N441 Care Plan

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission 11/06/2020	**Patient Initials** M.E.	**Age** 67	**Gender** Male
Race/Ethnicity Caucasian	**Occupation** Unemployed	**Marital Status** Married	**Allergies** NKDA
Code Status Full Code	**Height** 5’9” (180 cm)	**Weight** 145 lbs (65.6 kg)	

Medical History (5 Points)

Past Medical History: Wernicke's syndrome, Alcoholic, COPD, Dementia, Diabetes Mellitus, Smoker

Past Surgical History: No qualifying data

Family History: No qualifying data

Social History (tobacco/alcohol/drugs): Current every day smoker, Type: Cigarettes 5 packs per day since he was young; Current daily alcohol user, Type: Beer average 12-15 cans per day since he was young; No drug use and has never used

Assistive Devices: None

Living Situation: Patient lives at a nursing home.

Education Level: GED

Admission Assessment

Chief Complaint (2 points): Bilateral foot pain and toe infection

History of present Illness (10 points): The patient is a 67-year-old male with a past medical history of Wernicke's syndrome, alcoholism, COPD, dementia, Diabetes Mellitus, and smoking. The patient resides at a nursing home and was brought to the ED from Casey Health Care on 11/06/20 due to bilateral foot pain with a necrotic right fifth toe. The patient is on antibiotics and

alert and oriented to self (A&Ox1). The patient is a poor historian and is unable to communicate OLDCARTS. Upon my physical assessment findings, the patient is in no acute distress. However, the right eye pupil is larger than the left eye (anisocoria). The lower extremities are hairless bilaterally, redness, dry and scaly mottled skin, thick toenails, cold and cyanotic, with an absent pulse of the left foot via Doppler. A fem-pop of the right leg is visible, and an 18 gauge IV is patent on the right AC, with an arterial line on the left wrist. The patient is on a continuous infusion of NS at 100 mL/hr and 75 mL/hr. The patient stated that his pain was an "eight" (8/10) on a Stanford Pain Scale and seemed relieved from pain whenever his legs were in a dependent position. I informed the nurse of my findings and administered the prescribed medications. An arterial duplex of the right lower extremity was done and showed severe peripheral vascular arterial disease. An ultrasound of the right lower extremity veins ruled out a deep vein thrombosis (DVT). A CT angiography also indicates that both left and right iliac and femoral arteries are thrombosed. The patient underwent a femoral-popliteal (fem-pop) bypass surgery of the right leg and is awaiting further treatment.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Foot pain and necrotic right 5th toe

Secondary Diagnosis (if applicable): Severe peripheral arterial disease (PAD)

Pathophysiology of the Disease, APA format (20 points):

Gangrene develops with a lack of perfusion to tissue, caused by either a severe burn or an arterial blood clot (Capriotti & Frizzell, 2016). Gangrene is associated with peripheral vascular diseases including peripheral arterial disease (PAD) and peripheral venous disorders, both of which interfere with normal blood flow.

The pathophysiology of this debilitating condition is PAD. PAD affects arteries (blood vessels that carry blood away from the heart), and the peripheral venous disease affects veins (blood vessels that carry blood toward the heart). Atherosclerosis and thrombosis within the lower limb arteries cause PAD and leads to tissue ischemia (Capriotti & Frizzell, 2016). According to Hinkle & Cheever (2018), "The most common direct results of atherosclerosis in arteries include narrowing (stenosis) of the lumen, obstruction by thrombosis, aneurysm, ulceration, and rupture. If such reductions are severe and permanent, the cells undergo ischemic necrosis (death of cells due to poor blood flow). Poorly perfused tissues are susceptible to damage and infections." (p. 850 & 855). PAD results from atherosclerosis that usually occurs in the lower extremities' arteries and is characterized by inadequate blood flow. Atherosclerosis is caused by a gradual thickening of the arteries' intima and media, ultimately resulting in the vessel lumen's progressive narrowing (Capriotti & Frizzell, 2016). Plaques can form on the walls of the arteries, making them rough and fragile. Progressive stiffening of the arteries and narrowing of the lumen decreases the blood supply to affected tissues and increases blood flow resistance. Atherosclerosis is a type of arteriosclerosis, which means "hardening of the arteries" (Hinkle & Cheever, 2018). Arteriosclerosis alludes to the loss of arteries' elasticity over time due to their thickening walls (Hinkle & Cheever, 2018). PAD is classified as an inflow (distal aorta and iliac arteries) and outflow (femoral, popliteal, and tibial arteries) and can range from mild to severe. Tissue damage occurs below the arterial obstruction. Buerger's disease, subclavian steal syndrome, thoracic outlet syndrome, Raynaud's disease, and popliteal entrapment are examples of PAD (Hinkle & Cheever, 2018).

The signs and symptoms of PAD include burning, cramping, and pain in the legs during exercise (intermittent claudication), numbness and burning pain primarily in the feet when in

bed, and pain is relieved by placing the legs at rest in a dependent position (Hinkle & Cheever, 2018). The physical signs and symptoms can be abundant and may include hearing a bruit over the femoral and aortic arteries, decreased capillary refill of toes (greater than 3 seconds), decreased or nonpalpable pulses, and loss of hair on the lower calf, ankle, and foot (Hinkle & Cheever, 2018). Other signs and symptoms include dry, scaly mottled skin, thick toenails, cold and cyanotic extremity, pallor of extremity with elevation, dependent rubor (redness) of the extremity, muscle atrophy, ulcers, and possible gangrene of toes (Hinkle & Cheever, 2018).

