ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2022

Student Name: Grace Sweetman

ATI Scenario: Myocardial infarction complications

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

Blood flow: Blood enters the right atrium through the superior vena cava, go through the tricuspid valve, into the right ventricle. Then up through the pulmonary artery and into the lungs where gas exchange happens. Oxygenated blood enters the left atrium from the pulmonary veins and goes through the mitral valve, into the left ventricle. It then gets pumped through the aorta and into the body. The left ventricle has more muscle than the right because it needs to be strong enough to push blood through the entire body, the right ventricle just needs to pump blood to the lungs where there is a lower resistance. The arteries that supply blood to the heart are the circumflex artery, left main artery, left anterior descending, and the right coronary artery. The heart also has the conduction system. Depolarization starts at the Sinoatrial node, travels down to the atrioventricular node, through the bundle of His and down to the purkinje fibers at the base of the heart.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

A myocardial infarction occurs when there is a blockage of one of the coronary arteries and blood flow cannot get to the heart. The left anterior descending artery is the most common artery to have a blockage. Causes of a blockage can be plaque rupture, coronary artery thrombosis, or a coronary artery spasm. Once there is a blockage oxygenated blood cannot get to the myocardium and the heart begins to die. Hypoxia can happen in 10 seconds and ischemia can happen in 20 minutes from onset. After those 20 minutes there is irreversible damage to the heart. There are two different types: STEMI and NSTEMI. A STEMI (ST elevation myocardial infarction) means that the heart muscle is transmural (meaning the entire myocardium is becoming ischemic). On an ECG there ST segment elevation. With an NSTEMI there is no ST segment elevation, and it is only partial thickness, meaning it does not involve the entire thickness of the myocardium. A STEMI is an emergency! The patient needs to get to a cath lab withing 90 minutes of entering the facility and/or have thrombolytics within 30 minutes. A NSTEMI is less urgent, patients get into the cath lab within 12-72 hours. They cannot have any thrombolytics since it is only a partial occlusion (risk of bleeding). Myocardial infarctions are accompanied by angina/chest pain which is lactic acid being released to give oxygen to the heart. MI's usually affect the left ventricle which can then cause a decreased cardiac output since it is not pumping as effectively, and it can have hypertrophy and remodeling. This can all lead the patient to having heart failure.

Anticipated Patient Problems, Goals, & Interventions Based on Medical Diagnosis

** This worksheet should be completed before you begin the ATI simulation.

Problem #1: Decreased Cardiac Output

Patient Goals:

1. Will have a normal Urine output of 30mL/hr during my time of care
2. Will have stable VS especially a HR of 60-100bpm, BP within 20mmHg of baseline, & a RR of 12-20

Assessments: Assess VS q 2 hr (esp. BP, HR, RR), Assess EKG continuously, Assess UO for a normal amount of 30mL/hr, Assess peripheral pulses q 2 hr, Assess skin for warmth, normal color, and moisture

Interventions (In priority order):

1. Administer Nitroglycerin to dilate the coronary arteries as ordered
2. Administer any Angiotensin-converting enzyme inhibitors like lisinopril as ordered
3. Place in Fowlers or High Fowlers position and administer O2 as prescribed to keep SPO2 > 92%
4. Place on a cardiac monitor so that any dysrhythmias can be identified
5. Administer a cardiac healthy diet with low salt and fat
6. Educate on importance of relaxation and not doing a lot of activity so they do not use up any energy or exerts the heart even more

Problem #2: Acute Pain

Patient Goals:

1. Will have a pain score < 4 on a 0-10 scale during my time of care
2. Will understand the importance of alerting someone if pain occurs

Assessments: Assess pain scale (0-10) q 2 hours, assess quality, type, frequency of pain q 2 hr, Assess VS q 2 hours (esp. B/P, HR, RR)

Interventions (In priority order):

