Medications

Dobutamine Hydrochloride

Pharmacologic Class: Sympathomimetic
Therapeutic Class: Inotropic
Dose/Frequency: 16 ml/hr - IV Continuous Infusion
Reason to take: acute decompensated Heart Failure
Nursing Assessments: Monitor Potassium due to medication causing low levels and monitor Urine output. (Jones & Bartlett Learning, 2020).

Fentanyl Citrate (Fentora)

Pharmacologic Class: Opioid
Therapeutic Class: Opioid Analgesic
Dose/Frequency: 50 mcg - IV Push - q3hrs/PRN
Reason to take: For Pain of 8-10
Nursing Assessments: Monitor Respiratory Status due to medication causing hypoventilation, medication can cause cardiac arrest - monitor signs of CNS depression and hypoventilation (Jones & Bartlett Learning, 2020).

Hydrocodone - Acetaminophen (Narco) Tablet

Pharmacologic Class: Controlled Opioid Combos
Therapeutic Class: Analgesics
Dose/Frequency: 325mg tab - q4hrs/PRN - Crushed via NG tube
Reason to take: for moderate pain 4-6/10 level
Nursing Assessments: Assess heart rate (hold medication if HR is <60), Assess blood pressure (hold if sys. B/P is < 100), assess oxygen saturation and respiration after administration for respiratory depression (Jones & Bartlett Learning, 2020).

Admission History

71 year old Female Causian-American walked into the Carle department in Richland Il with complaints of excruciating pain in the right thigh/knee. The Area was swollen and hot to the touch. The patient ROM was very limited due to the excruciating pain. Past medical history shows that the patient had a bilateral knee arthroplasty with recurrent osteomyelitis infections in the past 2 years that is current now. From the prior facility til admission of recent patient was febrile and hypotensive. Blood culture was obtain from the area of concern and results show of deep tissue infection of MRSA growth. Patient was given a broad-spectrum antibiotics, vasopressors, midodrine, and albumin. Before transferring to current location (Urbana carle hospital) the patient had consulted with orthopedic surgeon and palliative care leader about options but patient disagreed with them and asked to be transferred for higher level of care.

Demographic Data

Date of admission: 10/06/2023

Admitting diagnosis: Sepsis from Right knee

Chief Complaint: Excruciating Pain in the Right thigh/Knee

Age of client: 71 year old

Sex: Female

Race/Ethnicity: Caucasian

Medical History

Previous Medical History: Endometrial Cancer (Date: 06/2023), GERD (Date Unknown), Hx of Heart Attack(Date Unknown in Chart), HTN (Date Unknown), MRSA infection in rt. Knee (12/12/2022), PAD (Date Unknown), DVT (Date Unknown), Rheumatoid Arthritis (Date Unknown)

Prior Hospitalizations: Sepsis (10/01/2023), Fall (09/20/2023)

Past Surgical History: Right Breast Biospy (Date Unknown), Upper GI Endoscopy (07/28/2020), Colonoscopy (07/31/2020), Total Knee Arthroplasty Left (12/05/2021), Total Knee Arthroplasty Right (04/05/2022), Hysterectomy (total) abdominal (06/17/2019).

Social needs: Patient is in need of emotional support from the stress of chronic health issues regarding frequent spetic infections

Social History: Drugs - None, Alcohol - None, Drugs - None

Relevant Lab Values

BUN: 8 mg/dL (Low)

Normal value: 10-20 mg/dL (Pagana et al., 2018)
Relevance: Patient had Chronic Kidney disease.

Glucose: 148 mg/dL (High)

Normal value: 74-100 mg/dL (Pagana et al., 2018)
Relevance: Patient has Diabetes and sepsis infection can cause body glucose to increase

HgB: 7.9 g/dL (Low)

Normal Value: 11.0 - 16.0 g/dL (Pagana et al., 2018)
Relevance: sepsis can cause the body red blood cells to reduce due to infection process thus lowering the hemoglobin and hematocrit count.

Hct: 24.3% (Low)

Normal Value: 34.0 - 47.0% (Pagana et al., 2018)
Relevance: sepsis can cause the body red blood cells to reduce due to infection process thus lowering the hemoglobin and hematocrit count.

