

Nursing Process Paper for a Geriatric Patient

Dawnielle L. Williams

Kent State University Stark

College of Nursing

Fall 2011

Client Profile

On November 17, 2011, I cared for C.S. during my clinical at Mercy Medical Hospital. She is a 71 year old, widowed female. She was in room 34, bed one. She is allergic to opioids especially Meperidine and related medications, Propoxyphene, adhesive tape and latex and has adverse reactions to Darvon, Darvocet-n 100, and Toprol XL. She needed assistance with the phone. She was sleeping upon my arrival to the floor; when I woke her up she stated that “In therapy, I did more with my left leg today so I am very stiff and sore.” She also said that physical therapy made her “tired.” She stated that “I haven’t slept good since I have been in here.” C.S. made jokes when I assessed her and had been extremely happy to receive a phone call from her daughter. Her admitting and primary diagnoses were bilateral knee osteoarthritis and bilateral knee replacement. She had been admitted on November, 4, 2011. She had a full code status, standard isolation and was a fall risk because of her recent knee surgeries. She was able to get up with assistance of one or two with a wheeled walker and tolerates activity well. She had no history of falls. She had a history of pain management, hypertension, hypercholesterolemia, diabetes mellitus, peptic ulcer disease, stress incontinence, depression, coronary artery disease, aortic stenosis, pleural effusion, and skin cancer. She had a family history of coronary artery disease and diabetes mellitus. Her surgical history included lumbar spine decompression, hysterectomy, bilateral knee scope, cholecystectomy, aortic valve replacement, tonsillectomy, coronary artery bypass graft, and adenoidectomy. She had her bilateral knee replacement done on November 1 and had pain rated at an eight out of ten before the surgery. She had some postoperative complications. She experienced acute hyperglycemia and postoperative anemia. She had a second left knee replacement done after she tore her sutures. Her diet is consistent carbohydrate medium DB 1800 with one can of Boost daily.

Medical Diagnoses

Osteoarthritis

Definition: It is the progressive decline of joint cartilage. Risk factors include increased age, being a female, family history, increased weight, joint stress or trauma, inflammatory joint conditions, and endocrine or metabolic conditions (Johnson, 2004, p. 536-537). Osteoarthritis usually occurs in the weight-bearing joints including knees, hips, cervical and lumbar spine, and fingers (Johnson, 2004, p. 537). Osteoarthritis is “a chronic, progressive process in which new tissue is produced in response to joint insults and cartilage deterioration,” (Black & Hawks, 2009, p. 471). Changes in the joint space may cause local inflammation which leads to transient joint effusion.

Pathophysiology: Osteoarthritis involves cartilage matrix degradation resulting in pathologic changes. The resulting changes include soft, less elastic cartilage, increased joint friction, and cartilage loses its ability to withstand use without damage. Collagen fibers rupture and osteophytes develop. Joints are less able to distribute stress and trauma which results in pain and limited range of motion. Excess synovial fluid is excreted leading to inflammation and distention (Black & Hawks, 2009, p. 471).

Clinical Manifestations: Osteoarthritis is characterized by worsening pain and increasing limitation of movement. Affect joints may have crepitus, mild tenderness, stiffness that increases with activity and is relieved by rest, and enlargement. Joints are not affected symmetrically. Heberden’s or Bouchard’s nodes may be present (Black & Hawks, 2009, p. 471). “Pain, stiffness, and functional impairment are primary clinical manifestations,” (Johnson, 2004, p. 537). Stiffness is more typical after waking up in the morning and decreases with mobility.

Impairment is related to pain with movement and limited ability to move joints with structural changes (Johnson, 2004).

Assessment and Diagnosis: A radiograph may be used to see reduction of joint space and osteophytes (Johnson, 2004). Diagnosis of osteoarthritis is mainly from history and physical assessment. To diagnose, the physician will rule out all other possible conditions that cause joint pain (Black & Hawks, 2009, p. 471).

Medical Treatment: Treatment emphasizes on slowing and treating symptoms. There is no cure. Heat, weight reduction, rest, orthotic devices, exercise and therapy may be helpful in decreasing severity of pain and/or symptoms. Acetaminophen and NSAIDs are used to reduce inflammation and joint symptoms. COX-2 inhibitors and topical analgesics may be used. Corticosteroids can be injected into sites to reduce inflammation. Joint replacement is used as a final resort (Johnson, 2004, p. 538).

Nursing Care: The nurse should assess and manage the patient's pain, increase the joints' functional ability, assist patient in weight reduction and physical/occupational therapy, and encourage the use of assistive devices (Johnson, 2004, p. 538-539). Education is significant in minimizing the effects of OA on the patient's life (Black & Hawks, 2009, p. 474).

Hypertension

Definition: Hypertension is considered to be a systolic blood pressure more than 140 mm Hg or a diastolic BP more than 90 mm Hg. It is based on a number of consistent BP measurements. It is a risk factor in atherosclerosis, heart failure, stroke, and renal failure (Johnson, 2004, p. 429-431). Hypertension can be primary or secondary. Secondary HTN occurs with a specific cause

such as a disease or condition, medication, tumor, etc. Primary HTN cannot be traced back to a single causative factor and is genetically-linked and multifactorial.

