

**Medications**

**aspirin EC (Ecotrin) tablet 325mg PO daily**  
 Pharmacological class: Salicylate  
 Therapeutic class: NSAID  
 The client is taking this medication to help alleviate any mild pain or possible fevers following surgery. One nursing consideration is that older adults have a higher risk of developing toxicity because of this drug (2023 Nurse's Drug Handbook, 2023).

**ceFAZolin sodium SOLR 2,000mg IV every 8 hours**  
 Pharmacological class: First-generation cephalosporin  
 Therapeutic class: antibiotic  
 The client is taking this medication to prevent infection following surgery. Some things to monitor when giving this medication are the client's BUN and serum creatinine levels. These will tell you if the client may be developing nephrotoxicity (2023 Nurse's Drug Handbook, 2023).

**DULoxetine (CYMBALTA) capsule 60mg PO daily**  
 Pharmacological class: selective serotonin and norepinephrine reuptake inhibitor  
 Therapeutic class: antidepressant, neuropathic and musculoskeletal pain reliever  
 The client is taking this medication to help with the chronic pain she has been experiencing in her knee. One nursing assessment to be done before administering this medication is to take the client's blood pressure. This medication can lower blood pressure and lead to orthostatic hypertension; therefore, it should not be given in the blood pressure is low (2023 Nurse's Drug Handbook, 2023).

**HYDRomorphone (Dilaudid) IV 0.5mg every 2 hours**  
 Pharmacological class: opioid  
 Therapeutic class: opioid analgesic  
 The client is taking this medication for severe pain. One assessment that needs to be done in client's taking this medication is an assessment of the respiratory function. HYDRomorphone, like most opioids, can lead to respiratory depression or respiratory failure (2023 Nurse's Drug Handbook, 2023).

**ondansetron (Zofran) IV 4mg every 6 hours**  
 Pharmacological class: selective serotonin receptor antagonist  
 Therapeutic class: antiemetic  
 The client is taking this medication to help treat nausea. The nurse should monitor the client's potassium and magnesium levels while giving this medication. If either levels are low, they should be corrected before the medication is administered (2023 Nurse's Drug Handbook, 2023).

**oxyCODONE-acetaminophen (Percocet) 5-325mg per tablet 1 tablet PO every 4 hours**  
 Pharmacological class: opioid  
 Therapeutic class: opioid analgesic  
 The client is taking this medication in conjunction with the HYDRomorphone to treat severe pain. As with the HYDRomorphone, it is imperative that the nurse monitors the client's respiratory status as this medication is an opioid.

**prochlorperazine (Compazine) tablet 10mg PO every 6 hours**  
 Pharmacological class: piperazine phenothiazine  
 Therapeutic class: antiemetic  
 The client is taking this medication to control nausea and vomiting that often comes with surgery. One nursing consideration for this medication is to monitor the client's blood pressure. This is because this medication has an adverse effect of hypotension that could be very serious (2023 Nurse's Drug Handbook, 2023).

**Lab Values/Diagnostics**

The client does not have any pertinent labs.

The client had an x-ray of her left knee following her surgery. The x-ray was to ensure the placement of the implant that was placed during surgery.

**Demographic Data**

**Date of Admission:** 2/5/2024  
**Admission Diagnosis/Chief Complaint:** Osteoarthritis of the Left Knee  
**Age:** 54  
**Gender:** Female  
**Race/Ethnicity:** Caucasian  
**Allergies:** Morphine and Penicillin  
**Code Status:** DNR  
**Height in cm:** 165.1 cm  
**Weight in kg:** 70.8 kg  
**Psychosocial Developmental Stage:** Generativity vs Stagnation  
**Cognitive Developmental Stage:** Formal Operational Stage  
**Braden Score:** 14  
**Morse Fall Score:** 45  
**Infection Control Precautions:** Standard

**Admission History**

The client came into the hospital to have an elective surgery on her left knee. The client stated that she had been having pain in her knee since August of 2023 and that the pain was consistent since this time. When asked to describe the pain, the client stated that it was and aching, stabbing kind of pain. The client also stated that the pain in her knee would cause her back pain to worsen. The client stated that she would take over-the-counter ibuprofen to manage her symptoms. She also stated that she had previously undergone outpatient injection therapy for the pain. When asked to rate her pain on a scale from 1-10, the client rated her pain as a ten.