Prothrombin: 14.4 secs (High)

Normal Value: 11.7 - 13.5 secs (Pagana et al., 2018)
Relevance: it is increased due to heparin given to patient due to Chronic heart failuure (per med chart).

Absolute Neutrophils: 11.54 (High)

Normal Value: 1.6 - 7.7 x 10^3/uL (Pagana et al., 2018)
Relevance: high due to infection that is going through the

Sepsis - Pathophysiology

Disease process:

Sepsis (septicemia) is a system infection, that is caused by a infectious organisms that overwhelms the immune system and causes multi-organ compromise. Infection source can be from virus, fungus, parasite, and bacterial. Sepsis is from a overwhelming local source of infection that invades the blood vessels and circulates the body as a whole (Capriotti T., 2020). Common sites of infection include lungs, urinary tract, abdomen, pelvis, open wounds from traumas, and during surgical procedures.(Capriotti T., 2020).

S/S of disease:

Signs and symptoms include chills, confusion/delirium, fever, lightheadedness, tachycardia, skin rash, mottled skin, warm skin, and shivering (Capriotti T., 2020). Septic shock can occur in those at high-risk such as pregnancy, those with urinary catheter in placed, long-termed diabetes, advanced age >65, immunocompromised, heart conditions, and congenital disorders. Signs and symptoms of septic shock includes hypotension, disorientation/confusion, cold clammy skin, and slurred speech.

Method of Diagnosis:

Methods for diagnosis sepsis is not yet known but is evident through a series of assessments and monitoring such as assessing vital signs (temperature, heart rate, and respiratory rate), blood draws for labs (CBC, inflammatory markers), wound cultures, urine/stool samples, and image studies such as (x-rays, ultrasound, and CT scan) (Capriotti T., 2020). Other methods include labs such as monitoring hemoglobin, hematocrit, leukocytes, platelet count, and erythrocyte sedimentation rate (Capriotti T., 2020).

Treatment of disease:

Treatment for sepsis includes a broad-spectrum antibiotics to start while the testing/cultures results determine the type of organisms causing the infection. Other primary treatments include running IV fluids in the veins and vasopressors for increasing

Active Orders

Contact Isolation - MRSA (10/07/23)
Vital Signs - Continuous ((10/07/23)
Inspect Skin - Pressure Ulcer in high risk areas such as back of head, elbows, wrist, heels, and coccyx (10/07/23)
Enteral Feeding - nutrition (Cal:440,Protein:28g, 369 ml of free H_2O) (10/08/23)
Neuro Check - monitoring LOC - (10/06/23)
Tele Monitoring - Continuous - (10/06/23)

Nose:

nose bilaterally with no visible signs of bleeding. Frontal sinuses are nontender to palpation bilaterally. Has a

open for assessment.

Cardiovascular	Sinus Rhythm is present along with S1 and S2 sound present with no murmur or s3/s4 present. Heart rhythm is regular (Normal sinus rhythm). Upper peripheral pulses were +2 bilaterally. Popliteal pulse is +1 and anterior tibialis pulse were +1 bilaterally. Apical pulse auscultated at the midclavicular line at the 5th intercostal space (rhythm/rate is regular). Cap refill is less than 3 seconds. No signs of neck vein distention or edema in the upper/lower extremities.
Respiratory	No use of accessory muscles during respiration. Normal rate and regular pattern of respirations. Respirations are symmetrical and non-labored. Lung sounds clear throughout the anterior/posterior in the upper section bilaterally. No wheezes, crackles, or rhonchi present. No use of accessory muscle or signs of breathing distress. Lung aeration is equal bilaterally.
Genitourinary	Urine is yellow and clear. Urine output was 750ml via foley catheter. Genitals are clean. Patient is not on dialysis. Last menses is unknown.
Gastrointestinal	Diet at home is regular. Current Diet is also via tube feedings (trickle feedings). Height is 5'3'' (160 cm) and Current Weight is 159.6 lbs (72.4 kg). Normoactive bowel sounds in all 4 quadrants. Last BM was 3 days ago. No pain/tenderness or mass upon palpation in all 4 quadrants. No signs of distention, drains, or wounds upon inspection. No redness, hot to touch, drainage, or swelling present. No ostomy present.
Musculoskeletal	Neurovascular is intact with no impaired blood flow or damage to the peripheral nerves in the extremities bilaterally. Patient is able to perform all ROM passively in upper and lower extremities bilaterally (limited due to severe pain). Muscle strength is 2/5 in upper and lower bilaterally. May need ADL assistance. Fall Risk score is 100 (High Risk - recommend the implementation of Fall Prevention Measures).
Neurological	PERRLA is equal, round and reactive. Muscle Strength in both upper and lower extremity is equal 2/5 bilaterally. Patient is disoriented except for name and simple commands and pain stimuli. Speech is slurred but sensory are normal. LOC is 8.
Most recent VS (highlight if abnormal)	**Time: 1045** **Temperature: 97.8°F** **Route: Axillary**