Pathophysiology: Any condition or factor that alters peripheral vascular resistance, heart rate or stroke volume affects systemic arterial pressure. Renal conditions can elevate blood pressure over time. Hypertension causes pathologic changes in blood vessels and in the heart, kidneys, and brain. Large vessels become sclerotic, twisty, weakened, and narrowed leading to decreased blood flow to the heart and the rest of the body. Small vessels are damaged, fibrin accumulates, local edema develops, and intravascular clotting occurs. This results in decreased blood supply to tissues of the body, gradual functional impairment, and with lack of oxygen, infarction is eminent (Black & Hawks, 2009, p. 1293-1294).

Clinical manifestations: In some patients, increased blood pressure may be the only sign/symptom with no other obvious signs. If left undiagnosed, clinical manifestations will appear with continued rise in blood pressure. Common complaints include persistent headaches, fatigue, dizziness, palpitations, flushing, blurred/double vision, and epistaxis (Black & Hawks, 2009, p. 1294). Hemorrhages in the retinas, exudates, narrowed arterioles, and papilledema may be present. Vascular damage may be seen. Coronary artery disease with angina or myocardial infarction is common. The left ventricle may hypertrophy. The kidneys may be affected: the patient may experience nocturia and/or have increased blood urea nitrogen and creatinine. Cerebrovascular incidents may occur (Johnson, 2004, p. 431).

Assessment and Diagnosis: The nurse should assess for family history and look for clinical manifestations during physical examination.

Medical Treatment: The goal of treatment is to prevent complications and maintain lowered blood pressure. Weight reduction, alcohol, sodium and tobacco restriction, increased exercise

and relaxation strategies are encouraged. Patients are encouraged to pursue a high fruit and vegetable and low dairy, sodium, and fat diet. First line medications are typically diuretics and beta-blockers (Johnson, 2004, p. 432). Client education and understanding are critical in compliance and successful treatment.

Nursing Care: The nurse should assess blood pressure frequently as well as the apical and peripheral pulse rates. The nurse should ask the patient about any new or unusual symptoms such as nosebleeds, angina, shortness of breath, visual changes, imbalance, headaches, or nocturia. The nurse should emphasize to the patient that hypertension can be controlled but not cured. The patient should be included in goal setting and should understand the importance of medication and treatment compliance. Counseling, education and support groups are available for family and patient. The nurse should assess how the client reacts to any new medications and any possible side effects (Johnson, 2004, p. 432-435).

Type 2 diabetes mellitus

Definition: Type 2 DM is typically a progressive condition and may go undiagnosed for years until complications occur (Johnson, 2004, p. 284-285). It involves genetic and environmental factors. It is more common in older adults and obesity (Black & Hawks, 2009).

Pathophysiology: There is typically a limited beta-cell response to hyperglycemia; they become desensitized to high blood glucose levels and their responsiveness declines. Peripheral and liver tissues become less susceptible to the effects and activity of insulin (insulin resistance). Without insulin, major effects occur in the body: decreased glucose utilization, increased fat mobilization, and increased protein utilization (Black & Hawks, 2009, p. 1066).

Clinical Manifestations: Besides hyperglycemia, the three most common manifestations are the 3 Ps: polyuria, polydipsia, and polyphagia. Other manifestations may include: fatigue, weakness, vision changes, tingling or numbness in extremities, dry skin, slowed healing, or recurrent infections (Johnson, 2004, p. 285).

Assessment and Diagnosis: A fasting blood glucose of 126 mg/dL or more or a random plasma glucose level of 200 mg/dL or more in a number of measurements is indicative of diabetes mellitus. The medical personnel may assess for complications common to DM to help diagnose the presence of the condition (Johnson, 2004).

Medical Treatment: The goal for a patient with diabetes mellitus is “to normalize insulin activity and blood glucose levels to reduce the development of vascular and neuropathic complications,” (Johnson, 2004, p. 287). There are five main components of treatment of DM, these include nutrition, exercise, blood glucose monitoring, pharmacologic therapy, and education. Primary treatment is weight reduction (Johnson, 2004, p. 285).

Nursing Care: The nurse must assess for signs and symptoms of hyperglycemia and hypoglycemia, and for complications of diabetes such as hypotension, altered sensation, seizures, reduced skin turgor, hyperosmolarity, and/or electrolyte imbalances. The nurse should monitor labs for metabolic acidosis and electrolyte imbalance. The nurse should find out how the patient learns best and any barriers that may be problematic to the patient’s compliance. The nurse should assess the client for effective coping and emotional disturbances. Intake and output should be measured and fluids should be encouraged. The patient must be able to demonstrate what she has learned back to the nurse. If hypoglycemic agents are indicated, the patient must be educated on them (Johnson, 2004, p. 288-296).

Depression

Definition: Depression is a mood disorder in which the patient will feel that she cannot control the severity of her feelings. There may or may not be a clear causative factor in depression onset. Mood disorders are common with other psychiatric and medical conditions. Patients may mask their depression with other actions or conditions like substance and alcohol abuse or an anxiety or eating disorder (Black & Hawks, 2009, p. 427- 428).

Pathophysiology: The limbic system is altered in some way in many mood disorders. Psychological reasoning relates mood disorders to unconscious thought processes, faulty thinking or learning (Black & Hawks, 2009, p. 425).

