ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

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ATI Scenario: CKD

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: CKD

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

The kidneys are bean shapes organs located posteriorly on either side of the vertebral column. The hilus serves as the entry and exit sight of nerves, vessels, and ureters. The main functions of the kidney are 1) regulate the volume and composition of extracellular fluid and 2) excrete waste products from the body. The nephron is the functional unit of the kidney and each kidney has about 1 million nephrons. Inside the nephron is the glomerulus and tubule system that filters and acts as collection ducts that will soon drain into the venous system by means of reabsorption. The kidneys filter waste called urea from the blood. The GFR expresses the amount of blood filtered each minute by the glomeruli. Once filtered, the wasted fluid is gathered by collecting ducts that drain into the calyces and proceeds to the renal pelvis and finally the ureters, where it empties into the bladder and is expelled through the urethra. The ureters are important for draining urine out of the renal pelvis since it only holds 3-5 mL, preventing backflow throughout the kidney. Further, the bladder and urethra are also important structures for moving urine out of the body. The kidney are also responsible for producing erythropoietin which stimulates RBC production in the bone marrow leading to anemia if kidney disease occurs, and for regulating BP by secreting renin which stimulates the RAAS and causes vasoconstriction, leading to HTN.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

CKD is defined by the presence of kidney damage or a GFR less than 60. The insult that initiates CKD is mainly diabetes and HTN. As kidney function deteriorates, all body systems become affected. The manifestations result from retained urea, creatinine, phenols, hormones, electrolytes, and water. Uremia is a syndrome in which kidney function declines to the point that symptoms may develop in multiple body systems and occurs when GFR is less than 15. Some clinical manifestations include n/v, thyroid abnormalities, hyperlipidemia, bleeding, PAD, HF, hypertensive retinopathy, amenorrhea, erectile dysfunction, uremic pleuritis, vascular and soft tissue calcifications, and paresthesia. As GFR decreases, BUN and creatinine increase. Our body goes into metabolic acidosis from the kidney's impaired ability to excrete excess acid and from defective absorption of bicarb. This kidney damage happens in a series of 5 stages; stage 1 being signs of kidney damage with normal or increased GFR (greater than or equal to 90), stage 2 with mild decrease in GFR (60-89), stage 3 moderate decrease in GFR (30-60), stage 4 with severe decrease in GFR (15-29), and stage 5 is kidney failure (less than 15) needing dialysis.

To Be Completed Before the Simulation

Anticipated Patient Problem: Excess fluid volume

Goal 1: Pt will have a UO of at least 30mL/hr 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?
Monitor I&O's q1hr	Administer diuretic as prescribed
Assess HR, BP, RR q2hr	Elevate HOB prn Administer antihypertensive as prescribed
Assess daily weight Assess eating habits qshift	Enforce a low sodium (less than 2000mg/day) diet qshift
Assess for adventitious lung sounds, dyspnea q4hr	Maintain fluid restrictions to less than 2000mL/day qshift
Assess for JVD and peripheral edema q4hr	Referral to dialysis prn for treatment Elevate LE above level of heart qshift

Goal 2: Pt's weight will not increase during my care

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for electrolyte imbalance

Goal 1: Pt will maintain a normal potassium level of 3.5-5 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?
Monitor labs for K+ qshift	Administer calcium gluconate as prescribed Administer insulin as prescribed Enforce a low potassium diet (2000-3000mg/day) qshift
Monitor HR and rhythm continuously	Ensure telemetry battery charged and properly connected to pt qshift prn Administer antidysrhythmic as prescribed
Assess BUN and Creatinine qshift Monitor I&O's qhr	Administer prescribed antidiuretic Prepare for dialysis prn
Monitor labs for Na+ qshift	Enforce a low sodium (less than 2000mg/day) diet qshift
Assess LOC qshift	Notify HCP with any changes

Goal 2: Pt will maintain a normal sodium level of 135-145 during my care

To Be Completed During the Simulation:

Actual Patient Problem: Excess fluid volume

Clinical Reasoning: Rhonchi, +2 pitting edema in b/l LE, pulmonary venous congestion

Goal: Pt will maintain a UO of 30mL/hr during my time of care Met: ☐ Unmet: ☐

Goal: Pt will have no evidence of worsening edema during my care Met: ☐ Unmet: ☐

Actual Patient Problem: R/f electrolyte imbalance

Clinical Reasoning: fluid overload, K=6, Na=132

Goal: Pt will obtain a potassium level of 3.5-5 by the end of my care Met: ☐ Unmet: ☐

Goal: Pt will obtain a sodium level of 135-145 by the end of my care Met: ☐ Unmet: ☐

Additional Patient Problems: 3) activity intolerance 4) Readiness for enhanced nutrition 5) readiness for enhanced learning 6) hopelessness

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, 3	1830	Scattered rhonchi ant. & post. bilaterally, RR 24, HR 118, BP 174/94, O2 94% RA, 72.1 kg, "moving around by myself is difficult. My leg feels so tight", dyspneic on exertion, +2 pitting edema in LE, weakness with gait, UO 150mL, 2/10 pain. CXR shows b/l pulmonary venous congestion with infiltrates, GFR 8, Na 132, BUN 42, creatinine 8, glucose 174,	1835	Raised HOB, applied O2 2L NC, administered 20 mg PO furosemide	2040	O2 96% on 2L NC. UO 100mL, BP 170/84, HR 110, RR 20