	RR: 10 **HR: 73** **BP: 123/67 mmHg** **MAP - 65** **Oxygen saturation: 96% on 2L via Nasal Cannula** **Oxygen needs: None**
Pain and Pain Scale Used	Pain is 6 Pain Scale: Critical Care Pain Observation (CPOT) 1 - 8
Braden Score	9 (Severe High Risk)
Morse Fall Scale	100 (High Risk - Standard Fall Precaution)

Nursing Diagnosis 1	**Nursing Diagnosis 2**	**Nursing Diagnosis 3**
Chronic Low Self-Esteem related to ineffective coping towards the current situation of infection affecting overall health as evidence by patient stating (towards the end of clinical time) that she doesn't want to be in the hospital, she did not care what happens to her, and that she upset about how she is not able to do anything for themselves.	**Acute Pain related to pain from current hospitalization as evidenced by taking Fentanyl and hydrocodone-acetaminophen for pain, patient having severe pain on right knee upon admission and could barely ambulate extremity (even passively) due to severe pain.**	**Risk for Shock related to systemic infection as evidenced by MRSA systemic infection, taking piperacillin-tazobactam for the septic infection, and having an antibiotic spacer in the right knee in place.**
Rationale This is relevant to my patient because for most of the clinical she was disoriented until the last hour when the nurse had talk to her and she stated that she was upset about her situation and how she is not able to tend to herself.	**Rationale** This is relevant to my patient due to having severe pain even with passive range of motion assistance and upon awakening the patient, they will scream in pain (even with pain meds given prior)	**Rationale** This is relevant to my patient due to having a systemic infection that can potentially cause a shock to the patient from the infection.
Interventions **Intervention 1:** Teach self-healing techniques such as guided imagery, yoga, and praying, to prevent anxiety and keeping the patient frame in mind. **Intervention 2:** spend time with patients to listen to their thoughts and ensure they are being heard.	**Interventions** **Intervention 1:** Assess for behavioral cues for pain and administer pain medication as prescribed. **Intervention 2:** Perform comfort measures to promote relaxation such as massage, bathing, repositioning and relaxation techniques.	**Interventions** **Intervention 1:** Assess and monitor the patient's vital signs and level of consciousness. **Intervention 2:** Administer IV fluids to maintain fluid volume.

Evaluation of Interventions The patient will be able to cope with the current situation (after being completely oriented to themselves/situation) before discharge. Spending time with the patient will make them feel like they are being heard and increase self-esteem. Though the nursing student was not able to assess completely.	**Evaluation of Interventions** The patient will be able present behavioral cues of pain being controlled when reassessed 2 hours after pain meds are given. The patient will use alternative pain control measures such as relaxing, and repositioning techniques. Though the nursing student was not able to assess completely.	**Evaluation of Interventions** The patient will continue to have hemodynamics maintained and level of consciousness will not deteriorate during the entire stay of hospitalization. Though the nursing student was not able to assess completely.

References (3):

Capriotti, T. (2020). *Davis advantage for pathophysiology: introductory concepts and clinical perspectives*. F. A. Davis Company.

Jones & Bartlett Learning. (2020). *2021 Nurse's drug handbook* (20th ed.).

Pagana, K., Pagana, T., & Pagana, T. (2018). *Mosby's diagnostic and laboratory test reference* (14th ed.). Mosby.