Clinical Manifestations: Manifestations of depression include sad or irritable mood, crying at unusual times, pessimistic/negative thoughts, feeling guilty or hopeless, being preoccupied with minor events, losing pleasure in activities that once brought happiness, decreased socialization, reduced ability to concentrate, change in sleep patterns and appetite, decreased libido and sexual activity, suicidal thoughts, and/or psychosis with delusions about negative future events (Black & Hawks, 2009, p. 427).

Medical Treatment: Depression can be treated rather effectively in most cases with a combination of medication and psychotherapy. Antidepressant medication can be used for short or long-term treatment depending on the patient's situation and response. There may be a trial-and-error period with medication in which the doctor and patient collaborate to try to find the best one (Black & Hawks, 2009, p. 428).

Nursing Care: The nurse must constantly assess the depressed client's mood and affect as well as risk for suicide. The nurse should take any comment about or illusion to suicide seriously. The patient needs encouragement in treatment especially in the beginning when the medication may

not be effective yet. Communication and client education is key (Black & Hawks, 2009, p. 428-430).

Peptic ulcer disease

Definition: Peptic ulcers are lesions that occur in the mucosal wall of the GI tract due to abnormal gastric acid and have been linked to infection by *H. pylori*. Inflammation occurs. It may lead to a GI bleed (Johnson, 2004, p. 574-575).

Pathophysiology: The causal factor in 90% of peptic ulcers is infection by *H. pylori*. Ulcers occur when infection and acid secretion overcome the protective barriers against ulcerations like the mucosa's integrity and regeneration, blood flow to the mucosa, regulation of secretion, and the presence of gastromucosal prostaglandins. NSAIDs are a common cause of peptic ulcer disease. Emotional stress causes increased gastric secretion (Black & Hawks, 2009, p. 630-631).

Clinical Manifestations: Clients may not have any serious or noticeable manifestations. Many patients admit with a "dull, gnawing pain and a burning sensation in the mid-epigastrium or the in back," (Johnson, 2004 p. 576). The pain typically occurs when the stomach is empty. Heartburn and burning sensation in the esophagus or stomach may be indicative of peptic ulcer disease. Bleeding may be noticed in stool (Johnson, 2004, p. 576).

Assessment and Diagnosis: Physical assessment will most likely reveal abdominal distention and/or epigastric tenderness. An endoscopy, upper GI barium study, occult blood test, or stool culture may be performed to diagnose the condition (Johnson, 2004, p. 576).

Medical Treatment: The main goal of treatment of peptic ulcer disease is to eliminate the bacteria and reduce gastric acidity. Stress reduction and rest are usually priorities. The patient is

encouraged to quit smoking. Dietary changes may be implemented. Small frequent meals may be helpful. Caffeine, alcohol and dairy intake should be restricted or removed. Antibiotics and proton pump inhibitors are prescribed. H₂-receptor antagonists are used to decrease stomach acid secretion (Johnson, 2004, p. 576-578).

Nursing Care: The nurse should assess for pain, assess nutritional intake, assess for blood in emesis or stools, ask patient about food habits, alcohol intake, smoking, medication use and level of stress in daily life, obtain a family history for ulcer disease, assess vital signs, assess for anemia, palpate abdomen for localized abdomen, and assess for weight loss. Aspirin should be avoided. Relaxation techniques and coping should be encouraged. Reducing anxiety is very important and open therapeutic communication and building rapport with the patient is helpful. Education is stressed so that patient learns what factors aggravate their condition. Follow-up is very significant in detecting recurrence and complications (Johnson, 2004, p. 576-581).

Medications

C.S. was taking Warfarin Sodium 2.5 mg by mouth every day. Warfarin is the generic name whereas Coumadin is the brand name for the drug. Its therapeutic classification is an anticoagulant and its pharmacologic classification is a coumarin. It is indicated in the prophylaxis and treatment of venous thrombosis, pulmonary emboli, atrial fibrillation, in the management of MIs, and in prevention of thrombus formation and embolization after prosthetic valve replacement. Warfarin impedes the hepatic synthesis of vitamin K dependent clotting factors (II, VII, IX, and X). Its therapeutically prevents thromboembolic events. It is contraindicated in excessive and uncontrolled bleeding, open wounds, active ulcer disease,

severe liver or kidney disease and uncontrolled hypertension. Geriatric patients may have a greater anticoagulant response so lower doses may be used. Side effects include bleeding, cramps, nausea, dermal necrosis, and fever. NSAIDs and aspirin may increase responsiveness to warfarin and increase the risk of excessive bleeding. Chronic use of acetaminophen may increase bleeding risk. Warfarin can be given IV or PO and is typically given as 2-5 mg a day for 2-4 days and dosage is adjusted according to INR results. Nurse must assess for signs of bleeding/hemorrhage, monitor for other side effects, monitor PT, INR, and clotting factors throughout therapy, monitor hepatic function and CBC before and throughout therapy, monitor stool and urine for occult blood, withhold dose if INR is too high or if minor bleeding occurs, and know that the antidote is vitamin K (Deglin, Vallerand & Sanoski, 2011, p. 1295-1297). She was taking it to decrease the complications that may be associated with her potential immobility related to her bilateral knee replacement and surgical knee pain. Although C.S. was up at least five times during my clinical shift, she may not always be up that much. Her pain may worsen at times and may cause a decrease in her activity.