There are several ways to diagnose PAD, with a combination of screening tests. According to Hinkle & Cheever (2018), "The diagnosis of peripheral arterial occlusive disease may be made using CW Doppler and ABIs, treadmill testing for claudication, duplex ultrasonography, or other imaging studies." (p. 858). Diagnostic procedures may include arteriography, exercise tolerance testing (stress test), plethysmography, segmental systolic blood pressure measurements, magnetic resonance imaging (MRI), ankle-brachial index (ABI), and Doppler-derived maximal systolic acceleration (Hinkle & Cheever, 2018). The results of the patient's diagnostic procedures and the signs and symptoms present indicate that my patient has gangrene of the 5th toe due to PAD.

The assessment and diagnosis show that my patient has PAD. An arteriography arterial duplex of the right lower extremity indicates PAD. The results show a severe peripheral vascular arterial disease of the right lower extremity, a right common femoral artery mild diameter stenosis, segmental occlusion of the right superficial femoral artery, occluded right popliteal artery, occluded dorsalis pedis artery, and posterior tibial artery with the segmental flow with monophasic waveform. (Sarah Bush Lincoln Hospital, 2020). Other assessment findings help diagnose this patient with having PAD. The patient's past medical history, signs and symptoms

of pain in the feet only relieved by them being in a dependent position, and the physical assessment of gangrene of the right 5th toe and other physical signs and symptoms help reinforce his diagnosis of PAD.

The patient has undergone diagnostic testing to diagnose and guide the plan of care. Medications are currently managing the patient's infection and PAD, along with fem-pop surgery to open up the arteries for better tissue perfusion (Sarah Bush Lincoln Hospital, 2020). A neurological assessment was performed to check the patient's mental status, and he is encouraged to stop smoking and drinking alcohol, and to make lifestyle improvements. The patient is turned every 2 hours, and is assited with active and passive range of motion (ROM) exercises to help with circulation.

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory concepts and clinical perspectives*. F.A. Davis Company.

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Sarah Bush Lincoln Hospital (2020, November 10). Diagnostic Tests. Lakeview College of Nursing, Charleston, IL.

Laboratory Data (15 points)

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	3.9–5	**3.89**	**3.29**	Erythropoietin (EPO) is a glycoprotein produced by the kidneys that regulates

				RBC production in the bone marrow. Low production of EPO may be associated with alcoholism with this patient. (Hinkle & Cheever, 2018).
Hgb	11-15.5	13.6	11.4	
Hct	33.2-45.3%	38.9	**32.8**	A low hematocrit level is caused by a decrease in EPO production, and may be associated with cirrhosis (Hinkle & Cheever, 2018).
Platelets	150-400(k)	197	157	
WBC	5-10(k)	8.3	10.3	
Neutrophils	45-80%	65	72.9	
Lymphocytes	11.8-46	19.0	14.4	
Monocytes	4.4-12	12.6	11.8	
Eosinophils	0-6.3	N/A	N/A	
Bands	< x 10^9/L	N/A	N/A	

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	135-145	137	137	
K+	3.5-5.0	3.9	4.2	
Cl-	98-107	102	108	
CO2	21-34	28	22	
Glucose	70-99	**91**	**112**	The patient is a type 2 diabetic.
BUN	6-20	21	12	
Creatinine	0.5-0.9	0.7	0.5	

Albumin	3.5-5.2	N/A	N/A	
Calcium	8.6-10.4	9.4	**8.2**	Hypocalcemia is frequently observed in alcoholic patients due to various pathophysiologic mechanisms (Hinkle & Cheever, 2018)
Mag	1.6-2.4	N/A	1.9	
Phosphate	2.5-4.5	N/A	N/A	
Bilirubin	<1.2	0.3	0.3	
Alk Phos	32-100 U/L	82	68	
AST	<32	16	14	
ALT	<33	12	11	
Amylase	50-150	N/A	N/A	
Lipase	10-140 U/L	N/A	N/A	
Lactic Acid	0.4-2.3	N/A	N/A	
Troponin	0-0.4 ng/mL	N/A	N/A	
CK-MB	5-25 IU/L	N/A	N/A	
Total CK	22-198 U/L	N/A	N/A	

Other Tests Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0.86-1.14	N/A	N/A	
PT	11.9-15	N/A	N/A	
PTT	23-37	N/A	N/A	

D-Dimer	< 500ng/mL	N/A	N/A	
BNP	<100pg/mL	N/A	N/A	
HDL	> 40	N/A	N/A	
LDL	< 100	N/A	N/A	
Cholesterol	< 200	N/A	N/A	
Triglycerides	< 150	N/A	N/A	
Hgb A1c	0-5.7	N/A	N/A	
TSH	0.358-3.740	N/A	N/A	

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow/Clear	N/A	Light Yellow/**Cloudy**	The patient is taking antibiotics for bacterial infection.
pH	4.5-8.0	N/A	5.5	
Specific Gravity	1.005-1.035	N/A	1.015	
Glucose	< 0.8 mml/L	N/A	Normal	
Protein	6.4-8.4 g/dL	N/A	Trace (A)	
Ketones	0.6-1.5	N/A	Negative	
WBC	5-10(k)	N/A	**12**	The patient is taking antibiotics for bacterial infection.
RBC	3.9-5.0	N/A	**8**	The patient is taking albumin to restore blood volume.
Leukoesterase	4.5-11(k)	N/A	1+ (A)	

