

Medications

Atorvastatin- HMG-CoA reductase inhibitor; antilipemic. Taking for morbid obesity. Nursing considerations include checking lipid panel before administration (Comerford & Durkin, 2023).

Cefdinir- Third-generation cephalosporin; antibiotic. Taking for cellulitis infection. Nursing considerations. Check for allergy to penicillin or cephalosporin (Comerford & Durkin, 2023).

Chlorhexidine- Antiseptic skin cleanser. Taking for wounds. Nurse should check for allergies to food, dyes, animals, or medicines (Multum, 2023).

Enoxaparin- Low-molecular-weight heparin; anticoagulant. Taking to prevent clot due to acute illness and decreased mobility. Nurse should check for allergy to heparin, pork products, or benzyl alcohol; possible drug interactions (Comerford & Durkin, 2023).

Continued in notes.

Lab Values/Diagnostics

Calcium- (8.7 mg/dL- 10.5 mg/dL) **8.6 mg/dL**- may be related to malnutrition as albumin is also low, the patient may not be eating well in the hospital setting, she is on admission day 5 (Pagana et. al., 2020).

Total Protein- (6.3 g/dL- 8.2 g/dL) **5.7 g/dL** may be due to acute or chronic infection related to cellulitis (Pagana et. al., 2020).

Albumin- (3.5 g/dL- 5.0 g/dL) **2.8 g/dL**- may be due to acute or chronic infection related to cellulitis (Pagana et. al., 2020).

CRP- (<0.50 mg/dL) **5.32 mg/dL**- may be attributed to the patient's cellulitis (Pagana et. al., 2020).

Continued in notes.

Demographic Data

Date of Admission: 9/13/2023

Admission Diagnosis/Chief Complaint: Cellulitis

Age: 48

Gender: Female

Race/Ethnicity: Caucasian

Allergies: see notes

Code Status: Full code

Height in cm: 167.6 cm.

Weight in kg: 171.3 kg.

Psychosocial Developmental Stage: generativity vs. stagnation

Cognitive Developmental Stage: formal operational

Braden Score: 14 moderate risks for pressure ulcer development

Morse Fall Score: 76 high risks for falls.

Infection Control Precautions: MRSA nasal- contact isolation

Admission History

The patient states that she came to the hospital because her left leg was swollen, hard to the touch, and painful. Unknown start date, but states that she stepped on walnuts outside of the home that grow there, which led her to fall and develop sores on her legs and feet. She also states that this has happened to her before, and that she goes to the hospital immediately.

Medical History

Previous Medical History: Arthritis, GERD, HTN, OSA, DM

Prior Hospitalizations: 7/25/23- OSA, diabetic foot infection; 8/11/23- ED Cellulitis.

Previous Surgical History: None

Social History: smokes cigarettes 0.25 packs per day. No smokeless tobacco, no alcohol, no drugs.

Pathophysiology

Disease process: Cellulitis is a bacterial infection commonly found on the lower legs. The dermis and surrounding tissue becomes overwhelmed by *streptococcus pyogenes* mostly, with methicillin resistant *Staphylococcus aureus* in close second. Patients who have diabetes and other immunosuppression are more likely to develop cellulitis, which makes this diagnosis appropriate for this patient. There is usually a break in the skin which allows the growth of bacteria to enter the dermis which can be associated with this patient's statement of stepping on walnuts in her yard (Brown & Hood Watson, 2023).

S/S of disease: Redness, warmth, swelling, inflammation, tenderness are local signs of infection related to cytokines and neutrophils responding to bacterial invasion of the dermis. The patient may also complain of weakness, general malaise, and fever. The skin may show dimpling and a non-specific area of redness (Brown & Hood Watson, 2023).

Method of Diagnosis: The physician will usually be able to diagnose cellulitis upon inspection, however labs and cultures may be drawn to get background and underlying conditions (Mayo Clinic, 2022).

Treatment of disease: The patient should be treated with antibiotic therapy related to the development of MRSA with Cephalosporin, and should be admitted if they are immunocompromised, such as with this patient (Brown & Hood Watson, 2023).

Active Orders

Diet- general, no special diet at home (Pagana, et. al., 2020).

CMP- monitor electrolytes for imbalances in blood (Pagana, et. al., 2020).

CBC- monitor blood cells for infection and circulation (Pagana, et. al., 2020).

Magnesium- monitor for cardiac patients (Pagana, et. al., 2020).

POCT Glucose- monitor glucose levels for diabetes (Pagana et. al., 2020).

PT eval for deconditioning- evaluate for loss of function due to cellulitis and obesity (Reddycare, 2023).

Continued in notes.

Physical Exam/Assessment

General: Appears awake and alert and oriented to person, place, time, and situation. She appears disheveled and starts verbalizing that she needs help organizing her things for discharge. She is in no apparent distress. Patient is morbidly obese.

Integument: Skin is warm and dry to the touch on upper extremities. Skin turgor is elastic. Lower extremities are reddened, warm and flaky. Wounds are present and dressed on bilateral feet, need to be changed by RN. Braden score 14, moderate risk for pressure injury. Performed wound cleaning with nurse, observed additional wounds under breast and abdominal folds that were treated with miconazole powder, silver sulfadiazine lotion and dressed.

