Medications

Albuterol sulfate: 2.5 mg/3 mL (PO/inhalant)

- **Pharmacological classification:** Beta-2 adrenergic agonist
- **Therapeutic classification:** Bronchodilator
- **Reason for taking:** SOB/dyspnea
- **Nursing assessment prior to administration:** assess respiratory status/auscultate lungs

benzonatate (Tessalon Perles): 200 mg 3 x daily (PO)

- **Pharmacological classification:** Antitussive
- **Therapeutic classification:** Antitussive
- **Reason for taking:** Cough
- **Nursing assessment prior to administration:** Assess cough and lung sounds

diltiazem (Cardizem): 7.5 mg/hr. (IV)

- **Pharmacological classification:** Calcium channel blocker
- **Therapeutic classification:** Antianginals, antiarrhythmic, and antihypertensive
- **Reason for taking:** Angina/a-fib
- **Nursing assessment prior to administration:** Assess heart rate and blood pressure

(Jones & Bartlett Learning, 2020).

Lab Values/Diagnostics

PTT: 71.8

- **Normal range:** 22.4-35.9 seconds
- **Relates to CHF:** A overworked heart can lead PTT levels to increase, causing clotting problems.

B-natriuretic peptide: 557.0

- **Normal range:** 0.0-100.0
- **Relates to CHF:** BNP is the common lab test to diagnose CHF.

UA drug screen: Positive (+) for cocaine

- **Normal range:** Negative (-)
- **Relates to CHF:** Patients that live an unhealthy lifestyle are at higher risk of congestive heart failure.

No other diagnostic tests were run on this patient.

(Pagana et al., 2018).

Demographic Data

Date of Admission: 10/23/22
Admission Diagnosis/Chief Complaint: SOB, chest pain, back pain, a-fibrillation with rapid ventricular response, right sided congestive heart failure.
Age: 46
Gender: Female
Race/Ethnicity: Caucasian
Allergies: Bees develops an anaphylactic reaction, and gabapentin results in anger issues.
Code Status: Full code
Height in cm: 175.3 cm/5'9" ft.
Weight in kg: 92.7 kg/204 lbs. 4.8 oz.
Psychosocial Developmental Stage: Generativity vs. stagnation
Cognitive Developmental Stage: Formal operational
Braden Score: 21
Morse Fall Score: 30
Infection Control Precautions: No special precautions are placed for this patient.

Admission History

K.A. was seen in convenient care on 10/7 for dyspnea, and prescribed Lasix for suspected heart failure. The patient has been having symptoms for 2 weeks. The patient came to the emergency department with severe chest pain on 10/23/22. The patient complains of angina, in the left precordial region. The duration of symptoms started 2 weeks ago. The characteristics associated with her symptoms are pulling/wheezing sensation when breathing, sharp pain radiating to left arm, severe middle back pain, lightheadedness. Her associated factors are orthopnea, dyspnea with activity, nausea/vomiting, abdominal distention, and a productive cough. She notes that sitting up gives her mild relief. The patient was put on Lasik by a convenient provider on 10/7. Timing of her symptoms are intermittent with moderate severity. The patient is now in impatient care and being monitored closely.

Medical History

Previous Medical History: Anxiety/depression, B12 deficiency, GERD, Barrett's esophagus, PCOS, and vitamin D deficiency.
Prior Hospitalizations: Hysterectomy in May of 2015.
Previous Surgical History: EGD/colonoscopy on 3/15/21, upper EGD 5/26/20 and 2/25/22, and a hysterectomy on 05/15.
Social History: The patient does not smoke cigarettes or vape tobacco products. The patient does not currently drink alcohol. The patient reports smoking and snorting crack and cocaine every day, multiple times a day since the age of 18.

Pathophysiology

Disease process: Heart failure is a disorder where the heart is unable to effectively pump blood to the body's other organs. The most frequent cause of right heart failure is left ventricular failure brought on by volume and pressure overload (Arrigo et al., 2019). Preload, contractility, afterload, ventricular interdependence, and cardiac rhythm interact to form the normal RV function. Most cases of RV failure are caused by pre-existing, newly diagnosed, or a mix of cardiac and pulmonary illnesses, which can modify ventricular interdependence, raise RV afterload, decrease RV contractility, decrease RV preload, or increase the risk of cause-related arrhythmias (Arrigo et al., 2019).
S/S of disease: Some sign and symptoms you may see with right-sided heart failure are; shortness of breath with activity or when lying down, fatigue and weakness, swelling in the legs, ankles, and feet, rapid or irregular heartbeat, decreased ability to exercise, persistent cough or wheezing with white or pink blood-tinged mucus, swelling of the belly area (abdomen), extremely rapid weight gain from fluid buildup, nausea and lack of appetite, difficulty concentrating or decreased alertness, and chest pain if heard are some signs and symptoms of heart failure (Arrigo et al., 2019).
Method of Diagnosis: The evaluation continues with an electrocardiogram, arterial blood gas, blood lactate, and a chest x-ray once the history and physical have been completed. Renal and hepatic panel markers of end-organ function should be included in blood testing to determine severity. When a PE is suspected, a D-Dimer is helpful in the diagnostic process. Although cardiac troponin and B-type natriuretic peptide are very sensitive for the early diagnosis of RCHF and myocardial damage, there are no biomarkers specifically for RCHF. These are connected to a bad prognosis in RCHF when increased (Arrigo et al., 2019).
Treatment of disease: Some treatment options for right sided heart failure may include diuretics, vasodilators, beta-blockers, digoxin, pulmonary vasodilators. Advise the patient to obtain in smoking, alcohol, and drug cessation. Live a healthy lifestyle by eating a healthy diet, eating a low-sodium diet, and exercising regularly (Arrigo et al., 2019).