Arterial Blood Gas Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	7.35-7.45	N/A	N/A	
PaO2	75-100	N/A	N/A	
PaCO2	35-45	N/A	N/A	
HCO3	22-26	N/A	N/A	
SaO2	>92%	N/A	N/A	

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Straw	N/A	N/A	Preliminary negative
Blood Culture	N/A	N/A	N/A	
Sputum Culture	N/A	N/A	N/A	
Stool Culture	N/A	N/A	N/A	

Lab Correlations Reference (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Normal Lab Values - Common Laboratory Values. (n.d.). Retrieved from https://www.meditec.com/resourcestools/medical-reference-links/normal-lab-values/

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

XR Toe(s) 2 or Greater Views Right. Impression: No acute osseous abnormality. No bony erosive changes.

CT Angiography Abdomen Aorta and Runoff w/Contrast indicative of PAD. Impression:

1. High-grade stenosis in the origin of the celiac trunk and moderate stenosis in the origin of the SMA due to atherosclerotic plaque.
2. The right external iliac artery is thrombosed.
3. The right superficial femoral artery is thrombosed. There is collateral flow in the right popliteal artery where there are multiple moderate stenosis.
4. There is three-vessel runoff to the right foot via collateralization at the level of the popliteal artery.
5. The left external iliac artery is thrombosed.
6. The left superficial femoral artery is thrombosed. There is collateral flow in the left popliteal artery where there are multilevel moderate stenosis.
7. There is three-vessel runoff to the left foot provided via collateralization at the level of the popliteal artery.

XR Foot Complete 3 or Greater Views Right. Impression: No acute osseous abnormality.

US Duplex Right Lower Extremity Arteries or Arterial Bypass Grafts. Impressions:

1. Severe peripheral vascular arterial disease right lower extremity.
2. Right common femoral artery mild diameter stenosis. Biphasic waveform suggesting upstream iliac artery stenosis. Mixed plaque with calcium and soft plaque.
3. Segmental occlusions of the right superficial femoral artery.
4. Occluded right popliteal artery.
5. Occluded dorsalis pedis artery.

6. Posterior tibial artery with segmental flow with monophasic waveform.

US Duplex Right Lower Extremity Veins. Impression: No evidence of deep vein thrombosis (DVT).

Diagnostic Test Correlation (5 points):

The x-ray on the right toe supports the right 5th toe's gangrene and indicates that there is no bone abnormalities or erosion present in the toe.

The CT Angiography Abdomen Aorta and Runoff w/Contrast indicates that the left and right iliac and the left and right femoral arteries are thrombosed with atherosclerotic plaque.

The x-ray on the right foot supports that there is no bone abnormality, or osteomyelitis present with the extremity.

The US Duplex Right Lower Extremity Arteries or Arterial Bypass Grafts supports that this patient has severe PAD and required femoral-popliteal surgery to open up the right femoral and right popliteal arteries.

The US Duplex Right Lower Extremity Veins indicate that there is no DVT present in the right extremity.

Diagnostic Test Reference (APA):

Bypass graft evaluation (2020). Retrieved from https://health.ucdavis.edu/vascular/lab/exams/vein_graft.html

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Sarah Bush Lincoln Hospital (2020, November 10). Diagnostic Tests. Lakeview College of Nursing, Charleston, IL.

Current Medications (10 points, 1 point per completed med)
10 <u>different</u> medications must be completed

Home Medications (5 required)

Brand/Generic	**Accuneb (albuterol)-**	**Symbicort (budesonide)**	**Lasix (furosemide)**	**Folvite (folic acid)**	**Thiamine (vitamin B1)**
Dose	2.5mg/3mL inhale	160 mcg = 4.5 mcg inhale	40 mg	1 mg	100 mg tablet
Frequency	Every 4 hours PRN	Twice per day	BID	Daily	Daily
Route	Inhalant	Inhalant	IV	PO	PO
Classification	Bronchodilator	Corticosteroid	Loop diuretic	Water-soluble vitamin	Water-soluble vitamin
Mechanism of Action	Binds to beta2-adrenergic receptors in airway smooth muscle, leading to activation of adenyl cyclase and increased levels of cyclic-adenosine monophosphate(cAMP). Increases in cAMP activate kinases, which inhibit the phosphorylation of myosin and decrease intracellular calcium — decreased intracellular calcium relaxes smooth muscle airways. Relaxation of airway smooth muscle with subsequent bronchodilation.	It is a potent, locally acting anti-inflammatory and immune modifier. It decreases the frequency and severity of asthma attacks. It improves asthma symptoms.	Inhibits the reabsorption of sodium and chloride from the loop of Henle and distal renal tubule. Increases renal excretion of water, sodium, chloride, magnesium, potassium, and calcium. Effectiveness persists in impaired renal function.	Necessary for formation of coenzymes in metabolic systems (purine and pyrimidine synthesis required for maintenance in erythropoiesis); stimulates platelet production in folate deficiency anemia. Enhances elimination of formic acid in methanol toxicity via provisions of coenzyme to folate	Forms thiamine pyrophosphate by combining with adenosine triphosphate; essential coenzyme in carbohydrate metabolism.