**Medical History**

**Previous Medical History:** Arthritis and Asthma  
**Prior Hospitalizations:** On 10/8/2022 the client visited the emergency room following a fall that led to a facial contusion. On 11/30/2020 the client visited the emergency room due to severe COVID-19 symptoms.  
**Previous Surgical History:** Back surgery, bladder surgery, cholecystectomy, right middle finger surgery, lumbar fusion, spinal fixation with implant, tubal ligation  
**Social History:** N/A

**Pathophysiology**

**Disease process:** Osteoarthritis is an inflammatory disease that affects the joints. Overtime, the cartilage covering the bones in these joints will erode. The body's immune system will then come in and destroy the damaged cartilage. This immune response is where the inflammation comes from. The cartilage cells when then try to repair themselves by releasing a fluid to lubricate the joint. This extra fluid is what causes the swelling commonly seen in osteoarthritis. Over time, the amount of fluid excreted by the cartilage cells is decreased. This causes the cartilage to become dry and it often cracks. These cracks will cause the joint to lose cartilage, causing the bones of the joint grow closer together until some touch. The point where the bones come into contact with each other will become inflamed. This point will eventually become very dense and may begin to degenerate. Bones may also grow small prominences at the sites where the cartilage has degenerated. These prominences can come into contact with surrounding nerves, causing pain to the client (Capriotti, 2020).

**S/S of disease:** The main signs and symptoms of osteoarthritis are aching joints, stiff joints, swelling of the joint and surrounding areas, altered gait, limited range of motion, and decreased strength in the muscles and tendons surrounding the joint. Client's may also experience pain with this disease. My client experienced all of these symptoms prior to her surgery. The client reported that her joints began to feel stiff and achy while she was working or gardening. After some time, the client noticed some swelling in her knee. This swelling led to a limited range of motion and the client began to walk with most of her weight bearing on the right side. This altered gait, combined with the other symptoms, led the client to experience severe pain that she rated a ten on a scale of one to ten. With using her left less, the client's medial collateral ligament became weakened. This led to the client tearing this ligament shortly after (Capriotti, 2020).

**Method of Diagnosis:** Laboratory tests are not commonly used to diagnose osteoarthritis. This disease is most often diagnosed after a physical assessment where the client shows the signs and symptoms discussed above. The official diagnosis of the disease is done using x-rays. X-ray results will show a decrease in the space between the bones of the joint due to the decrease in the amount of cartilage in the area. The client did receive and x-ray to diagnose her osteoarthritis (Capriotti, 2020).

**Treatment of disease:** The treatment for osteoarthritis will depend on the severity and progression of the disease. The first treatment that many providers will try to help clients with osteoarthritis is to suggest exercise and lifestyle changes. Providers will often suggest that the client walk daily or take up swimming as a way to get exercise. These workouts can help relieve pressure on the joints and are not as impact heavy on them. While exercise and lifestyle changes will not cure osteoarthritis, it can slow the progression of the disease. Medication treatment is also a common route that providers will choose. The medications most commonly used are NSAIDs to treat the pain associated with osteoarthritis. Supportive devices are another common treatment. These often include braces to support the joint, walkers, and canes. Heating pads are also common. The final treatment option is surgery. While uncommon, it is sometimes performed if the disease has progressed to far for the other treatment options to be successful. The different types of surgery include an osteotomy, an osteoplasty, arthrodesis, and a partial or total arthroplasty. My client did undergo a few of these treatment options. The client reported that she was taking over-the-counter ibuprofen to manage her symptoms. The client also received injections in her knee to help with the pain. She also would wear a knee brace while working to help support the joint. After those were unsuccessful, the client received a total arthroplasty on her left knee (Capriotti, 2020).

**Active Orders**

**Change dressing 48 hours post op**  
 This helps decrease the risk of infection.

**Cold therapy continuous 20 minutes operative knee**  
 This will help reduce swelling and ease pain in the operative knee

**Continuous passive motion**  
 This will help with any stiffness in the joint as well as preventing venous stasis, therefore reducing the risk of a deep vein thrombosis.

**Discontinue drain 24 hours post op**  
 There will not be a need to continue to drain the incision site. It will also reduce the risk of bacteria getting into the surgical site through where the drain is inserted.

**Hemovac to closed suction**  
 This will drain any extra fluid from the incision site while getting any bacteria out of the area.