1. Administer any antianginals like Nitroglycerine as ordered
2. Administer any analgesics like morphine as ordered
3. Administer any beta-blockers like metoprolol as ordered
4. Provide a calm environment to decrease stimuli
5. Demonstrate relaxation and breathing techniques to decrease pain

6. Educate on the importance of alerting someone that chest pain has occurred

To Be Completed During the Simulation

Nursing Notes

Time	*I Or E*	Notes	Specify Problem #
1725	E	Laying in bed supine with HOB 45 degreees. Wife at the bedside. O2 administered via NC. Stated pain was a 8/10 on a 0-10 pain scale. Stated "with this squeezing over my heart, I'd say an eight."----------GS	1,3
1730	E	ECG showing ST segment elevation. ----------GS	1
1730	I	Provided teaching on cardiac catheterization and an angioplasty. -----GS	1, 4
1730	E	Verbalized understanding to procedure ----------GS	1
2100	E	Laying supine in bed with 2L O2 NC administered. VS: T 36 degrees C, HR 96, RR 14, BP 112/66, SPO2 98% 2L O2 NC.	1, 2, 3
2100	I	Educated on importance of applying light pressure on dressing when coughing, keeping right leg stretched out and staying still	4
2100	E	Verbalized understanding and stated felt itchy over arms and chest and stated that "I ate shrimp one time, my tongue swelled."	5
2115	I	Administered diphenhydramine 25mg IV	5
2140	E	Stated feeling short of breath and had some wheezing in lungs	2, 5
0800	E	O2 87% NC. Stated "having a hard time swallowing. And I can't quite catch my breath." Ashen skin, dusky nail beds, and breath sounds are stridor.	2, 5
0800	I	Administered 15L O2 vial non-rebreather face mask and called a rapid response	2
0800	I	Administered epinephrine IV to reduce anaphylaxis	2,5
1200	E	Stated "I'm breathing better and I don't itch anymore." O2 100%. Still having a cough	2, 5
1200	I	Switched non-rebreather mask to NC. Re-educated to keep pressure on the dressing when coughing so clot does not dislodge. Also to tell providers of allergy to contrast and shellfish.	2, 4
1300	E	Stated "I feel like I'm sitting on something wet." There is bleeding and a hematoma at the puncture site	4
1300	I	Outlined the hematoma with a marker to see if it grows	4
1400	E	Potassium level 3.2	1
1400	I	Notified provider and administer potassium pill PO	1
1430	I	Educated on importance of decreasing modifiable risk factors to having a MI	6
1430	E	Stated "I quit smoking a month ago" and that he eats a lot of steak and bread and has no time to exercise or cook a healthy meal.	6
1500	E	Showed signs of cardiogenic shock with MAP 54mmHg, agitation and	1

		restlessness, and arterial BP 88/54. UO 48mL/hr	
1515	I	Increased O2 3L NC. Administered IV NS 250mL/hr with dobutamine at 2.5mcg/kg/min.	1,2
1530	I	Administered Norepinephrine 0.5mcg/min then titrate to remain SBP >100.	1
2040	E	BP 96/56. Stated “I’m less shaky and I’m not as dizzy or sweating anymore.”	1
0800	I	Educated on reducing sodium in diet and gave a pamphlet to help	6
0800	E	Verbalized understanding about a low sodium diet and what foods to eat	6

Initials/ Signature G. Sweetman, SNB

Actual Patient Problems & Goals

** This worksheet should be completed after you complete the ATI simulation.

Problem #1: _____Decreased Cardiac output_____

Patient Goals:

1. ____Will have a normal Urine output of 30mL/hr or greater during my time of care _____ Met ☐ Unmet ☐
2. Will have stable VS especially a HR of 60-100bpm, BP within 20mmHg of baseline, & a RR of 12-20 Met ☐ Unmet ☐

Problem #2: __Impaired gas exchange_____

Patient Goals:

1. __SPO2 will stay above 92% during my time of care _____ Met ☐ Unmet ☐
2. _Lung sound will be clear with no crackles, wheezing or stidor upon auscultation during my time of care _____ Met ☐ Unmet ☐