	Relatively selective for beta2 (pulmonary) receptors. Therapeutic Effects: Bronchodilation.			dehydrogenase. .	
Reason Client Taking	COPD	COPD	Reduce edema due to heart failure	Reduces neural tube defects	Wernicke Encephalopathy
Contraindications (2)	1) Hyperthyroidism 2) Glaucoma	1) Acute attack of asthma 2) immunosuppression	1) Hepatic coma/anuria 2) Cross-sensitivity with thiazides and sulfonamides may occur.	1) Hypersensitivity to preservatives, colorants, or additives, including tartrazine, saccharin, and aspartame (oral forms). 2) Patients with anemia of undetermined cause.	1) In pregnancy (doses exceeding the recommended daily average). 2) Acute thiamine deficiency reported with dextrose administration
Side Effects/Adverse Reactions (2)	1) Supraventricular tachycardia 2) Hyperglycemia	1) Otitis media 2) Pharyngitis	1) Tinnitus 2) Stevens-Johnson Syndrome	1) Bronchospasm 2) Erythema	1) Cyanosis 2) Diaphoresis
Nursing Considerations (2)	1) Use cautiously in patients with cardiac disorders, diabetes mellitus, digitalis intoxication, hypertension, hyperthyroidism	1) Monitor respiratory status and lung sounds. Assess pulmonary function tests periodically during and for several months following a transfer from	1) Assess fluid status. Monitor daily weight, intake and output ratios, amount and location of edema, lung sounds, skin turgor, and	1) Except during pregnancy and lactation, folic acid should not be given in therapeutic doses greater than 0.4 mg	1) Use cautiously in pregnant patients (doses > RDA 2) Hypersensitivity reactions reported following repeated parenteral doses.

	, or history of seizures. 2) Monitor serum potassium level because albuterol may cause transient hypokalemia.	systemic to inhalation corticosteroids. 2) Advise patients using inhalation corticosteroids and bronchodilator to use bronchodilator first and to allow 5 min to elapse before administering the corticosteroid, unless otherwise directed by health care professional.	mucous membranes. Notify health care professional if thirst, dry mouth, lethargy, weakness, hypotension, or oliguria occurs. 2) Diuretic use is associated with increased risk for falls in older adults. Assess falls risk and implement fall prevention strategies.	daily until pernicious anemia has been ruled out. 2) Use caution when giving the parenteral preparations to premature infants. These preparations contain benzyl alcohol and may produce a fatal gasping syndrome in premature infants.	
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	1) May cause transient decrease in serum potassium concentrations with nebulization or higher-than-recommended doses. 2) Assess lung sounds, pulse, and BP before administration and during peak of medication. Note amount, color, and character of sputum produced.	1) Periodic adrenal function tests may be ordered to assess the degree of hypothalamic-pituitary-adrenal (HPA) axis suppression in chronic therapy. Children and patients using higher than recommended doses are at the highest risk for HPA suppression. 2) May cause an increase in serum and urine glucose concentrations if	1) Monitor electrolytes, renal and hepatic function, serum glucose, and uric acid levels before and periodically throughout therapy. Commonly decreased serum potassium. May cause decreased serum sodium, calcium, and magnesium concentrations.	1) Test using Schilling test and serum vitamin B12 levels to rule out pernicious anemia. Therapy may mask signs of pernicious anemia while the neurologic deterioration continues. 2) Physically asses for skin lesions, color; adventitious	1) Acute thiamine deficiency reported with dextrose administration; use caution when thiamine status is uncertain. 2) Parenteral products may contain aluminum; use caution in patients with impaired renal function.

		significant absorption occurs.	May also cause elevated BUN, serum glucose, creatinine, and uric acid levels. 2) Assess for allergy to sulfonamides.	sounds; CBC, Hgb, Hct, serum folate levels, serum vitamin B12 levels, Schilling test.	
Client Teaching needs (2)	1) Teach patient to use inhaler. Tell him to shake canister before use and to check that a new canister is working y spraying it the appropriate number of times into the air while looking for a fine mist. 2) Instruct patient to wash mouthpiece with water once a week and let it air dry.	1) Advise patient to take medication as directed. Take missed doses as soon as re-membered unless almost time for next dose. Advise patient not to discontinue medication without consulting health care professional; gradual decrease is required. 2) Advise patients using inhalation corticosteroids and bronchodilators to use the bronchodilators first and to allow 5 min to elapse before administering the corticosteroid unless otherwise directed by a health care professional.	1) Instruct patient to consult health care professional regarding a diet high in potassium. 2) Advise patient to contact health care professional of weight gain more than 3 lbs in 1 day.	1) Encourage patient to comply with recommendat ions of health care professional. Explain that the best source of vitamins is a well-balanced diet with foods from the 4 basic food groups. 2) Report rash, difficulty breathing, pain or discomfort at injection site.	1) Teach patient of use to prevent or treat thiamine (vitamin B1) deficiency. 2) Instruct patient to contact doctor or get medical help if any side effects persist, such as nausea, sensation of warmth, restlessness, diaphoresis, weakness, severe abdominal pain, vomiting, black tarry stools, or shortness of breath.