**Notify physician/licensed independent practitioner**  
 This was related to the client's vitals. If they were to fall out of normal ranges, it could indicate that the client has an infection, that she has a blood clot, or that she is bleeding internally.

**Incentive spirometry**  
 This will help the client's respiratory status and help prevent her lung from collapsing.

**Neuro/vascular checks every 4 hours**  
 This will allow the nurse to assess the client's mental status. If the client's mental status deteriorates, it may indicate that something is wrong. It will also allow to nurse to assess the circulation to the area below the surgical site. If the dressing on the client's leg is too tight, it could cut off blood flow to her lower extremities and cause necrosis.

**Sequential compression device to be left on at all times unless ambulating or bathing**  
 These devices will help prevent blood clots by reducing venous stasis.

**Straight catheterization PRN inability to void**  
 If the client is unable to move around or void, it is important to remove the urine from her bladder. If it stays in the bladder, it could cause infection or rupture.

**Strict input and output**  
 This will allow the health care team to observe if the client's kidneys are functioning properly. If the input is much higher than the output, the client is not excreting the way she needs to.

**Up in chair tonight**  
 Ambulation is important post op to keep blood from pooling in the lower extremities and for preventing muscle atrophy.

**Vital signs per unit routine**  
 This is important because the vital signs will let the health care team know if the client may be bleeding internally, if she may have a blood clot, or if she is going into shock following her procedure.

**Walker, wheeled**  
 The client needs to be moving around as much as possible, but it is important that she use a supportive device such as a walker so that her knee is not taking on too much weight.

**Weight bearing lower left extremity**  
 The client should put as much weight as she can on her left leg. Doing this will help ensure that the muscles in this leg do not become dependent on the right leg or supportive devices. It will also help prevent muscle atrophy in the leg.

**Physical Exam/Assessment**

**General:** The client is alert and oriented times four. She is well groomed, dressed appropriately for the situation, and does not show signs of acute distress.

**Integument:** The client's skin is olive and normal for her ethnicity. The skin is dry, warm and intact. Skin turgor is intact with no tenting present. The skin bounced back upon release. The client showed no signs of rashes. **The client does have a bruise on her left hand where an IV was previously inserted and the vein had blown. The client also has a wound on her left knee.** This was to be expected as she had undergone surgery on that knee that morning. The client had a Braden score of 14, putting her at a moderate risk for pressure injuries. **The client does have a Hemovac drain coming out of her left knee. The drain was filled with serosanguinous fluid.**

**HEENT:** The head and neck are symmetrical. The head is round and of proportional size for the head. The trachea is midline with no signs of deviation. The thyroid is not palpable. The carotid pulse is present and palpable +2 bilaterally. The ears are symmetrical and of the same color as the head. There were no lesions, redness, or lumps present on the auricles. Hearing was intact based on conversation with the client. The cornea was clear and the sclera was white bilaterally. The conjunctiva was pink and moist bilaterally. There was no signs of drainage or lesions present. Pupils were equal, round, and reactive to light and accommodation bilaterally. EOMS were intact bilaterally. The nasal septum was midline with no signs of deviation. The mucosal membranes were pink and moist. There were no signs of bleeding, drainage, or lesions. There was no tenderness in the sinuses upon palpation. The oral mucosa and the gums were both pink and moist. There were no signs of lesions or bleeding present. The tongue is midline. The client has all of her original adult teeth and dentition was good.

**Cardiovascular:** S1 and S2 sounds were present and clear with no signs of murmurs, rubs, or gallops. The heart was beating at a normal rate and rhythm. The client's apical pulse was present and palpable. The pulse was beating at a normal rate and rhythm as well. Peripheral pulses were present and palpable bilaterally. Capillary refill was less than three seconds. There was no jugular vein distention. **The client did have some non-pitting edema in her lower left extremity near the ankle.**

**Respiratory:** The client's lung sounds were clear bilaterally, posterior, and anteriorly. There were no wheezes or crackles present. The client did not use any accessory muscles to breath. Breathing was at a normal rate and rhythm.

**Genitourinary:** The client reported having urinated right before I went into the room. She stated that the urine was clear, yellow, and did not have an odor. The client voided about 100mL. The client denied having any pain with urination. The client is not undergoing dialysis and does not have a catheter.

**Gastrointestinal:** **The client's bowel sounds were hypoactive in all four quadrants.** There were no lesions on the abdomen and it was not distended. The client reported no tenderness upon palpation.