C.S. was taking Aspirin 325 mg by mouth twice a day with meals. Aspirin is acetylsalicylic acid. Therapeutically it is classified as an antipyretic and a nonopioid analgesic. Pharmacologically it is classified as a salicylate. It is indicated in conditions involving inflammation such as rheumatoid arthritis and osteoarthritis, in mild to moderate pain, for fever, and for prophylaxis of transient ischemic attacks and MI. It acts by producing analgesia and reducing inflammation and fever by inhibiting the production of prostaglandins and decreasing platelet aggregation. Aspirin is contraindicated in hypersensitivity and should be used cautiously in patients with a history of GI bleeding or ulcer disease. In geriatric patients, there is an increased risk of adverse reactions especially of a GI bleed because of increased sensitivity to

toxic levels. Side effects include GI bleeding, allergic reactions including anaphylaxis and laryngeal edema, tinnitus, dyspepsia, epigastric distress, nausea, abdominal pain, anorexia, hepatotoxicity, vomiting, anemia, hemolysis, rash and urticaria. Aspirin may increase the risk of bleeding with warfarin and heparin. Nurse should assess pain and limitation of movement, assess for fever, know that it prolongs bleeding time for 4-7 days, monitor hematocrit to assess for any GI blood loss, and monitor for adverse reactions and withhold if any occur (Deglin et. al, 2011, p. 1131-1134). She was taking this medication to reduce inflammation and pain associated with her osteoarthritis.

C.S. was taking Sertraline HCL (Zoloft) 50 mg by mouth each day. It is classified therapeutically as an antidepressant and as a selective serotonin reuptake inhibitor (SSRIs). It is used in the treatment of major depressive disorder, panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, social anxiety disorder, premenstrual dysphoric disorder, and generalized anxiety disorder. It inhibits the uptake of serotonin in neurons in the CNS, potentiating the activity of serotonin but has little to no effect on other neurotransmitters. Zoloft is contraindicated in hypersensitivity, concurrent MAO inhibitor therapy, and alcohol intolerance. It should be used cautiously in patients with severe hepatic or renal impairment or in patients with increased risk or history of suicide. Side Effects include neuroleptic malignant syndrome, suicidal thought, serotonin syndrome, dizziness, drowsiness, fatigue, headache, insomnia, agitation, anxiety, confusion, emotional lability, impaired concentration, manic reaction, nervousness, weakness, yawning, pharyngitis, rhinitis, tinnitus, visual abnormalities, chest pain, palpitations, diarrhea, dry mouth, nausea, abdominal pain, altered taste, anorexia, constipation, dyspepsia, flatulence, increased appetite, vomiting, sexual dysfunction, menstrual disorders, urinary disorders, urinary frequency, increased sweating, hot flashes, rash,

hyponatremia, back pain, myalgia, tremor, hypertonia, hypoesthesia, paresthesia, twitching, fever and thirst. Zoloft may increase the effects of warfarin and increase the risk of bleeding with NSAIDs, aspirin or warfarin. It is given PO in adults at a safe dose of up to 200 mg per day. It is given in the morning or evening once daily. Nurse must assess for suicide risk, monitor appetite and nutrition, assess for serotonin syndrome, and monitor for mood changes, anxiety, nervousness, and insomnia (Deglin et. al, 2011, p. 1147-1149). She was taking this medication to treat her depression.

C.S. was taking Pantoprazole (Protonix) 40 mg each day before meals. It is an antiulcer agent and a proton-pump inhibitor. It is used to treat erosive esophagitis associated with GERD, to decrease relapse of heartburn symptoms for patients with GERD, to treat pathologic gastric hypersecretion and as adjunctive treatment for duodenal ulcers. It binds to an enzyme in the presence of acidic gastric pH, preventing the transport of hydrogen ions into the gastric lumen. It is contraindicated in hypersensitivity. Side Effects include headache, abdominal pain, diarrhea, eructation , flatulence, and hyperglycemia. It may increase the risk of bleeding with warfarin. It is given PO in safe doses up to 120 mg twice daily (Deglin et. al, 2011, p. 990-991). The nurse should assess for abdominal pain and for frank and occult blood. She was taking to treat her peptic ulcer disease.

C.S. was taking Metformin HCL (Foramet, Glucophage) 1000 mg twice a day with meals. It is an anti-diabetic biguanide. It is indicated to manage type 2 diabetes mellitus in the maintenance of blood glucose. It decreases hepatic glucose production, decreases intestinal glucose absorption, and increases sensitivity to insulin. It is contraindicated in hypersensitivity, metabolic acidosis, dehydration, sepsis, hypoxemia, hepatic impairment, excessive alcohol use, renal dysfunction, and CHF. Geriatric patients may require decreased doses. Avoid using in

patients that are undergoing stress (infection or surgery), hypoxia, pituitary deficiency, or hyperthyroidism. Side effects include lactic acidosis, hypoglycemia, and decreased vitamin B12 levels. A safe PO dose is up to 2500 mg per day. The nurse should assess for hypoglycemia, assess for ketoacidosis or lactic acidosis, monitor electrolytes, ketones, glucose, and pH, monitor blood glucose at the same time every day, assess renal function and monitor serum folic acid and vitamin B12 in long term therapy (Deglin et. al, 2011, p. 829-831). She was taking this medication to help maintain control of increased blood glucose levels associated with type 2 diabetes mellitus.