Hospital Medications (5 required)

Brand/Generic	**Prinivil (lisinopril)**	**Norco (hydrocodone bitartrate-acetaminophen)**	**Narcan (naloxone)**	**Zofran (ondansetron)**	**Protonix (pantoprazole)**
Dose	5 mg tablet	5mg-325mg tablet	0.4 mg = 1 mL injectable	4 mg = 2 mL injectable	40 mg tablet
Frequency	Daily	Every 4 hours PRN	PRN	Every 6 hours PRN	Daily
Route	PO	PO	IV Push	IV Push	PO
Classification	Antihypertensive	Analgesic	Lipid-lowering agent	Antiemetic	Antiulcer
Mechanism of Action	May reduce blood pressure by inhibiting conversion of angiotensin I to angiotensin II, which is a vasoconstrictor that also stimulates adrenal cortex to secrete aldosterone that reduces sodium and water reabsorption and increases their excretion, thereby reducing blood pressure.	Bind to opiate receptors in the CNS. Alter the perception of and response to painful stimuli while producing generalized CNS depression: Suppress the cough reflex via direct central action. A decrease in the severity of moderate pain. Suppression of the cough reflex.	Briefly and competitively antagonize mu, kappa, and sigma receptors in the CNS, thus reversing analgesia, hypotension, respiratory depression, and sedation caused by most opiods.	Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve terminals in the intestine.	Inhibits the hydrogen-potassium adenosine triphosphatase enzyme in gastric parietal cells.
Reason Client Taking	Reduce hypertension	Reduce pain	Opioid overdose	Reduce nausea	Reduce GERD symptoms

Contraindications (2)	1) Diabetes 2) Renal impairment	1) Hypercarbia 2) Respiratory depression	1) Nausea 2) Vomiting	1) Concomitant use of apomorphine. 2) Congenital long QT syndrome	1) Acute interstitial nephritis 2) Bronchospasm
Side Effects/Adverse Reactions (2)	1) Depression 2) Orthostatic hypotension	1) Lethargy 2) Peripheral edema	1) Excitement 2) Cardiac arrest	1) Dystonia 2) Torsade's de pointes	1) Confusion 2) *Clostridium difficile* associated with diarrhea
Nursing Considerations (2)	1) Be aware that Lisinopril should not be given to a patient who is hemodynamically unstable after an acute MI. 2) Monitor blood pressure often, especially during the first 2 weeks of therapy and whenever the dose is increase. If excessive hypotension develops, expect to withhold drug for several days.	1) Be aware that opioid therapy should only be used concomitantly with benzodiazepines in patients for whom other treatment options are inadequate. 2) Monitor patient for respiratory depression.	1) Keep resuscitation equipment readily available during naloxone administration. 2) Administer parenteral Narcan brand by IV route whenever possible.	1) Place disintegrating tablet or oral soluble film on patient's tongue immediately after opening package. It dissolves in seconds. 2) Use calibrated container or oral syringe to measure dose of oral solution.	1) Don't give within 4 weeks of testing for *Helicobacter pylori* because may lead to false-negative results. 2) Expect to monitor PT/INR during therapy if patient takes an oral anticoagulant.
Key Nursing Assessment(s)/ Lab(s) Prior to Administration	1) May cause hyperkalemia 2) Monitor renal function. May cause	1) May cause elevated plasma amylase and lipase concentra-tions	1) Evaluate serum cholesterol and triglyceride levels before	1) Implement appropriate manual therapy techniques, physical	1) Monitor signs of hyperglycemia (drowsiness, fruity breath, increased

	increase in BUN and serum creatinine.	2) If an opioid antagonist is required to reverse respiratory depression or coma, naloxone is the antidote. Dilute the 0.4-mg ampule of naloxone in 10 mL of 0.9% NaCl and administer 0.5 mL (0.02 mg) by direct IVpush every 2 min. For children and patients weighing40 kg, dilute 0.1 mg of naloxone in 10 mL of 0.9% NaCl for a concentration of 10 mcg/mL and administer 0.5mcg/kg every 2 min. Titrate dose to avoid withdrawal, seizures, and severe pain.	initiating, after 2– 4 weeks of therapy, and periodically thereafter. 2) Monitor liver function tests prior to initiation of therapy, and as clinically indicated. If symptoms of serious liver injury, hyperbilirubinemia, or jaundice occurs, discontinue atorvastatin and do not restart. May also cause elevated alkaline phosphatase and bilirubin levels.	agents, and therapeutic exercises to reduce pain and help wean patient off opioid analgesics as soon as possible. 2) Because of the risk of arrhythmias and abnormal BP response, use caution during aerobic exercise and other forms of therapeutic exercise. Assess exercise tolerance frequently (BP, HR, RR, fatigue levels), and terminate exercise immediately if any untoward response occur.	urination, unusual thirst). Patients with DM should check blood glucose levels frequently. 2) Monitor improvements in GI symptoms (gastritis, heartburn, and so forth) to help determine if drug therapy is successful.
Client Teaching needs (2)	1) Explain that Lisinopril helps to control, but do not cure, hypertension and that patient may need lifelong therapy.	1) Instruct patient to take drug exactly as ordered and not to adjust dosage without speaking to prescriber first. 2) Urge patient to consume plenty	1) Inform patient or family that naloxone will reverse opioid-induced adverse reactions.	1) Advise patient to use calibrated container or oral syringe to measure oral solution. 2) Advise patient to	1) Instruct patient to swallow tablets whole and not to chew or crush them. 2) Instruct patient to take 30 minutes before a

	2) Advise patient to take Lisinopril at the same time every day.	of fluids and high-fiber foods to prevent constipation.	2) Urge opioid-dependent patient to seek drug rehabilitation .	immediately report signs of hypersensitivity, such as rash.	meal.