Active Orders

- Daily weight before breakfast for CHF
- Strict I/O Q2hrs for CHF
- Continuous cardiac and pulse oximetry monitoring for dyspnea and CHF
- Cardiac heart healthy diet due to CHF

Physical Exam/Assessment

General: The patient is alert and oriented x4. No known distress and overall appearance is suitable per situation. Patient was tired.

Integument: The patient's skin is warm, dry and intact. There are no visible rashes, bruises, or scars present. The patient has diaphoresis, but denies fever, or chills. Moderate bilateral lower extremity edema is seen with +2 pitting up to mid-thigh. The patients Braden score is 21. The patient's skin turgor snaps back rapidly. There are no drains present.

HEENT: Head, and neck symmetrical, no tracheal deviation, non-palpable thyroid, non-palpable lymph nodes. Pallor, TM bilateral, bilateral sclera white, bilateral cornea clear, bilateral conjunctiva pink, no visible drainage or discharge present from eyes. Bilateral lids are moist and pink without lesions or discharge noted. PERRLA bilaterally. Septum is midline, turbinate's are moist and pink bilaterally and there are no visible bleeding or polyps present. Bilateral frontal sinuses are non-tender to palpate. Oral cavity is pink and moist. Dentition intact.

Cardiovascular: Clear S1 and S2 without murmurs, gallops, or rubs. S3 and S4 were clear in all lobes. The patient has tachycardia, with complaints of angina. Peripheral pulses were a +2. Capillary refills were less than 3. Neck vein distention is not noted. Moderate bilateral lower extremity edema seen with +2 pitting up to mid-thigh.

Respiratory: Moderate wheezing in lower portion of right lobe. No rales or rhonchi noted in all four lobes. Moderate dyspnea upon resting in bed. The patient does have a productive, dry cough, and complaints of shortness of breath.

Genitourinary: The patient denies dysuria, frequency, and urgency. Color of urine is pale-yellow. Character of urine is odorless and clear. Inspection of genitals are normal. No catheter is present.

Gastrointestinal: The patient has a normal diet at home but is on a cardiac diet during this admission. The patient complains of nausea but no vomiting within the last 13 hours. The patient denies noticing any blood in her stools. The patient's last bowel movement was on 10/23/22. The patient is 175.3 cm and weights 92.7 kg. Normal active bowel sounds in all four quadrants. No pain or masses noted. Abdomen is distended due to water weight, but soft upon palpation. No incisions, scars, wounds present.

Musculoskeletal: The patient did not need ADL assistance and is a fall risk. The patient's fall score is a 30. The patient is independent and but inactive due to dyspnea, and angina upon everyday activities. The patient does not have any equipment. The patient complaints of lower back muscle pain. Normal ROM, no calf tenderness and strength is equal bilaterally. No swelling or deformities.

Neurological: The patient is oriented x4. The patient is anxious. The patient presents PERLA and MAEW. Equal strength in all extremities. No LOC. Sensation is present and normal. Deep tendon reflexes are not assessed on this assessment. Coordination and gait is normal and steady. The patient complains of mild lightheadedness.

Most recent VS (include date/time and highlight if abnormal): On 10/24/22 at 1133 the patient's vitals were as the following: BP 136/76, P 126, RR 18, Temp 97.6F (orally), and SpO_2 100% (RA).

Pain and pain scale used: The numeric rating pain scale was used and the patient rates her pain an 8/10.

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
Decreased cardiac output related to alterations in the rate and rhythm of the heart as evidence by tachycardia and dysrhythmia.	Excess fluid volume related to retention of sodium and water as evidence by a weight gain of 13.6 kg (30 lbs.) in the last three months.	Activity intolerance related to imbalance between oxygen and supply demand as evidence by dyspnea.

Rationale The patient goes back and forth from having atrial fibrillation then back to a normal rate and rhythm.	**Rationale** The patient has noticed a severe change in weight from her normal baseline weight and moderate edema bilaterally to her lower extremities.	**Rationale** The patient is unable to do daily living activities due to dyspnea and fatigue upon activity.
Interventions **Intervention 1:** Auscultate the patient's apical pulse for one full minute. **Intervention 2:** Assess the patient's cardiac rate and rhythm and not note any abnormalities. (Phelps, 2020).	**Interventions** **Intervention 1:** Monitor the patient's I/O's strictly. **Intervention 2:** Obtain daily weights before breakfast at the same time every morning. (Phelps, 2020).	**Interventions** **Intervention 1:** Check the patient's vital signs before and after activity. **Intervention 2:** Have the patient do the six minute test to help determine the patient's physical activity. (Phelps, 2020).
Evaluation of Interventions The patient's apical pulse stayed around 100 bpm, even though this is on the higher end this number is considered normal. The patient's cardiac rate and rhythm remained normal with no active palpitations. No modifications are needed at this time.	**Evaluation of Interventions** The patient's intake was adequate, and her output remained higher due to patient previously being on Lasix. The patient did not gain any more weight during admission. The patient tolerated the given interventions. No modifications are needed for this patient.	**Evaluation of Interventions** The patient's vital signs were at the higher spectrum but considered safe for this patient's condition. The patient was fatigued after doing the six minute physical test. The patient was unable to tolerate the six minute test. The results were sent to the MD for further evaluation. Modifications may be updated in two weeks after the patient is seen by her cardiologist.

References (3) (APA):

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