**Musculoskeletal:** The client's right upper extremity, right lower extremity, and left upper extremity all have full range of motion. **The lower left extremity has limited range of motion.** Hand grips were equal in strength. **The pedal pushes showed decreased strength in the lower left extremity.** I was unable to assess gait as the client was not able to walk at the time of assessment. The client is a fall risk and had a Morse fall score of 45.

**Neurological:** The client can move all extremities **with limited range of motion in the lower left extremity.** Pupils were equal, round, and reactive to light and accommodation bilaterally. The client was alert and oriented times four. Speech was intact based on conversations with the client.

**Most recent VS (include date/time and highlight if abnormal):** 2/5/2024 1500 Blood pressure: 111/71mmHg, Pulse: 89bpm, Respiratory rate: 18bpm, Temperature: 98.7°F temporal, Oxygen saturation 95% on room air.

**Pain and pain scale used:** Pain scale: 0-10 Pain reported: 5/10

<p align="center"><b>Nursing Diagnosis 1</b></p> <p>Impaired physical mobility related to pain as evidenced by the client avoiding using her left leg due to the pain in her knee (Phelps, 2023).</p>	<p align="center"><b>Nursing Diagnosis 2</b></p> <p>Risk for injury related to a physical barrier as evidenced by the client tearing her medial collateral ligament (Phelps, 2023).</p>	<p align="center"><b>Nursing Diagnosis 3</b></p> <p>Risk for caregiver role strain related to physical conditions as evidenced by the client stating that her osteoarthritis made it difficult to care for her boyfriend (Phelps, 2023).</p>
<p align="center"><b>Rationale</b></p> <p>I chose this diagnosis because the client was very limited in her physical mobility because of the pain that she was in. The osteoarthritis had progressed severely and the client stated that she had a hard time walking.</p>	<p align="center"><b>Rationale</b></p> <p>I chose this nursing diagnosis because the client injured herself because of her physical barrier, her osteoarthritis.</p>	<p align="center"><b>Rationale</b></p> <p>I chose this nursing diagnosis because the client stated that her disease made it difficult for her to care for her boyfriend that has leukemia. She stated that she was in a lot of pain and that it was sometimes difficult to care for her boyfriend in the way that he needed.</p>
<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Perform range of motion activities with the client every few hours (Phelps, 2023).</p> <p><b>Intervention 2:</b> Teach the client how to use her unaffected leg to help support her affected leg to reduce pain (Phelps, 2023).</p>	<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Teach the client how to properly use assistive devices, such as a walker, to help steady her gait and improve her balance (Phelps, 2023).</p> <p><b>Intervention 2:</b> Inform the client that her home should be free of clutter to decrease the risk of her tripping and injuring herself (Phelps, 2023).</p>	<p align="center"><b>Interventions</b></p> <p><b>Intervention 1:</b> Help the client come up with ways she can reduce her pain so that she can care for her loved one (Phelps, 2023).</p> <p><b>Intervention 2:</b> Inform the client about home-health services that can help care for her loved one when she feels incapable of doing so (Phelps, 2023).</p>
<p align="center"><b>Evaluation of Interventions</b></p> <p>The client began with passive range of motion but was soon able to perform active range of motion activities in all extremities.</p> <p>The client was able to learn how to push herself up in bed using her unaffected leg so that she was not putting too much pressure on the affected leg, therefore reducing pain levels.</p>	<p align="center"><b>Evaluation of Interventions</b></p> <p>The client refused to learn about a walker. She stated that using a walker will make her look old and she was not going to use one once she left the hospital.</p> <p>The client was receptive to hearing about uncluttering her home. She stated that she understood that cleaning up her home could decrease the risk of falls for both her and her boyfriend.</p>	<p align="center"><b>Evaluation of Interventions</b></p> <p>The client was receptive to hearing about ways she can alleviate her pain. The client stated that she plans on taking her prescribed pain medication and using ice to help alleviate her pain so she can care for her loved one.</p> <p>The client said that she appreciated the information about home-health services but that she was not comfortable with someone coming into their home while her boyfriend was still immunocompromised.</p>

**References (3) (APA):**

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F.A. Davis.

Phelps, L. L. (2023). *Nursing diagnosis reference manual* (Twelfth ed.). Wolters Kluwer.

*2023 nurse's drug handbook*. (2023). Jones & Bartlett Learning.