Medications Reference (APA):

Davis, F.A. (2020, November 12). *Online Resource Center for Instructors and Students*. https://davisplus.fadavis.com

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

RNpedia (2020, November 12). *Complete Nursing Notes and Community*. https://www.rnpedia.com/

Sarah Bush Lincoln Hospital (2020, November 10). Document. Lakeview College of Nursing, Charleston, IL.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** A&Ox1 Pt is alert and oriented to self. **Orientation:** A&Ox1 Pt is alert and oriented to self. **Distress:** No acute distress **Overall appearance:** Appears stated age	Patient is A&Ox1, no acute distress, and appears stated age.
INTEGUMENTARY (2 points): **Skin color:** Redness of lower extremities bilaterally **Character:** Dry and scaly mottled skin, thick toenails, cold and cyanotic.	The lower extremities are hairless bilaterally, redness, dry and scaly mottled skin, thick toenails, cold and cyanotic, with an absent pulse of the left foot via Doppler. Skin turgor is

Temperature: cold feet bilaterally **Turgor:** Appropriate for age **Rashes:** No noted rashes **Bruises:** No noted bruises **Wounds:** No noted wounds **Braden Score:** 13 **Drains present: Y☒ N ☐** **Type:** Urinary catheter	appropriate for age. No noted lesions or rashes. Braden Score of 13 indicates risk for developing pressure ulcer.
HEENT (1 point): **Head/Neck:** Head is normocephalic and atraumatic. Trachea is midline **Ears:** TMs pearly gray bilaterally. **Eyes:** Anisocoria present **Nose:** No noted deviated septum, polyps or turbinates. **Teeth:** Teeth are present and appropriate for age	Patient has no palpable lymph nodes. Head is normocephalic and atraumatic. Trachea is midline. Right eye pupil is significantly larger than the left eye (anisocoria). TMs pearly gray bilaterally. No noted deviated septum, polyps or turbinates. Moist mucus membranes, no noted exudate, lesions, erythema around the head and neck.
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** dorsalis pedis 2+ on right foot postop. Absent pulse of left foot. **Capillary refill:** <3 seconds upper extremities bilaterally and right lower extremity. >3 seconds of left lower extremity. **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1, S2 detected. No noted murmurs, gallops, or rubs. Capillary refill <3 seconds upper extremities bilaterally and right lower extremity. >3 seconds of left lower extremity. 2+ pedal pulse of right foot postop. Absent pulse of left foot. No noted deformities.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Lungs CTA bilaterally, no noted wheezes, rhonchi, or crackles.
GASTROINTESTINAL (2 points): **Diet at home:** Regular **Current Diet:** Clear fluids **Height:** 180 cm **Weight:** 65.6 kg **Auscultation Bowel sounds:** Active in all four quadrants **Last BM:** I did not inspect last bowel movement **Palpation: Pain, Mass etc.:**	Bowel sounds active in all four quadrants. No pain upon palpation.

Inspection: No noted lesions or rashes **Distention:** No noted distention **Incisions:** Fem-pop surgical site of right leg **Scars:** No noted scars **Drains:** Urinary catheter **Wounds:** No noted wounds **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	
GENITOURINARY (2 Points): **Color:** Yellow **Character:** Yellow color, Clear **Quantity of urine:** 285 mL voided in 5 hours. **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** I did not inspect genitals **Catheter: Y ☒ N ☐** **Type:** Indwelling Foley catheter **Size:**	Patient urinated a total of 285 mL in 5 hours on 11/10/2020. Polyruia (57 mL/hr). Patient has diabetes mellitus.
MUSCULOSKELETAL (2 points): **Neurovascular status:** All 4 extremities are atraumatic, well developed, and move without difficulty (MAEW). Noted erythema and cyanosis of lower extremities bilaterally. **ROM:** Intact in the upper and lower extremities bilaterally. Severe pain felt upon moving lower extremities. **Supportive devices:** None **Strength:** 5/5 in upper and lower extremities bilaterally. **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** 50 **Activity/Mobility Status:** Patient needs assistance to ambulate **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk ☒**	Hand grips equal bilaterally. DTRs intact. ROM intact in the upper and lower extremities bilaterally, 5/5 musculoskeletal strength in upper and lower extremities bilaterally. Severe pain felt upon moving lower extremities. Erythema and cyanosis noted of lower extremities bilaterally. Patient is a fall risk as evidence by Morse Fall Scale of 50. Patient needs assistance to ambulate.

NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** Pt oriented to self only **Mental Status:** A&Ox1. Altered mental status **Speech:** Incoherent **Sensory:** Intact **LOC:** Normal for appropriate age	Patient is A&Ox1. He is able to orient to self only. Altered mental status. Muscle strength and sensation intact in upper and lower extremities bilaterally. No noted nuchal rigidity or meningeal signs.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** The patient is incoherent to the conversation. **Developmental level:** Altered mental status **Religion & what it means to pt.:** The patient is incoherent to the conversation. **Personal/Family Data (Think about home environment, family structure, and available family support):** The patient is married and lives at a nursing home.	The patient is incoherent to the conversation. The patient is married and lives at a nursing home.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	98	149/69	13	37.2 C	100% on RA
1100	87	138/66	11	37.1 C	100% on RA

Vital Sign Trends: Vital signs stable, continue to monitor patient.

Pain Assessment, 2 sets (2 points)

Time	Stanford Pain Scale	Location	Severity	Characteristics	Interventions
0700	8/10 (0-	Lower	Moderate	Pain would	Administered Toradol

	10 pain scale)	extremities bilaterally		subside when legs were in dependent position.	(ketorolac) 15mg = 1mL IV push.
1100	8/10 (0-10 pain scale)	Lower extremities bilaterally	Moderate	Pain would subside when legs were in dependent position.	Administered Norco (hydrocodone/acetaminophen) 2 tablets as prescribed.