C.S. was taking Ferrous sulfate 325 mg twice a day before meals by mouth. It is an antianemic and an iron supplement. It is used to treat and prevent iron deficiency anemia. Iron is an essential mineral in hemoglobin, myoglobin, and many enzymes. It enters the bloodstream and adds to the iron stores. It is contraindicated in hypersensitivity and should be used cautiously in peptic ulcer disease, alcoholism, and severe hepatic and renal impairment. Side effects include dizziness, headache, syncope, nausea, constipation, dark stools, epigastric pain, GI bleeding, and vomiting. Using with proton pump inhibitors may decrease the absorption of iron. A safe dosage given PO is 2-3 mg/kg/day in 2-4 divided doses. The nurse should assess nutrition and diet, determine the possible cause of anemia, assess bowel function for constipation or diarrhea, monitor hemoglobin and hematocrit, monitor occult blood in stools, and assess for toxicity and overdose (Deglin et. al, 2011, p. 737-741). She was taking this medication to help treat and prevent any anemia after she experienced some post-operative anemia for her bilateral knee replacement surgery on November, 1, 2011.

C.S. was taking APAP/Hydrocodone every 3 hours as needed. It is an opioid agonist, a nonopioid analgesic combination. It is therapeutically classified as allergy, cold and cough

remedies and opioid analgesics. It is to manage moderate to severe pain or as an antitussive. Hydrocodone binds to opiate receptors in the central nervous system and alters the perception of and response to painful stimuli while depressing the CNS. It is contraindicated in hypersensitivity and severe hepatic or renal disease. It should be used with caution in head trauma, increased intracranial pressure and undiagnosed abdominal pain. Geriatric patients typically receive decreased doses due to increased CNS depression and constipation. Side effects include confusion, dizziness, sedation, euphoria, hallucinations, headache, unusual dreams, blurred vision, diplopia, miosis, respiratory depression, hypotension, bradycardia, constipation, dyspepsia, nausea, vomiting, urinary retention, sweating, physical and psychological dependence, and tolerance. A safe PO dose is 2.5-10 mg every 3-6 hours as needed. The nurse should assess blood pressure, pulse and respirations before and throughout therapy, assess level of sedation, monitor sedation and drowsiness, assess bowel function, prevent constipation, assess pain type, location, intensity and relief, and know that the antidote is Narcan (Deglin et. al, 2011, p. 675-677). She was taking this medication for moderate to severe surgical knee pain.

C.S. was taking a Multivitamin 1 tablet each day. It is therapeutically classified as a vitamin. It is used in the treatment and prevention of vitamin deficiencies. Vitamins are necessary for normal growth and development and may act as coenzymes or catalysts in metabolic processes. It is contraindicated in hypersensitivity and alcohol intolerance. It should be used with caution in anemia with unknown cause. Adverse reactions are not common. Side effects include urine discoloration if vitamin includes B vitamins, and allergic reactions to preservatives, additives, or colorants. A safe PO dose is 1 tablet per day. The nurse should assess for signs of nutritional deficiency and assess for possible toxicity and overdose (Deglin et. al,

2011). She was taking this medication to ensure her nutrition intake was enough to promote healing and provide nutrients throughout her body.

C.S. was taking Docusate Sodium 240 mg twice a day by mouth. Docusate Sodium is therapeutically defined as a laxative and pharmacologically as a stool softener. It is used to prevent constipation. It encourages the incorporation of water into stool, leading to softer stools and may also encourage electrolyte and water secretion into the colon. It eases the passage of stool. It is contraindicated in hypersensitivity, abdominal pain, nausea, or vomiting. It should be used with caution due to possible formation of dependence in long-term use. Side effects include throat irritation, mild cramps, diarrhea and rashes. A safe PO dose is between 50 and 400 mg in 1-4 divided doses. The nurse should assess for abdominal distention, bowel sounds, bowel function, and characteristics of stool produced (Deglin et al., 2011, p.467-469). She was taking this medication to help prevent and treat constipation and maintain bowel movement and function.

Assessment Data

C.S. had a temperature of 97.9° F, respirations of 16, blood pressure of 126 over 78, heart rate of 86, and oxygen saturation of 95%. She had surgical knee pain rated at a 4 or 5 but asked to wait until she ate dinner because “Pain medicines hurt my stomach if I don’t eat first.” Vicodin was given to her at 1712 for her pain. She was alert and oriented to person, place, time and situation. She was awake, alert, pleasant, cooperative and pleasant. She had received Vicodin at 1242 that day. She had no speaking difficulty or hearing aids but she did have glasses that she wore all the time and partial upper dentures. C.S. stated that that is “hard of hearing.” She weighed 207 pounds and was five feet tall. Upon assessment her pupils were equal, round, and

reactive to light and accommodation. Her mouth was moist and pink. She ate 100% of her dinner. Her skin was dry and flaky and warm to touch. She had several areas on her body with ecchymosised areas which are described as wounds further down in the assessment. Capillary refill on all extremities was less than 3 seconds. No rashes or ulcers were noted.