Problem #3: _____Acute pain_____

Patient Goals:

1. _____ Met ☐ Unmet ☐
2. _____ Met ☐ Unmet ☐

Problem #4: _____ Risk for bleeding _____

Patient Goals:

1. _____ Met ☐ Unmet ☐
2. _____ Met ☐ Unmet ☐

Problem #5: ____Risk for Allergy reaction_____

Patient Goals:

1. _____ Met ☐ Unmet ☐
2. _____ Met ☐ Unmet ☐

Problem #6: ____Deficient knowledge_____

Patient Resources: _____Dietician/nutritionist _____

Patient Teaching: __taught about a low sodium diet and to change life style to decrease modifiable risk factors _

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
Troponin -0.2
Potassium -3.2

NCLEX II *(3)*: Health Promotion and Maintenance

Signs and Symptoms
Chest pain (8/10)
ST-segment elevation
Shortness of breath

NCLEX II *(3)*: Health Promotion and Maintenance

Contributing Risk Factors
Smoker (quit a month ago)
Obese
Age
Hx of HTN and CAD
Male

Therapeutic Procedures
Non-surgical

Surgical
Cardiac catheterization with angioplasty in LAD

NCLEX IV *(7)*: Reduction of Risk

Prevention of Complications
(Any complications associated with the client's disease process? If not what are some complications you anticipate)
Obtained Cardiogenic shock

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Medication Management
Nitroglycerin
Aspirin – 325 mg
Dobutamine – 2.5mcg/kg/min
Norepinephrine
Epinephrine for anaphylactic reaction

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures
HOB flat
Dressing on groin area
Right leg stretched out

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

Stressors the client experienced?
Anxiety
Allergic reaction to contrast dye

Client/Family Education

Document 3 teaching topics specific for this client.

- Low sodium diet
- What a cardiac catheterization is
- how to prevent a thromboembolism from occurring when coughing (hold pressure on site)

NCLEX I *(1)*: Safe and Effective Care Environment

Multidisciplinary Team Involvement

(Which other disciplines were involved in caring for this client?)

Nurse
Cardiologist
Nutritionist

Reflection Paper

Directions: Write a 1-page reflection paper using Times New Roman, 12 pt. font and double-spaced. Include the following:

1. Describe an "Aha" moment you experienced during this learning experience.
2. What were the most important aspects of this simulation and what did you learn?
3. How will this simulation experience impact your nursing practice?

My "Aha" moment was when I was completed with my first round of the simulation. When I was finishing the simulation, I felt like I did not do my best, but I thought it was enough to pass. When I saw my report, I was disappointed that it said "Needs improvement" but also not that surprised. Going through the simulation I felt that I was just doing "okay." I got a lot of answers that were correct, but they were not the priority to my patient at that time. It was a little frustrating to know that I was on a right path but did not have the priory right. Reading the rationales and going though it a second time helped me realize where I went wrong. The most important aspect of this case is that patients need to be observed even when it seems like their condition is getting better. Mr. Davis had a reaction to the contrast that I did not see coming and it's a good thing the nurse went in there and talked to Mr. Davis. The nurse was even vigilant when he started showing signs of cardio genic shock. He alerted someone and followed the right protocol to treat his patient. This simulation will stick with me because it has re-enforced the idea that when I do start practicing, I will not be able to have a "do over" when it comes to taking care of my patient. I only have one shot to notice the signs and get the right treatment the first time for them. That is what I like about doing the ATI real-life scenarios. I am able to make mistakes and learn from them. When I choose the wrong answer the rationales come up that tell me why there is a better choice. Even when I get the answer right the rationale comes up to tell me why I am right. It's good to have that extra knowledge about care for my patient. I know as a new nurse I will have the help of a preceptor and a charge nurse, but as I grow in my career I will be expected to know what to do in an emergent situation.