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 18 gauge **Location of IV:** Right AC **Date on IV:** 11/09/2020 **Patency of IV:** Patent, no phlebitis/infiltration present, infusing without difficulty **Signs of erythema, drainage, etc.:** No noted signs of erythema, drainage, etc. **IV dressing assessment:** Clean, dry, and intact	NS 0.9% NaCl drip 1,000 mL at 100 mL/hr. NS 0.9% NaCl drip 1,000 mL at 75 mL/hr.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
NS 0.9% NaCl drip 1,000 mL at 100 mL/hr. NS 0.9% NaCl drip 1,000 mL at 75 mL/hr.	Urine = 285 mL total voided in 5 hours

Nursing Care

Summary of Care (2 points)

Overview of care:

The patient is a 67-year-old male and has a past medical history of Wernicke's syndrome, Alcoholism, COPD, Dementia, Diabetes Mellitus, and currently smokes five packs a day. He

has been diagnosed with having necrosis of the right 5th toe, and diagnostic tests have indicated he has an infection and severe PAD.

He is A&Ox1 and does not seem to comprehend where he is or why he is at the hospital. This patient is married but lives at a nursing home and complains of pain in both of his feet. He shows impaired skin integrity of his lower extremities bilaterally, impaired mobility, altered mental status, altered tissue perfusion, fatigue, weakness, and is a fall risk (Morse Fall Scale of 50). He currently had a femoral-popliteal surgery of his right leg on 11/09/20.

I was with the patient's nurse during my stay with the patient, and I informed the nurse of my findings during my assessment. The patient urinated 285 mL in 5 hours (polyuria). The patient complained of lower extremity pain bilaterally and rated his pain at 8/10 on a 0-10 pain scale (Stanford Pain Scale) at 0700 and was given Toradol (ketorolac) 15mg/1mL IV push. He has an 18 gauge IV in the right AC dated 11-09-20. The patient's medications consisted of lisinopril 5mg PO; Norco 5mg-325mg PO; naloxone 1mL IV push; ondansetron 2mL IV push; pantoprazole 40mg PO; alvimopan 12mg PO; apixaban 2.5mg PO; cefepime 1,000mg IV piggyback; and ketorolac 1mL IV push. He did not show any signs of acute distress, and his vital signs remained stable throughout my time with him. The patient had an x-ray of the right gangrene toe, a CT angiography of the abdomen and aorta with contrast, an x-ray of the right foot, an ultrasound of the right foot arteries/arterial bypass grafts, and an ultrasound of the right lower extremity veins to rule out DVT. The patient's physical assessment noted anisocoria, impaired skin integrity of his lower extremities bilaterally, impaired mobility, altered mental status, altered tissue perfusion, fatigue, weakness, and fall risk (Morse Fall Scale of 50). He is being monitored continuously until the hospitalist determines the appropriate treatment. The patient never left the floor and was ambulated to sit in a recliner as prescribed.

I anticipate that the patient will have another fem-pop done on his left leg due to the absence of pulse via Doppler and stay at the hospital until he can maintain normal lab values, urine production, and PAD management. The patient will return to his nursing home upon discharge.

Procedures/testing done: XR Toe(s) 2 or Greater Views Right; CT Angiography Abdomen Aorta and Runoff w/Contrast; XR Foot Complete 3 or Greater Views Right; US Duplex Right Lower Extremity Arteries or Arterial Bypass Grafts; US Duplex Right Lower Extremity Veins.

Complaints/Issues: "Pain in lower feet"

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: Clear fluid diet. Patient tolerating diet and activity.

Physician notifications: Monitor infection; fluid restoration; check daily weight; strict I&O.

Future plans for patient:

Plans will require ineffective tissue perfusion management to remove vasoconstricting factors like smoking and alcohol cessation and diet improvement.

Plans will also include improving peripheral blood flow via diet and exercise, reducing metabolic demands on the body, and patient participation in understanding the disease process and the treatments in preventing complications.

The patient will require assistance with ADLs and management with a care plan at the nursing home where he resides.

Discharge Planning (2 points)

Discharge location: The patient will return to his assisted living facility upon discharge.

Home health needs (if applicable): The patient requires a visit from a Care Coach to educate the primary caregivers of the patient's management and assistance with ADLs.

Equipment needs (if applicable): None.

Follow up plan: The patient will follow up with her PCP in one week following discharge.

Education needs:

The patient and the patient's caregivers will be educated on the causes of PAD before being discharged (i.e., smoking cessation, alcohol cessation, hypertension, hyperlipidemia, etc.). The patient will be educated on the symptoms of PAD, such as claudication, leg numbness or weakness, coldness of lower extremities, and sores on toes that won't heal. The patient and his caregivers will be educated on when he should see his doctor, and the types of treatments (i.e., medications, diet and lifestyle changes).