Her lungs were clear to auscultation anteriorly, posteriorly, and laterally. Her respiratory rate was even and unlabored. She denied having a cough. She was on room air. She does not receive breathing treatments. Her apical rate was 86 beats per minute; the rhythm was regular. Her abdomen was soft and rounded. Her bowel sounds were normal in all quadrants. She had two bowel movements on that day which is normal for her and when asked about characteristics of the BMs she reported that they were within normal limits for her. She is continent of both urine and stool. She urinated multiple times that day and was up twice during the clinical shift. She tolerated getting up well and was not short of breath with activity. She reported that “I am getting up to use the bathroom less than I was before, but I still have to get up at night to go.” Her urine is a clear, dull yellow color with no odor. She does not have a catheter. C.S. said that she experienced a bladder infection a week or so ago and had experienced urinary urgency, increased urinary output, and nocturia but does not have those symptoms today. She denies any unusual vaginal discharge or hemorrhoids.

Her upper extremities were a fleshy pink color and her lower extremities were pale. Her radial pulses were strong and equal at a rate of 80 per minute on both sides. She had a small bruise on the inner portion of her left knee, bruising on the outer portion of her left shin, and bruising on the inner portion of her right shin. She had steri-strips on her right knee, with no staples. She had staples on her left knee and wore an immobilizer on that side because she had torn the sutures on that side previously. Both knee incisions were well approximated with no

drainage present. Dressings were intact and unsaturated. She did not have a wound vac. Her pedal pulses were all rated a +1 on both sides for both her dorsalis pedis and posterior tibial pulses. She was slightly imbalanced when she got up to walk. She had edema in both lower extremities; it was graded as +2 on the left side and +1 on her right side. Her grips on her right and left upper extremities were strong. Her push/pull on her right lower extremity was stronger than on her left, but both sides were weak but the RN stated that “her legs are getting stronger.” C.S. was able to report all sensations applied to her upper and lower extremities and denied having any itching, tremors, paralysis, numbness, or tingling.

She did not have IV access. She had a Braden score of 20. She wore thigh high TED hose and knee high SCDs on both legs. TED hose and SCDs are important in thromboprophylaxis (i.e. in preventing postoperative complications) (Cook, Warren, Ganley, Prefontaine, & Wylie, (2008, p. 156). She has limited ROM in her legs. She has a wheeled walker. She is supervised for grooming, movement out of bed, and toileting. She only needs set up to dress and bathe her upper body. She needs minimal assistance to dress and bathe her lower body. She has a slightly unsteady gait with limited ROM in her legs. Her 1600 blood glucose results were 103. Her Mini-Mental State Exam score was 29/30. Her Geriatric Depression Scale score was 3 which indicated that depression is not likely. Homan’s sign was negative.

Functional Health Pattern Assessment

C.S. stopped smoking eleven years ago. She had smoked for 30 years and had smoked an average of 2 packs a day. She lives by herself and has a 6-year-old pet Chihuahua who is named Cha Cha. C.S. has 3 daughters and is a widow. She was unsure about the last immunizations she had received. She denies any excessive alcohol use and says “I haven’t drank anything in

months.” She believes that she is in fair health. She says that “I haven’t exercised in a long time, I have had too much knee pain for so long.” She said that she always used her seat belt and that she had knowledge about self-breast exams and has done them previously. She had smoke detectors and throw rugs and carpets in her home. Her home was typically clean and she agreed that she felt safe in her home.

C.S. was 5 feet tall and weighed 207 pounds during my clinical day. Six months ago she weighed 143 pounds. Her diet at the hospital was consistent carbohydrate medium DB 1800. She also receives 1 can of Boost daily. At home, she explained that she normally had three meals a day. Her appetite was normal and she denied having any nausea, vomiting, and swallowing or chewing difficulties. She was able to feed herself. Her mouth was pink and moist. She had no ulcers or lesions. Her teeth and gums looked healthy. She denied having any teeth or gum pain or discomfort recently. She had upper partial dentures. She did not have any swallowing impairments documented in her chart. She had no IV site or fluids running. Her skin was fleshly pink, warm, dry, and intact. She had edema in her lower extremities and it was non-pitting. Her skin turgor was good and had no tenting. She denied any pruritis. She had 3 different bruises, they are described in the assessment section. Her temperature was measured orally at 97.9° F.

C.S. had a routine in which she had two bowel movements each day that were a medium amount and were brown. She had had two bowel movements on November 17, 2011. She denied having any diarrhea or incontinence recently but suffered from constipation or difficulties with bowel function. She was prescribed Docusate sodium as a prn medication to help with that. She said that she took it every day. Her bladder habits included getting up between eight and ten times a day to urinate. She had been having problems with nocturia and it had interfered with her sleeping patterns. She denied having any other urinary symptoms at that time but had expressed

experiencing them with her bladder infection that occurred earlier in her hospital stay. She denied any incontinence. She did not have any ostomy or catheters. Her abdomen was soft and rounded; C.S. was obese and had a larger abdomen. Bowel sounds were normal and present in all quadrants. She denied any tenderness or pain in her abdominal area. The vitals for C.S were a temperature 97.9° F, respirations of 16, blood pressure of 126 over 78, heart rate of 86, and oxygen saturation of 95%. The patient did not have any tremors, atrophy, or swelling. She was relatively independent in her self-care abilities but her knee surgeries did limit some of her abilities. For eating and bed mobility, she was completely independent, needing no assistance. She used her assistive device only for transferring, shopping or cooking. She used her assistive device and minimal assistance for toileting, bathing, dressing, ambulating, stairs, and home maintenance. She used both a wheeled walker and an immobilizer to help in mobility. She had an abnormal gait related to her bilateral knee replacement. She had limited range of motion in her lower extremities, her left was more limited than her right. Her posture was normal and she had no deformities, amputations, and prostheses.