		RBC 3.1, phosphorus 7.5, calcium 8				
2	1850	Resting in bed, limb alter bracelet on L wrist, potassium level 6	1920	Applied telemetry (#14) and educated of its importance, inserted 20g IV in R forearm	1925	Verbalized understanding, IV flushed without difficulty
1, 5	2000	concerned about & questioning hemodialysis	2000	Educated on the hemodialysis process using diagrams and potential complications such as hypotension	2000	Verbalized understanding
1, 2	2100	Tele showing sinus tachycardia with peaked T waves @ 114 beats/min, BP 182/90, BG 124, 0/10 pain	2130	Notified provider of high BP, administered 80 mg furosemide IV bolus, administered 20 mg IV bolus labetalol	2230	UO 120mL, BP 164/80, HR 108
1, 2, 3	Next day: 0715	Lips and skin dry, scattered rhonchi ant. & post. bilaterally, +2 pitting edema on LE bilaterally, RR 18, HR 94, BP 154/84, O2 96% on 1L NC, weakness with gait, BG 110 intake 120, UO 100, 0/10 pain, 72.6 kg, temp 37.1, K 4.7, Na 136	0745	Transported to dialysis via wheelchair	1215	Back from dialysis, reports fatigue, refusing to eat lunch due to nausea, ha, 2/10 pain, HR 88, RR 18, BP 134/76, O2 97% RA, 71.5 kg, temp 37.3 emesis 5 mL
6	1230	Crying, states “I don’t see any light at the end of this tunnel, I just feel sorry for myself”, concerned with hemodialysis process	1235	Used therapeutic communication such as active listening, and discussed options to allow more control and ways to minimize disruption of normal routine, referred to case management	Next day: 0800	Reported that case manager provided van for transportation to hemodialysis appointments
4, 5	0830	69.9 kg, peritoneal site score 2 with some scabbing	0845	Home health nurse discusses a diet plan to include	0900	Reports feeling more comfortable with hemodialysis,

		present and granulation tissue that is shiny and bulges, expressed concerns regarding renal diet		some of her favorite foods and maintain her spirituality		discharged from home health

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

BMP(Na+ 132
K+ 6
BUN 42
Cr 8
Phosphorus 7.5
A1C 7.4)
GFR 8
UA- + for protein
Iron studies- 110
CXR- b/l pulmonary venous congestion with infiltrates

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

Signs and Symptoms

Weight gain, hyperkalemia, LE edema +2, dyspnea, rhonchi, tachypnea, low RBC (3.1), high WBC (14), proteinuria, blurred vision, fatigue, c/o leg tightness,

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

Contributing Risk Factors

Type II diabetes
HTN

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures

Non-surgical
Peritoneal dialysis
Hemodialysis

Surgical

Prevention of Complications

(Any complications associated with the client's disease process? If not what are some complications you anticipate)

Dysrhythmias, anemia, depression, disequilibrium syndrome, hyperkalemia

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

Medication Management

Labetalol 20 mg IV
Furosemide 80 mg IV, 20 mg PO
Oxygen
Aspirin 81 mg PO
Tacrolimus ointment
Ferrous citrate
Docusate
Atorvastatin
Epoetin
Glipizide
Sevelamer carbonate
Linagliptin
Gabapentin

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

Non-Pharmacologic Care Measures

Raised HOB
Restricting fluids
Renal diet with low sodium, low potassium, and low fat
I&O's

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

Stressors the client experienced?

Hemodialysis
Food security
Cost of medication
Ability to attend dialysis sessions
Transportation

Client/Family Education

Document 3 teaching topics specific for this client.

• Educated on hemodialysis process & complications
• Educated on the importance of applying telemetry for continuous monitoring

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

Multidisciplinary Team Involvement

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

Nephrology, case management, nurses, provider, home health, dietician, dialysis

•Educated on what foods to include in her renal diet	

Patient Resources
Transportation services, support groups

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 from this scenario is how intricate our bodies are and how having one major problem can effect different parts of the body. I also realized how important education is in order for people to understand their disease process and even begin to feel more comfortable with its treatments.
2. What was something that surprised you in the care of this patient?
   One thing that surprised me was the resources that can be offered to patients in need, such as the transportation services for this patient that needs it to go to her dialysis appointments to keep up with her health.
3. What is something you would do differently with the care of this client?
   I think the care team did a great job of caring for this patient and educating her. I think I would have added more nonpharmacologic measures into her care like we see in the hospital here, such as EPC’s and TED’s when bedrest, IS, and cough & deep breathe
4. How will this simulation experience impact your nursing practice?
   This simulation gave me a better idea of CKD and how it could be presented in a pt that comes to the hospital. It also made me realize how much the human body works together and if one organ isn’t working its best it can make others not work their best as well. It has helped me be more prepared for the types of treatment, medications, and educational points that I can expect if I care for a patient with CKD.