusky, skin color is ashen, has stridor and is distressed, HR 118, RR 32, bp 148/94	1910	Called rapid response team, monitoring for difficulty swallowing, administered epinephrin iv 0.3 mg IM	1910	States "I feel much better and I am breathing much better. I also do not itch anymore" bp 128/78, RR 18, HR 98
Impaired gas exchange	1930	Oxygen saturation 100% on non-rebreather at 15l/min	1930	Switched to 2L on NC	1930	Oxygen saturation 100%, still having a cough
Risk for bleeding	1945	Notices a hematoma	1945	Applied pressure to groin site, outlines hematoma area	1945	Bleeding has stopped, bp 112/74, RR 12, HR 76
Risk for electrolyte imbalance	1945	Potassium 3.2	1950	Administered 20 mEq PO	Day 2, 0800	Potassium 3.4
Deficient knowledge learning, impaired cardiac output	1955	Explains activity in a normal week, and explains diet	1955	Taught important modifiable diet regimen, explained importance of eating foods low in saturated fat and high in fiber, also adding more fruits and vegetables, taught importance of reducing HTN	1955	Has information packet next to him, understands teaching

				by taking medication and reducing sodium.		
Impaired cardiac output, impaired gas exchange	2000	Skin is cool and clammy, he is restless and agitated, systolic bp less than 90, uo 48 ml/hour, bp 78/56, HR 64	2000	Increased NC to 3L, administered ns at 250ml/hr, started dobutamine drip at 17 ml/hr, administer norepinephrine 0.5 mcg/min	2045	Bp 96/56, feels less shaky and dizzy, no diaphoresis, HR 96, 96% on 2L via NC
Impaired cardiac output, impaired gas exchange, deficient knowledge	Day 2 1900	Laying in bed, skin normal, no signs of distress oxygen saturation 98% on RA, HR 68, RR 12, bp 124/72	1900	Taught lifestyle changes and diets, and updated medications, provided notes from dietician	1900	Demonstrated by looking at menu and choosing a better food for his diet
Deficient knowledge	1930	Requesting more information on blood thinner medication	1930	Provided teaching on clopidogrel and aspirin, taught signs and symptoms of clopidogrel and aspirin	1930	Pt understands teaching, and is no longer needing further information on blood thinner medications.

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV (7): Reduction of Risk

Actual Labs/ Diagnostics
 EKG, CK, troponin T, troponin I, lactic acid, aPTT, PT, INR, ABGs, urinalysis, chest x-ray

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
 Distressed, SOB, wheezing, stridor, itching, low oxygen saturation, diaphoresis, ashen skin color, dusky nail bed color

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Obesity, diet, activity level

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical
 Medications therapy, diet changes, activity changes, teaching
Surgical
 Cardiac catheterization

Prevention of Complications
 (Any complications associated with the client's disease process? If not what are some complications you anticipate)
Arythmias, wheezing, SOB, emboli, PE, arythmias

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
 Norepinephrine
 Aspirin
 Clopidogrel
 Lisinopril
 Morphine
 Epinephrin
 Potassium
 Diphenhydramine
 Dobutamine

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 Oxygen NC and non-rebreather, teaching

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
 Not being able to breath effectively, being in ICU, feeling itchy, being awake during procedure, chest pain

Client/Family Education

Document 3 teaching topics specific for this client.
 • Taught to reduce sodium intake
 • Taught importance of bp medication and blood thinner medication
 • Taught to increase activity level during the week

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines were involved in caring for this client?)
 ENIT, respiratory, nurse, provider, dietician

Patient Resources
 Cardiac rehab, dietician information, medication information like signs and symptoms and regimen, exercise program

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest “take away” from participating in the care of this client?
My biggest take away from the care of this patient of how important timing is in care. Getting him to the cath lab quickly and reacting quickly when he had signs of an allergic reaction and cardiogenic shock improved the quality of his care he got.
2. What was something that surprised you in the care of this patient?
Something that surprised me was his allergic reaction, I was not expecting him to have those signs that quickly after his Cath lab procedure. Now I know how fast that can occur and how fast I need to provide interventions.
3. What is something you would do differently with the care of this client?
Overall I do not think there is anything I would do differently. This simulation taught me what I would do in a situation like this and how to quickly intervene to help the care of this patient.
4. How will this simulation experience impact your nursing practice?
This simulation now gives me an example of someone who went through an MI, and had an allergic reaction during an intervention for the MI and how to prioritize my next action of care. It also showed me the important signs of an allergic reaction to contrast die. Not only did it teach me the signs of an allergic reactions but it put into perspective the signs I learned of cardiogenic shock and how the interventions we were tested on could be put to use and show that much of a positive difference they make. This simulation tested the knowledge I learned and allowed me to think and practice without having a harmful outcome from learning. I feel very prepared if I ever had a patient with any of these three complications or even all three.