

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

Student Name: Sam Roberts

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

Four chambered fist-sized muscular organs composed of 3 layers. The endocardium, myocardium, and epicardium. The heart consists of 2 atria and 2 ventricles that are separated by a septum. The ventricular myocardium is thicker than the atrial myocardium, which allows for the left ventricle to pump a great force of blood into systemic circulation. The myocardium of the heart has its own blood supply called coronary circulation, this is where blood flows into 2 major coronary arteries. The left coronary artery supplies blood to the aorta and divides into the left anterior descending artery and the left circumflex artery. The right coronary artery also arises from the aorta, and its branches supply the right atrium and 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 consists of special tissue responsible for creating and transporting electrical impulses or action potential. Electrical impulses begin in the SA node which is the pacemaker of the heart and then travel to the interatrial pathways to depolarize the atria, resulting in a contraction. It then travels to the AV node and through the bundle of his and the left and right bundle branches. The left bundle branches deliver an impulse to the ventricles via the Purkinje fibers, by generating a contraction to the heart. Preload is the volume of blood stretching the ventricles at the end of diastole before the next contraction. Afterload is the peripheral resistance against which the left ventricle must pump. The ability to respond to these demands by altering CO is called cardiac reserve. CO is the amount of blood pumped by each ventricle in 1 minute, and then calculated by the amount of blood then ejected from the ventricle with each heartbeat. $CO = \text{Stroke volume (SV)} \times \text{HR}$. Cardiac index is the CO divided by the body surface area.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

Coronary artery disease usually begins as atherosclerosis which is characterized by lipid deposits within the intima of the arteries. These lipid deposits can cause injury to the endothelium and produce inflammation. An injury produces a fatty streak which is the first stage of Coronary artery disease, next the fatty streak turns into a fibrous plaque. In the last stage of CAD, it is a complicated lesion which is the most dangerous stage where the plaque grows and becomes unstable. When chest pain from ischemia is prolonged and not immediately reversible, acute coronary syndrome may develop which is caused by the decline of a once stable atherosclerosis plaque that ruptures, producing either a partially blocked NSTEMI vessel with a thrombus, or totally blocked STEMI. A myocardial infarction occurs because of an abrupt stoppage of blood flow through the coronary artery with a thrombus caused by platelet aggregation. The acute MI process evolves overtime, it could be from hours to a few days to years. The degree of collateral circulation influences the severity of the MI are usually described based on the location of the damage.

To Be Completed Before the Simulation

Anticipated Patient Problem: Decreased Cardiac output

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

Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include timeframes	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Assess HR, RR, BP, and cap refill and continuous tele.	Apply oxygen as needed during my time of care
Assess temperature, skin color, and edema q4 hours	Administer diuretics as ordered during my time of care
Assess urinary output q 2hours	Encourage intake of fluids as ordered, insert foley as needed
Assess weight daily or q shift	Educate the importance of a low sodium diet PRN
Assess Spo2 q 2hours	Administer oxygen as ordered and PRN
Assess lung sounds for crackles q 2hours	Encourage the use of semi fowlers positioning q 2 hours Administer diuretics as ordered

Goal 2: Pt will have urinary output of 30ml/hr during my time of care

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute pain

Goal 1: Pt will report on a numeric pain scale any change of pain during my time of care

Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include timeframes	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Assess vital signs, BP, RR, and HR q2 hours	Encourage the use of distraction techniques, slow and deep breathing PRN
Assess for facial grimacing or wincing during my time of care	Provide a calm environment and position comfortably during my time of care
Assess PQRST and pain score on numeric pain scale q2 hours	Administer nitroglycerin as ordered, administer morphine as ordered PRN
Assess pulse ox stats q4 hours	Apply supplemental oxygen as needed
Assess history with chronic angina q shift	Administer nitroglycerin as needed during my time of care
Assess pain goal q shift	Administer morphine as needed during my time of care Provide nonpharmacological pain relieving techniques during my time of care

Goal 2: Pt will have a pain scale of 0/10 chest pain during my time of care

To Be Completed During the Simulation:

Actual Patient Problem: Decreased cardiac output

Clinical Reasoning: increased o2 demand, MI, decreased UO

Goal: Pt will maintain an HR between 60-100bpm during my time of care Met: Unmet:

Goal: Pt will have warm, dry skin, absence of crackles during my time of care Met: Unmet:

Actual Patient Problem: Deficient knowledge

Clinical Reasoning: Unaware of allergies, low sodium diet, and lifestyle changes

Goal: Pt will verbalize understanding and participate in learning about new lifestyle changes during my time of care Met: Unmet:

Goal: Pt will verbalize understanding of the difference between modifiable and nonmodifiable risk factors of disease during my time of care Met: Unmet:

Additional Patient Problems: acute pain

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
1,2	1655	“My chest is tight; the squeezing won’t go away. I left my nitroglycerin on the counter”	1658	Wife administered 3 nitroglycerin tablets	1700	No change in pain, 911 called
1	1720	Discomfort continued. “I feel dizzy and sick to my stomach.” The wife states hx of blocked arteries.	1725	Lead wires were applied, performed an EKG and chest x-ray. 4L of o2 applied	1735	ST elevation noted, tachycardia with PVCs, troponin of 0.2.
3	1740	Pain 8/10	1745	Nurse Christine is going to get something to help with the pain	1750	Still no relief from chest pain
1,2	1755	Experiencing a heart attack, wife asked “Can you explain the reopening a bit more?”	1800	Dr explained the heart catheterization procedure	1805	No more questions, transported to cath lab
1,2	1855	“The chest squeezing, I was having earlier is gone.” Lying in bed flat	1900	Explained the importance of lying flat for at least two hours and keep the right leg in a straight position and to apply pressure on puncture site when coughing.	1910	Verbalized understanding
2	1920	“I am feeling itchy on my arm and chest”	1925	Assessed for allergies to shellfish Administered 25mg of diphenhydramine IV	1930	“I ate shrimp one time and my tongue swelled, so I never ate it again”

				bolus		
2	1945	Coughing, mentioned stuffy nose, and trouble breathing on 87% o2, skin ashen and nail beds dusky. Stridor upon auscultation	1955	Called provider and rapid response team, Administered one dose of epinephrine	2015	Stated "I feel much better, I am breathing better and do not itch anymore"
1	2030	6inch hematoma on right groin site, dressing saturated with sanguineous red drainage	2040	Nurse Carl removed the dressing and applied pressure to site	2045	Bleeding stopped; pressure dressing applied
1	2100	O2 saturation 100%	2110	Replaced nonrebreather with nasal cannula	2125	Stated "Feeling better but still have nagging cough"
1,2	2130	Potassium 3.2, stated "I stopped smoking 1 month ago and I eat fast food at least 4 times a week"	2140	Administer 20meq of potassium PO, educated on the importance of changing modifiable risk factors	2155	Stated understanding of changing diet and lifestyle habits
1	2200	Skin cool and clammy, restless and agitated, MAP 54, decreased urine output, BP:62/42	2205	O2 increased to 3L, administer dobutamine drip with NS 250ml/hr and norepinephrine 0.5 mcg	2225	BP stabilized
2	Next day 0800	Lines and IV disconnected, being transferred to stepdown unit	0820	Educated on lifestyle changes, diet, and medications that will be continued once at home.	0845	Asked how to replace salt in food and interested in changing diet habits, verbalized understanding of new antiplatelet medication

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
 Chest X-ray
 CMP, ABGs, creatinine, and potassium
 H&H
 EKG (ST-elevation)
 Percutaneous coronary angioplasty
 Troponin
 Creatine Kinase
 Tele
 MAP

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
 Dizziness, SOB, nausea, chest pain, hypertension, dyspnea, tachycardia with PVCs, dusky nailbeds, ashen skin, cool and clammy skin, restlessness, agitation, itchiness, and cough

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Hypertension
 Smoker (just recently quit)
 CAD
 Obesity/diet
 Physical inactivity

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical

Surgical
 Percutaneous coronary angioplasty

Prevention of Complications
 (Any complications associated with the client's disease process? If not what are some complications you anticipate)
 Infection
 Re-occlusion
 Bleeding

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
 Nitroglycerin
 Aspirin
 Dobutamine
 O2- rebreather mask, and nasal canula
 Diphenhydramine
 D5W
 Epinephrine

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 Hold pressure on the groin site when coughing

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
 Stress/anxiety from chest pain
 Anxiety of surgery due to MI
 SOB related to allergic reaction to dye

Client/Family Education

Document 3 teaching topics specific for this client.
 • Educate on the importance of consuming a low-sodium diet from now on
 • Educated on applying pressure to the groin after surgery to prevent bleeding
 • Educated on modifiable risk factors and how to follow them

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines were involved in caring for this client?)
 The provider
 Nurses
 Family/wife
 Radiologist
 Pharmacy

Patient Resources

Follow up with cardiologist, nutritionist to help with diet changes



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 takeaway would be that decompensation can happen quickly, so acting fast on even subtle changes is important, and to always listen to the patient. If they are saying something is wrong, most likely something is wrong. Also, it is very important to take chest pain seriously. If this patient had not been seen quickly and taken to the cath lab they might not have survived it.
2. What was something that surprised you in the care of this patient?
One thing that surprised me was how he was not aware he had a shellfish allergy, he knew that the last time he had eaten shrimp he had a reaction but never said he was “Allergic.” I was also surprised by how quickly he received the good care that he needed. I feel like all the nurses and physicians were on top of his care, and made sure that he was getting the best care possible.
3. What is something you would do differently with the care of this client?
I think the one thing I would have done differently was when getting consent and all the information needed for the procedure being done, I would have asked more questions about shellfish allergy or a possible shellfish allergy, I think had that have happened the allergic reaction to the dye could have been avoided.
4. How will this simulation experience impact your nursing practice?
This simulation will have me first off making sure to verify allergies if in a situation where a patient needs to have dye contrast, and also just being on top of assessments of the patient and recognizing subtle changes in my patient. Lastly, never taking chest pain lightly.