Medications

Theophylline (Elixophyllin) - 200mg=1 capsule, PO, Daily, SOB/COPD, Pharmacological: Methylxanthines, Therapeutic: Bronchodilator, Monitor renal and hepatic function & Evaluate history of xanthine derivative hypersensitivity

Losartan-Hydrochlorothiazide (Hyzaar) - 50mg-12.5mg tab, PO, Daily, Hypertension, Pharmacological/Therapeutic: Angiotensin II receptor blocker & thiazide diuretic, Do not administer if the patient is unable to urinate & Do not use with a blood pressure med containing aliskiren

Ondansetron (Zofran) – 4mg=1 tab, PO, Q6 PRN, Nausea, Pharmacological: Selective serotonin receptor agonist, Therapeutic: Antiemetic, Access dizziness and drowsiness & Monitor patient's EKG

Acetaminophen (Tylenol) – 650mg=2 tabs, PO, Q6 PRN, Pain/Fever, Pharmacological: Nonsalicylate, Therapeutic: Antipyretic, Monitor liver function & Use cautiously with renal impairment

Ketorolac (Toradol) – 15mg=1ml, IV, Q6, Acute Pain, Pharmacological: NSAID, Therapeutic: Analgesic, Access patient's level of pain & administer with antacid or food to prevent GI upset

Insulin aspart (NovoLog concentrated dose HIGH) – Sliding scale (141-199:2u, 200-249:4u, 250-299:7u, 300-349:10u, 350-400:12u), Subcutaneous, Diabetes Mellitus, Pharmacological/Therapeutic: Antidiabetics, Insulin (Rapid-Acting), Monitor glucose level before & after meals, Do not administer with hypoglycemia

(Learning, J. &. B., 2023)

Lab Values/Diagnostics

Calcium – 8.3 (8.6-10.3); Low calcium levels caused by injury to the knee

Glucose Level – 152 (74-109); High glucose due to patient's history of diabetes mellitus

RBC – 3.38 (4.28-5.56); Low due to patient's history of anemia or surgery

Hgb – 11.1 (13.0-17.0); Low due to patient's history of anemia or surgery

**XR Right Knee 4 or Greater Views – ****Intact right knee arthroplasty, subcutaneous emphysema present

(Rischer, 2022)

Demographic Data

Date of Admission: 03/28/2024
Admission Diagnosis/Chief Complaint: Right Knee Arthroplasty/Right Knee Pain
Age: 78
Gender: Male
Race/Ethnicity: Caucasian
Allergies: NKA
Code Status: Full code
Height in cm: 182cm
Weight in kg: 99.3kg
Psychosocial Developmental Stage: As expected for age
Cognitive Developmental Stage: As expected for age
Braden Score: 25
Morse Fall Score: 60
Infection Control Precautions: Standard Precautions

Admission History

The patient came to the ER on 03/28/2024 with severe right knee pain. Pain is described as throbbing, aching, sharp, and a 10/10. Putting any pressure or moving causes the pain to increase. Keeping it supported and at rest sometimes keeps the pain tolerable. No medical interventions have eased pain before arrival at the hospital.

Medical History

Previous Medical History: COPD, Diabetes Mellitus, Hypertension, Morbid Obesity, High Cholesterol, Anemia
Prior Hospitalizations: Chest Pain/Stress Test (10/05/13), COPD Exacerbation (06/08/19), Left Knee Pain (03/02/20), Shortness of Breath/Low O2 (04/21/23)
Previous Surgical History: Left Knee Arthroplasty (03/03/20)
Social History: ½ pack of cigarettes daily for the past 20 years

Pathophysiology

Disease process: An arthroplasty is a joint disorder involving inflammation of one or more joints. This results in thinning of cartilage over time, which then leads to 'bone-to-bone" contact. Loss of cartilage comes in alterations in subchondral bone, where chondrocytes are constantly exposed to excessive force to bear (Capriotti, 2020). These chondrocytes work to synthesize collagen and produce enzymes that break down the matrix (Capriotti, 2020). Following cartilage loss in joints, osteophytes can develop, which are small bony prominences that may impinge on nerves and obstruct the blood supply to the joint (Capriotti, 2020).
S/S of disease: Signs and symptoms of joint degeneration may include swelling, tenderness, and a decrease in muscle strength around the joint (Capriotti, 2020). The patient should further be examined for any erythema, bruising, or deformity. Labs may show an increase in WBCs due to inflammation or a decrease in RBCs from traumatic injury at the affected site.
Method of Diagnosis: For diagnoses of the patient needing a right knee arthroplasty an x-ray is the most common test ordered, taking an image of the affected area. A CT scan, however, is superior to an X-ray in demonstrating complex structures (Capriotti, 2020).
Treatment of disease: For treatment of joint degeneration, "aspirin, NSAIDs, and corticosteroids are major anti-inflammatory agents used to help relieve pain and improve mobility" (Capriotti, 2020). Partial or total joint arthroplasty may be necessary by surgical intervention in which some or all the parts that make up the joint are replaced.

