

Firelands Regional Medical Center School of Nursing
AMSN 2023
Unit 6: Heart Failure online assignment (1.5H)

Directions:

- Read Lewis Chapter 34, review ATI Pharmacology Made Easy 4.0: Cardiovascular Module: Drug Therapy for Heart Failure, and review the Unit 6 Pharmacology List.
- Utilizing the resources above, complete the case study. There will be many items for each question.
- Utilizing the Pharmacology List and ATI/Skyscape, complete three ATI Medication Templates from the Pharmacology List.
- This assignment is due in the Unit 6: HF assignment drop box by March 13, 2023 at 0800.
- Be prepared to discuss this assignment in class.
- You must complete the assignment in full to receive the 1.5H theory credit.

Assignment Objectives:

- Determine overall goals in the treatment of heart failure.

CASE STUDY:

Frannie Failure, a patient on 4P, calls the nurse and states, "I feel really puffy. My rings feel so tight on my fingers and I am having trouble catching my breath." The patient is lying flat in the bed and is alert and oriented x 3. NS @ 125mL/HR running.

Assessment:

- Vital Signs: T 97.9 oral, HR 120, RR 24, SpO2 86% RA, BP 152/94, pain 0/10.
- Respiratory: Lung sounds- crackles throughout bilaterally, non-productive cough.
- Cardiac: Heart sounds- S3, pedal pulses not palpable, 3+ pitting edema bilateral feet and ankles.
- Skin intact, pale and cool.
- Gastrointestinal: Bowel sounds x4 WNL, BM yesterday morning.
- Intake/Output: Patient has had 900ml in and 200ml out.

1. What additional information would you want to know?

**Family and patient history, lab work (BNP and CBC), heart rhythm (ECG), palpitations?
Mental status and any changes? Medications? Chest Xray? When did it start?**

2. What assessment/ interventions would be appropriate for this patient?

1. Turn off the NS that is running.
2. Raise HOB to help patient with breathing (High-Fowler's)
3. Put on 4L of oxygen per NC.
4. Put on heart monitor.
5. Draw labs (BNP)
6. Daily weights

3. What would you anticipate the healthcare provider to order?
 1. Drug therapy
 2. Constant monitoring of vitals, O2 saturations, weight, mentation, edema, JVD, hypoxia, and crackles
 3. Daily weights
 4. ECG
 5. Sodium restriction
 6. Fluid restriction
 7. O2 via nasal cannula
 8. Vital signs every hour
 9. Urine output every hour.
 10. Continuous ECG and pulse oximetry monitoring
 11. Rest-activity periods
 12. Dietitian consult
4. What medications would be appropriate for this patient (include all pertinent from the Pharmacology List) ? Doses? Nursing Interventions? You will pick three of these medications to complete the ATI Medication Templates.
 1. Beta Blockers: **Carvedilol** (6.25 mg orally twice daily for 7-14 days): Obtain standing BP 1 hr after dosing to assess tolerance. Overdose can cause profound bradycardia, hypotension, bronchospasm, and cardiogenic shock. Abrupt withdrawal may result in sweating, palpitations, and headaches.
Metoprolol succinate: Decrease hypertension (25-100mg/day as a single dose -may be increased every 7 days as needed. Watch for bradycardia, Monitor BP and ECG frequently, and take radial pulse before each use.
 2. Diuretics: **Furosemide-** Block absorption of sodium and chloride in the kidneys, increases urine output, and decreases fluid volume. (PO 20-80mg/day) Watch for increased urine output, decreased symptoms, and fluid weight loss. Serum potassium and magnesium levels are continually monitored.
 3. Thiazide Diuretics: **hydrochlorothiazide-** (PO 12.5-100mg/day in 1 to 2 doses) Monitor BP, intake and output, daily weights, feet, legs, and edema daily.
 4. Potassium-sparing diuretic: **spironolactone-** (PO 25 mg once daily) Monitor potassium levels during treatment, use with caution in patients taking digoxin, since hyperkalemia may reduce the effects of digoxin.
Teach patients to avoid foods high in potassium.
Assess male patients for gynecomastia, a common side of effect of long term use.
 5. **Morphine Sulfate-** (IV 4-10 mg every 3 to 4 hours) Given in small IV boluses. Cautious use and close monitoring are advised. Morphine has serious adverse effects, including respiratory depression, which can require mechanical ventilation.
 6. **Dobutamine-** (IV dilute 250-1000mg in 250-500 mL of D5W or LR) (Concentration 0.25-5 mg/mL)
Monitor potassium levels: my cause hypokalemia.

Monitor BP, HR, ECG, cardiac output, and urinary output continuously during administration.

7. **Dopamine-** (2 to 10 mcg/kg/min IV for continuous infusion. Maintenance dose is 2-50 mcg/kg/min by IV infusion) Monitor IV site. Tissue necrosis and sloughing can occur with drug extravasation. High doses may produce ventricular dysrhythmias.
8. **Milrinone-** Short term treatment of HF. (Only available in IV use: 50mcg/kg over 10 mins followed by 0.5mcg/kg/min for continuous)
Monitor HR because it can optimize HR in A fib patients
Monitor kidney levels for renal function as well as potassium and magnesium levels.
Always have continuous heart monitoring for these patients.
9. Ace Inhibitors: **captopril-** (PO 25 mg 3 times daily)
Monitor for severe hypotension and hyperkalemia.
Monitor patient for first-dose hypertension (first-dose syncope)
Skipping doses or discontinuing the drug can result in rebound HTN.
Angioedema, a rare adverse effect, can develop suddenly and be life-threatening.
10. ARBS: **Losartan-** (PO 50 mg once daily)
Assess BP and pulse frequently as well as monitor for renal function.
11. Nitrates: **Isosorbide-** (PO 5-20 mg twice daily)
Monitor anginal pain as well as BP and pulse. Teach to never stop even if they are feeling better. May cause dizziness and hypotension.

Nitroglycerin- (Sublingual 0.3-0.6mg)

Must be held under the tongue until it is dissolved.

Assess anginal pain, location, and duration. Monitor BP and pulse before and after administration. May cause high urine concentrations.

5. What patient education would you include?

I would educate on health promotion and nutrition. Dietary Therapy- low sodium content as well as small, frequent meals.

Activity Program: Increase walking and other activities most days of the week.

Obtain annual influenza vaccinations.

Medication compliance- take each drug as prescribed and know signs and symptoms of HF and when to come back into the ER.

Give resources on a low sodium diet.