All of her pulses were equal and palpable on both sides. Her radial rate was 80 and her apical was 86. Her blood pressure was taken when she was lying down and was 126/78. Her extremities were warm and her capillary refill was brisk. Her Homan's sign was negative. Her nails and hair distribution were normal. Her pedal pulses were not easily palpable. Her chest was symmetrical. Her respirations were 16 per minute and were unlabored and at a regular rate without periods of apnea. C.S. denies having any shortness of breath, dyspnea on exertion, orthopnea or cough. Her lungs were clear to auscultation. She was on room air with oxygen saturation at 95%. When not in the hospital, C.S. typically acquired between 6 and 10 hours of sleep per night. When asked she said that "I almost never woke up in the middle of the night, but

I do a lot here.” The evening before my clinical she had only received 4 to 5 hours of sleep and they were not consecutive. She expressed that she did not feel rested after sleeping and that she had been awakened during the night by the need to urinate as well as by medical personnel. She said that “they wake me up to give me medicine,” and “I have no trouble falling asleep, but if I get woken up or if I have to get up to the bathroom I can’t fall back asleep right away.” She denied having any insomnia. C.S. said that she rarely had any sleeping difficulties before. She did not have any sleep aid prescribed. She said that she did have a kind of schedule of rituals that she typically did before bed every day.

C.S. was alert, pleasant, and cooperative. She was alert and oriented times four. She had no problems with recent and remote memory. Her pupils were round, equal, and reactive to light and accommodation. Her reflexes were normal. Her grasps were strong on both sides. She denied having any numbness or tingling in any of her extremities. The patient had pain in her knees related to her osteoarthritis and her knee replacement surgery rated at 4-5. She said that “getting up and therapy sometimes makes my knees hurt.” The patient expressed relief with pain medication, rest, and ice and increased pain with activity and movement. C.S. had glasses and her eye prescription was up to date. Her hearing was slightly impaired. The R.N. told me in report that “she is hard of hearing.” Her sense of smell was not impaired. She was able and willing to communicate. She was capable of speaking clearly and reading. She felt that she would be able to make decisions for herself. She was calm and was dressed appropriately for her environment. When asked to rate her anxiety on a level of one to ten, she rated it at a 4 because she was unsure about the difficulties she would deal with when she got discharged. She showed no apparent signs of anxiety. Her voice volume and quality was normal throughout the assessment. Her muscles did not seem tense. Her body language was open, relaxed with no

apparent tenseness but she did seem fatigued which was evident in her slowness to respond at some points in the assessment. She made eye contact frequently. She answered questions readily. When asked, C.S. said that she had a positive view of herself. She said that, "Once I heal from this surgery I will be the bionic woman, nothing is going to stop me." She rated her level of control in her situation at a five and her level of assertiveness at a six. She responded that she did feel that her body function and structure will change as a result of her surgery. C.S. said that:

I was supposed to be discharged last Friday; when I got up I felt burning in my left knee and was told that I tore my sutures and I had to go to surgery. So instead of going home that day I ended up having to stay for at least another week. I was not a happy person Friday or Saturday.

C.S. lived alone with her pet. She was widowed and had three daughters. Her oldest daughter was listed as her contact person. (* Sherri for some reason I skipped over the questions about her employment status and occupation) Her daughters and other family members were her support system and she had constant contact with them especially her daughters. The patient was concerned about having mobility issues, living alone, and taking care of her dog. She was active in social activities usually. The date of her last menstrual period was "many years ago." She had experienced menopause and had no reported history of sexually transmitted disease. She denied having any problems with sexual dysfunction or having any sexual concerns at the time of assessment. C.S. appeared to have no obvious signs of stress. The primary way she deals with stress is by spending time with her pet, family and friends. Her specific religious affiliation was not assessed but she did not indicate any religious restrictions or practices.

Lab Data and Interpretation

INR is a part of coagulation studies that is assessed in order to guide warfarin (oral anticoagulation) therapy. Normal INR for a patient who is not on anticoagulants is 0.8-1.2. A desirable INR to prevent DVT, PE, and clots in a patient who is receiving anticoagulation therapy is usually between 2.0 and 3.0. C.S.'s INR is not at a therapeutic level currently (Cavanaugh, 2009).

Nursing Diagnoses and Interventions

Primary Nursing Diagnosis: Acute Pain related to tissue trauma and reflex muscle spasms secondary to surgery

As evidenced by: bilateral knee replacement and left knee sutures torn, surgical pain rated at a 4-5 in her knees, decreased physical mobility, changes in sleep patterns, and increased blood pressure.