Active Orders

Fall Precautions – High fall risk due to recovery from right knee arthroplasty

PT Inpatient Evaluation – Consult with physical therapy in the rehabilitation process

Vital signs – Q4 monitoring

Blood Glucose PRN – To maintain blood glucose levels due to diabetes mellitus

Incentive Spirometry – to reduce or prevent postoperative pulmonary complications

Heat Therapy – to help relieve sore musculoskeletal areas

Polar Pack - to help reduce swelling and pain

Physical Exam/Assessment

General: Alert and responsive, oriented to person/place/situation/time, no current distress, very well groomed

Integument: Skin color normal for ethnicity, dry, warm, intact, tan, no rashes/lesions/lumps, slight swelling around right knee due to surgery, a Braden score of 25 (no sensory impairment, rarely moist, walks occasionally, slightly limited mobility, adequate nutrition, and a potential problem for friction and shear.

HEENT: Skull and face are symmetrical, no tracheal deviation, no lumps/rashes/lesions/bruises, no palpable lymph nodes, palpable carotid, eyes are PERRLA, conjunctiva pink, sclera white, EOMs as expected, hearing intact, no septum deviation, no pain when palpating sinuses, tongue/uvula midline, lips pink/moist, buccal mucosa pink/moist

Cardiovascular: Normal Sinus Rhythm, S1/S2 sounds heard upon auscultation, pulses 3+ normal, capillary refill <2 sec, no edema, no jugular vein distension

Respiratory: Respirations regular, no use of accessory muscles, breath sounds clear bilaterally, lung aeration equal

Genitourinary: Bowel sounds active, regular diet at home/currently, no rashes/lumps/lesions/bruises of the abdomen, no pain or tenderness noted upon palpation of the abdomen, no abdominal distension, surgical incision/wound care on right knee from right total knee arthroplasty, surgical site clean, last BM 1 day ago (03/31/2024)

Gastrointestinal: Urine yellow/clear in color, no pain with urination, no dialysis, no catheter

Musculoskeletal: Limited ROM of the right leg with pain due to right total knee arthroplasty, all other extremities appropriate ROM, no supportive devices used at home, nail beds pink, equal grip strengths, unable to perform appropriate resistance test with right foot due to pain from the knee, fall risk, Morse fall score 60

Neurological: Alert & Oriented x 4, speech clear, answers questions appropriately

Most recent VS (include date/time and highlight if abnormal): 04/01/2024, 0730 Temp – 36.4 C, Heart Rate – 63bpm, O2 – 93%, RR – 20 bmp, B/P – 130/61

Pain and pain scale used: 04/01/2024, 0925 Numerical pain scale Pain 10/10

Nursing Diagnosis 1 Risk for acute pain related to surgical intervention as evidenced by expression of pain and limited mobility	**Nursing Diagnosis 2** Risk for impaired transfer mobility related to surgical intervention as evidenced by increased pain post-op and musculoskeletal impairment	**Nursing Diagnosis 3** Risk for infection related to surgical interventions as evidenced by potential difficulty managing wound care
Rationale This nursing diagnosis was chosen due to the patient's severe level of pain post-surgery	**Rationale** This nursing diagnosis was chosen due to the patient's increased pain with movement and limited mobility of his right knee	**Rationale** This nursing diagnosis was chosen due to the high risk of infection post-surgery, and the possibility for the patient to not properly care for it while in pain
Interventions **Intervention 1:** Administer pain medications as ordered to help keep pain at a tolerable level **Intervention 2:** Assist the patient with transferring to and from their chair, and in positioning in bed to ensure they are comfortable	**Interventions** **Intervention 1:** Consult PT and OT for rehabilitation with active/passive ROM tests **Intervention 2:** Use proper transferring safety precautions such as a gait belt, assistive devices, non-slip socks, and proper lifting techniques	**Interventions** **Intervention 1:** Provide proper wound care to the surgical site by keeping the site clean and dry, and educating the patient step-by-step while doing so **Intervention 2:** Administer antibiotics as ordered to prevent infection and promote wound healing
Evaluation of Interventions The patient tolerated both pharmacological and nonpharmacological measures for pain management very well	**Evaluation of Interventions** The patient used proper safety interventions and supervision when transferring, and performed well with ROM tests	**Evaluation of Interventions** The patient kept the surgical site clean and dry and remained symptom-free of infection

(Phelps, 2023)

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