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective tissue perfusion related to PAD as evidence by necrosis of the right 5th toe.	The patient's chief complaint upon admission was bilateral foot pain and gangrene of right	1. Submit patient to diagnostic testing. 2. Check mental status by performing a	* The patient is cooperative and agrees with intervention. * The patient's caregivers understand that

	5th toe.	neurological assessment.	angiograms, Doppler flow studies, segmental limb pressure measurement such as ankle-brachial index (ABI), and vascular stress testing are a variety of tests available depending on the cause of the impaired tissue perfusion.
2. Ineffective tissue perfusion related to plaque buildup as evidence by smoking five packs per day and alcoholism.	The patient's social history indicate that he is a current smoker and alcoholic, and evidence-based data suggests smoking and heavy drinking increases the formation of plaque in blood vessels.	**1.** Encourage smoking and drinking alcohol cessation. **2.** Encourage change in lifestyle to improve tissue perfusion (avoiding smoking and drinking alcohol, reducing risk factors for atherosclerosis [hypertension, dyslipidemia, inactivity, obesity]).	* The patient is cooperative and agrees with intervention. * The patient and the patient's caregivers understand that smoking tobacco and alcoholism causes catecholamine to be released into the bloodstream, resulting in vasoconstriction and ineffective tissue perfusion. Smoking and alcohol cessation and lifestyle change measures reduce venous compression/venous stasis and arterial vasoconstriction.
3. Risk for ineffective therapeutic regime management related to cognitive impairments as evidence by A&Ox1 (oriented to self only).	The patient is incoherent to conversation, and speaks unclearly when asked a question.	**1.** Assess the patient's ability to absorb or recognize the desired health-related activity. **2.** Administer medications as prescribed to treat underlying problems, and note response.	* The patient is cooperative and agrees with intervention. * The patient's caregivers understand that cognitive impairments need to be recognized so that a suitable alternative plan can be devised. Once problems are classified, alternative actions can be initiated. Medications facilitate

			perfusion for most causes of impairment. For example, anticoagulants help reduce blood viscosity and coagulation; peripheral vasodilators enhance arterial dilation and improve peripheral blood flow; antihypertensives reduce systemic vascular resistance and optimize cardiac output and perfusion; inotropes enhance cardiac output.
4. Risk for impaired skin integrity related to prolonged rest periods as evidence by decreased activity level.	The patient states that his pain worsens with ambulation and improves when legs are in a dependent position.	**1.** Inspect skin, noting skeletal prominences, and absence of pulses, areas of altered circulation, or weakness. **2.** Ensure patient turns every 2 hours, and assist with active and passive range of motion (ROM) exercises.	* The patient is cooperative and agrees with intervention. * The patient's caregivers understand that these interventions reduces pressure on tissues, improves circulation and promotes blood flow. The goals and outcomes are for the patient to demonstrate behaviors/techniques to prevent skin breakdown and maintain skin integrity.
5. Risk for falls related to weak gait as evidence by Morse Fall Scale of 50.	The patient's subjective data indicate weakness, fatigue, and altered mental status, making him a fall risk.	**1.** Move items used by the patient within easy reach, such as call light, water, and telephone. **2.** Make sure beds are at the lowest position, and use side rails as needed.	* The patient is cooperative and agrees with intervention. * The patient's caregivers understand that these interventions prevent the patient from going out of bed without assistance, and reduce the risk for falls.

Other References (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Swearingen, P. L. (2016). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, psychiatric nursing care plans*. Elsevier/Mosby.

Concept Map (20 Points):

Subjective Data

Pain in lower extremities bilaterally
Altered mental status
Weakness
Fatigue

Objective Data

Gangrene of right fifth toe
X-ray of right toe
CT Angiography Abdomen Aorta and Runoff w/Contrast
X-ray of right foot
Ultrasound of right lower extremity arteries or arterial bypass grafts
Ultrasound of right lower extremity veins.

Patient Information

The patient is a 67-year-old male and has a past medical history of Wernicke's syndrome, alcoholism, COPD, dementia, Diabetes Mellitus, and smoking. The patient arrived at the ED with having necrosis of the right fifth toe. He is diagnosed with having PAD.

Nursing Diagnosis/Outcomes

Ineffective tissue perfusion related to PAD as evidence by necrosis of the right 5th toe.
Outcome: The patient demonstrates adequate tissue perfusion as evidenced by vital signs within acceptable limits.
Ineffective tissue perfusion related to plaque buildup as evidence by smoking five packs per day and alcoholism.
Outcome: Patient identifies necessary lifestyle changes, and stops smoking and drinking alcohol.
Risk for ineffective therapeutic regime management related to cognitive impairments as evidence by A&Ox1 (oriented to self only).
Outcome: Patient engages in behaviors or actions to improve tissue perfusion, and orients to person, place, and time.
Risk for impaired skin integrity related to prolonged rest periods as evidence by decreased activity level.
Outcome: The patient to demonstrate behaviors/techniques to prevent skin breakdown and maintain skin integrity.
Risk for falls related to weak gait as evidence by Morse Fall Scale of 50.
Outcome: The patient will not sustain a fall.

Nursing Interventions

Assess vital signs and submit patient to diagnostic testing
Check mental status by performing a neurological assessment.
Encourage smoking and drinking alcohol cessation.
Encourage change in lifestyle to improve tissue perfusion (avoiding smoking and drinking alcohol, reducing risk factors for atherosclerosis [hypertension, dyslipidemia, inactivity, obesity]).
Assess the patient's ability to absorb or recognize the desired health-related activity.
Administer medications as prescribed to treat underlying problems, and note response.
Inspect skin, noting skeletal prominences, and absence of pulses, areas of altered circulation, or weakness.
Ensure patient turns every 2 hours, and assist with active and passive range of motion (ROM) exercises.
Move items used by the patient within easy reach, such as call light, water, and telephone.
Make sure beds are at the lowest position, and use side rails as needed.