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

Structures:
- 4 chambers: right and left atria, right and left ventricles
- 3 layers: endocardium (inner layer), myocardium (middle muscle layer), and epicardium (outer wall)
- Pericardium: (around the heart) visceral and parietal layers, holds 10-15ml
- Valves: tricuspid (RA to RV), pulmonic (RV to lungs), mitral (LA to LV), aortic (LV to aorta)
- Chordae tendinea and papillary muscles: attach to tricuspid and mitral valves to prevent regurgitation and prolapse of leaflets

Blood flow through the heart:
- SVC/IVC → RA→ tricuspid valve→RV →pulm valve→ pulm artery →lungs
- Pulm veins→ LA→mitral valve→ LV→ aortic valve→aorta

Coronary Arteries
- Left coronary artery branches: left anterior descending (LAD) and left circumflex-perfuse LA/LV, intraventricular septum, and part of RV
- Right coronary artery branches: right coronary artery- perfuse RA, RV, posterior LV (includes AV node and bundle of his)

Conduction
- SA node in RA → internodal pathways → AV node → bundle of his → bundle branches → purkinje network

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

- Abrupt stoppage of blood flow through a coronary artery that causes irreversible myocardial cell death (necrosis)
- Atherosclerosis (hardening of arteries with plaque buildup)
- Plaque ruptures which leads to thrombus formation trying to fix rupture
- Thrombus partially occluding artery and the blood flow
- This leads to decreased oxygenation of heart muscle cells
- When cardiomyocytes are oxygen deprived then send pain signals to the brain (angina)
- Thrombus continues to grow and occlude artery
- Thrombus now completely occludes artery and myocardial cell death (necrosis) occurs
- Cells can't pump effectively bc of decreased BF/oxygen, rest of heart tries to compensate for dying part of heart
- Cells start to rupture, and membrane breaks down because build up of toxic waste products (leak troponin protein into bloodstream)

STEMI
- ST elevation on EKG
- Completely occlusive thrombus
- Transmural/ full thickness ischemia of myocardium

NSTEMI
- No ST elevation on EKG
- Partially occluding thrombus
- Subendocardial ischemia

To Be Completed Before the Simulation

Anticipated Patient Problem: decreased cardiac output

Goal 1: Pt will maintain HR (60-100 normal sinus rhythm) WNL during my care.

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess HR, rhythm, abn heart sounds (s3, s4, murmur) q4h	Administer CCB, digoxin, or amiodarone as ordered
Assess for angina q4h	Administer nitroglycerin as ordered, administer O2, maintain EKG, notify provider
Assess LOC, agitation, restlessness q8h	Administer O2 therapy per protocol, reorient as needed, notify provider
Assess for crackles, dyspnea, orthopnea, or tachypnea q4h	Reposition client, elevate HOB, administer furosemide as ordered
Monitor for orthostatic hypotension q shift	Encourage dangling, educate on no OOB without someone in the room with them, place items close to bed
Assess cap refill, peripheral pulses, and skin temp/color q shift	Administer vasodilators as ordered to help restore peripheral blood flow

Goal 2: Pt will maintain capillary refill less than 3 seconds and baseline LOC during my care.

To Be Completed Before the Simulation

Anticipated Patient Problem: acute pain

Goal 1: Pt will maintain a pain score of 0/10 for chest pain during my care.

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess pain score out of 10 q4h and after intervention	Administer nitroglycerin as ordered
Assess HR, BP, RR, and SpO2 q4h	Administer oxygen NC per protocol
Assess PQRST of pain (provocation, quality, region/radiating, severity, and timing) q4h	Administer morphine as ordered
Assess previous methods of successful pan relief q shift	Provide these methods if not already, notify provider if different than ordered (rest, asa, nitro, etc)
Assess EKG for ST elevation when preformed	Notify provider, prep for cath lab
Assess for nonverbal signs of pain (grimacing, guarding, moaning, moving slow) q2h	Provide nonpharmacological pain relief methods (distraction techniques, rest, reposition)

Goal 2: Pt will utilize non-pharmacological main relief techniques during my care.

To Be Completed During the Simulation:

Actual Patient Problem: decreased cardiac output

Clinical Reasoning: ST elevation on EKG, hx CAD and HTN

Goal: Pt will maintain HR (60-100 normal sinus rhythm) WNL during my care. Met: ✓ Unmet:☐

Goal: Pt will maintain normal skin color and temperature during my care. Met: ☐ Unmet:✘

Actual Patient Problem: acute pain

Clinical Reasoning: STEMI, CP 8/10, squeezing feeling in chest

Goal: Pt will maintain a pain score of 0/10 for chest pain during my care. Met: ✓ Unmet:☐

Goal: Pt will utilize non-pharmacological main relief techniques during my care. Met: ☐ Unmet:✘

Additional Patient Problems:

3: deficient knowledge

4: risk for bleeding

5: risk for allergy reaction

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	12/7 1655	Onset of chest pain while shoveling snow	1655	Took 3 doses nitro and 325mg ASA	1725	CP still 8/10
1, 2	1725	Hx- blocked arteries, CP usually goes away with nitro	1725	EKG ordered and preformed	1730	ST elevation
1, 3	1730	ST elevation shown on EKG	1730	Educated on STEMI and cath lab	1730	Verbalized understanding of need for cath lab
1	1730	Precath lab orders initiated	1745	CXR performed, troponin, potassium, and creatinine drawn, morphine administered	1745	Troponin I: 0.06 Troponin T: 0.2 Potassium: 3.6 Creatinine: 0.8 CXR: aorta/aortic arch calcified, but

						intact, no fx, no pneumo, no tumors
1	1755	STEMI confirmed	1755	Taken to cath lab	After cath into ICU 2100	PCI stent placed in LAD, central line catheter, a line, urinary cath, IVF running, VSS, O2 2L NC, R femoral insertion site with no bleeding or hematoma
2, 5	2100	Laying flat, leg flat on bed, no CP or squeezing, arm and chest feel itchy	2100	Check chart for shellfish allergy, notify provider	2100	Diphenhydramine 25mg IV bolus PRN q4h for itching/restlessness
5	2100	Cough and stuffy nose, dyspnea, “can’t catch my breath”, wheezing	2100	Diphenhydramine administered, applied nonrebreather 15L	2100	SpO2 87%
1, 5	2130	Skin ashy, nail beds dusky	2130	Call rapid response, administer epi IM	2130	“Feel better”, no itching, persistent cough
4	2200	hematoma developing	2200	Apply pressure to insertion site	2200	Bleeding stopped, outline hematoma to ensure doesn’t grow
1	2230	Labs sent out, potassium 3.2	2300	Notify provider, administer potassium PO	0600 next day	Potassium: 3.2
1, 3	2300	Lying in bed awake and talking	2300	Educated on CV risk factors, modifiable (obesity, smoking, DM, HTN) and nonmodifiable (ethnicity, sex, family hx)	2300	Stated “I don’t exercise”, quit smoking 1 month ago, eats fast food 4x/week
1	12/8 1940	Damage to LV myocardium, agitated, restless, MAP 54, arterial BP 88/54, skin cold and clammy, UO down to 48ml/hr	1940	Increased O2 to 3L NC, NS 250ml/hr, dobutamine drip at 16.5ml/hr	1940	BP nonreactive, NSR with occasional PVC
1	2000	BP not reacting to dobutamine	2000	NS to 50ml/hr, norepinephrine drip	2100	BP stable, decreased shaky, dizzy, and sweating
3	12/9 0800	Transferring to CV stepdown, looking better	0800	Educated on lifestyle changes: keep daily sodium <1500mg/day, read food labels, decrease red meat, and fast food, increase fish, switch salt for other spices	0800	Chose shredded wheat for breakfast (1mg sodium in 3/4c)
3, 4	0810	Discharge meds:	0810	Educated on DC meds:	0810	Verbalize

		clopidogrel, ASA, lisinopril		Clopidogrel/ASA: watch for signs of bruising or bleeds, don't stop abruptly Lisinopril: report persistent dry cough		understanding, no further questions, D/C to stepdown

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 I and T
CXR
12 lead EKG
Potassium
creatinine

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

Signs and Symptoms

Chest pain 8/10, not go away with nitro or rest
Squeezing feeling in chest
ST elevation
dyspnea

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

Contributing Risk Factors

Obesity
Hx HTN
Hx blocked arteries
Smoking
Diet
Sedentary lifestyle
ethnicity

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures
Non-surgical
Cardiac catheterization (PCI with stent)

Surgical

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)

Allergic reaction to dye
Cardiogenic shock
Dysrhythmia
Insertion site hematoma

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

Medication Management

Nitroglycerine
Morphine
Aspirin
Oxygen
Clopidogrel

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

Non-Pharmacologic Care Measures

Rest

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

Stressors the client experienced?

Pain
Feel like can't breathe

Client/Family Education

Document 3 teaching topics specific for this client.
•catheterization
• lifestyle modification
•medical management

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

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
Cath lab pharmacy
ED team lab
ICU team

Patient Resources
nutritionist

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 this client was to monitor closely for subtle changes and always anticipate complications so we can proactively response and treat to limit any serious complications. Also keeping the line of communication open so patients will feel comfortable reporting to you when something feels off or wrong.

2. What was something that surprised you in the care of this patient?
   The adverse reaction to the dye surprised me because it wasn’t in his MAR or history anywhere, so my first thought when he said he felt itchy wasn’t a reaction to the dye, although I did catch on fast to the problem. I also thought after the Benadryl he would have started feeling better, I didn’t think it would progress to the RRT and epi.

3. What is something you would do differently with the care of this client?
   Something I would do differently with this client is double check any allergies before his procedure. Along with this checking his insertion site more frequently to try to prevent that hematoma because he said he felt something wet.

4. How will this simulation experience impact your nursing practice?
   This will impact my nursing practice because like I said before I will try to anticipate complications so they can be proactively and efficiently treated so they don’t progress to something more serious.