Short-term goal: C.S. will relate relief after a satisfactory relief measure as measured by decreased pain on scale of 1-10 as related by the patient by the end of the clinical shift.

Interventions:

1. The nurse will provide the patient with opportunities to rest during the day and provide for uninterrupted sleep at night when possible and as needed.
2. The nurse will provide optimal pain relief with prescribed analgesics and re-assess pain 30 minutes later whenever pain is reported by C.S.

Long-term goal: C.S. will relate other pain relief and comfort measures to the nurse as measured by demonstration and communication back to the nurse before discharged from hospital.

Interventions:

1. The nurse and patient will discuss the reasons for increased or decreased pain with every

interaction with client.

2. The nurse will teach noninvasive pain-relief measures especially relaxation strategies with every contact with client and as often as tolerated.

Citation: Carpenito-Moyet, 2010, p. 72-81.

Secondary Nursing Diagnosis: Impaired physical mobility related to external devices and insufficient strength and endurance for independent mobilization

As evidenced by: limited ROM, immobilizer to left knee, “weak” legs, and pain.

Short-term goal: C.S. will ambulate every 4-6 hours while awake when tolerated.

Interventions:

1. The nurse will provide progressive mobilization, increasing the amount of time spent ambulating as tolerated (this intervention also applies to the long term goal).
2. The nurse will observe the use of assistive devices (wheeled walker) every time client ambulates.

Long-term goal: C.S. will report increased strength and endurance in limbs before discharged from hospital.

Interventions:

1. The nurse will perform active/passive ROM exercises with the patient at least four times a day.

Citation: Carpenito-Moyet, 2010, p. 280-284.

Tertiary Nursing Diagnosis: Disturbed sleep pattern related to frequent awakenings

secondary to urinary problems, pain, and unfamiliar environment.

As evidenced by: Fatigue during the day, dozing during the day, patient stating that therapy made her “tired,” and patient expressing pain and fatigue.

Short-term goal: The patient will relate factors that inhibit and help sleep by the end of the clinical shift.

Interventions:

1. The nurse and patient will discuss factors that prevent or inhibit sleep with every interaction, as tolerated.
2. The nurse and C.S. will limit nighttime fluids and void before going to bed to reduce urinary disruptions of sleep cycle every night before sleeping.

Long-term goal: The patient will report increased sleep and an optimal balance of rest and activity before discharged from the hospital.

Interventions:

1. The nurse will organize procedures and patient schedule to provide fewest disturbances during sleep periods every shift and when needed.
2. The patient will develop and maintain a schedule of relaxing bedtime rituals every evening.

Citation: Carpenito-Moyet, 2010, p. 446-450.

Evaluation of Care

C.S. did relate relief of pain from a 4-5 rated surgical pain in her knees at the beginning of the shift to a 2 after medication was given. C.S. did relate some pain relief and comfort

measures to me before the end of my clinical shift. I taught her about ice and its systemic effects on the body and she was able to explain it back to me. More education and demonstration would be needed. To evaluate this goal, I would have to look into her discharge planning and see what she was taught and how much she was able to tell back to the nurse. This long-term goal is important to ensure that C.S. knows that pain can be relieved by more than just pharmacologic means especially when at home. C.S. ambulated twice during my clinical shift of 4 hours and she tolerated it well. A consistent effort would be needed to make sure that she ambulates as often as tolerated. To evaluate the patient's completion of the long-term goal, the nurse must document her legs as "strong" and her ROM must be documented as less limited or unlimited. ROM and ambulation done post-operatively on a consistent basis are extremely significant in increasing strength and reducing complications (Cook, Warren, Ganley, Prefontaine, & Wylie, (2008), p. 156). C.S. was able to relate to me why she was having problems sleeping and she was able to teach back to me a few actions that may help to help her feel rested and avoid nighttime disruptions. The nurses would ask the patient every day how she was sleeping and if there had been any improvement and by discharge the patient will have experienced restoration to her previous sleeping patterns and state of restfulness which will be measured by decreased daytime fatigue and reporting increased hours of consistent sleep. Overall, C.S. was very willing to participate in education and learning and had a positive attitude about her condition.

References

- Black, J. & Hawks, J. (2009). *Medical surgical nursing: Clinical management for positive outcomes* (8th ed.). St. Louis, Missouri: Saunders Elsevier.
- Carpenito-Moyet. (2010). *Handbook of nursing diagnosis* (13th ed.). Philadelphia, PA: Wolters Kluwer and Lippincott Williams & Wilkins.
- Cavanaugh, B. (2009). *Nurse's manual of laboratory and diagnostic tests* (4th ed.). Philadelphia, PA: F.A. Davis Company.
- Cook, J., Warren, M., Ganley, K., Prefontaine, P., & Wylie, J. (2008). A comprehensive joint replacement program for total knee arthroplasty: a descriptive study. *BMC Musculoskeletal Disorders*, vol. 9 (p.154-161). Retrieved from Academic Search Complete, EBSCOhost.
- Deglin, J., Vallerand, A., & Sanoski, C. (2011). *Davis's drug guide for nurses* (12th ed.). Philadelphia, PA: F. A. Davis Company.
- Johnson, J. (2004). Handbook for *Brunner & Suddarth's textbook of medical-surgical nursing* (10th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.