HEENT: Head and neck are symmetrical, no visible abnormalities. Eyes are clear without drainage or redness. Nose septum is midline without visible drainage or bleeding. Patient is missing front teeth.

Cardiovascular: Clear S1 and S2 without murmurs, gallops, or rubs. Pulses 2+ on all extremities except RLE diminished. Capillary refill difficult to detect due to patient having very dry hands and nails. No edema, but skin blanches upon palpation on lower extremities. No verbalization of pain or discomfort.

Respiratory: Normal rate and pattern of respirations, symmetrical and non-labored. Lung sounds are clear throughout anterior/posterior bilaterally, no wheezing, crackles or rhonchi noted.

Genitourinary: Patient voided at bedside commode, 125 ml of dark yellow urine, s/p foley removal. No verbalization of pain during urination. Genitals cleaned with moistened wipes; Miconazole powder applied to skin folds around pubic area by nurse.

Gastrointestinal: General diet at home, continued during admission. 167.6 cm. 171.3 kg.

Musculoskeletal: ROM impaired, patient needs assistance to ambulate and perform activities of daily living. Performed pedal pushes and pulls 3+. Patient complains of tingling in left foot and hand tremors. Nail beds are very dry. Fall risk 76, very high. Patient has a cane from home, wants wheelchair assistance for discharge.

Neurological: Oriented x 4 as stated above. She has normal cognition, detect slight disability by the way she verbalizes and expresses herself. She can follow commands and has good memory. Her speech is clear, and she answers questions appropriately. Non-lethargic, alert, and ready to go home. She has good strength in her upper extremities to hold and organize her things for discharge.

Most recent VS (include date/time and highlight if abnormal): 9/18/23 @ 1500 Temp- 97.7 F, oral; BP 114/66; o2 96% RA; pulse 110, respirations 16.

Pain and pain scale used: Patient states that she has no pain.

<p align="center">Nursing Diagnosis 1</p> <p>Impaired skin integrity related to injury to the skin and poor circulation as evidenced by open wounds, redness, and inflammation.</p>	<p align="center">Nursing Diagnosis 2</p> <p>Risk for infection related to decreased immune function and improper hygiene.</p>	<p align="center">Nursing Diagnosis 3</p> <p>Deficient knowledge related to lack of understanding of treatment as evidenced by recurrent cellulitis.</p>
<p align="center">Rationale</p> <p>Patient has open wounds, diagnosed with cellulitis, need to maintain cleanliness, and decrease bacterial growth to heal.</p>	<p align="center">Rationale</p> <p>Patient verbalizes her lack of hygiene at home, putting her at risk for increased infection.</p>	<p align="center">Rationale</p> <p>Patient has a history of a learning disability; she may need more education regarding antibiotic use at home.</p>
<p align="center">Interventions</p> <p>Intervention 1: Assess all areas of skin, including underneath skin folds and perineum. Intervention 2: Cleanse skin with Chlorhexidine, apply Miconazole powder and silver sulfadiazine as needed. Apply clean dressings to create barrier against infection.</p>	<p align="center">Interventions</p> <p>Intervention 1: Educate the patient about the importance of proper hygiene. Intervention 2: Educate the patient about signs of worsening infection such as the development of fever, swelling in her lower extremity, and fatigue.</p>	<p align="center">Interventions</p> <p>Intervention 1: Review cleanser, powder, and ointment provided and the indications for wound treatment. Intervention 2: Review the importance of completing antibiotic therapy at home to decrease bacterial growth.</p>
<p align="center">Evaluation of Interventions</p> <p>Patient verbalizes appreciation for helping to clean and dress her wounds.</p>	<p align="center">Evaluation of Interventions</p> <p>Patient verbalizes understanding of education when she states that she will make more effort to maintain hygiene and to come back to the ER for any increase in symptoms.</p>	<p align="center">Evaluation of Interventions</p> <p>Patient verbalizes understanding about various treatment options provided during discharge.</p>

Allergies: Amoxicillin, bananas, codeine, crab (diagnostic; allergy skin test), fish oil, grape (artificial flavor), meloxicam, mold extract (trichophyton), morphine sulfate, peanut oil, penicillin, red dye, strawberry extract, tomato, almond oil, iodine, peanut, proanthocyanin, cherry, molds & smuts.

Medications continued:

Gabapentin- GABA analogue, anticonvulsant. Taking for diabetic neuropathy pain. The nurse should make sure patient does not have kidney disease or depression (Comerford & Durkin, 2023).

Lisinopril- ACE inhibitor; Antihypertensive. Taking for hypertension. The nurse should make sure the patient isn't pregnant and check serum potassium level before administration (Comerford & Durkin, 2023).

Miconazole 2% powder- Imidazole; Antifungals. Taking for cutaneous candidiasis in skin folds of perineum and upper body. The nurse should check for hypersensitivity to powder before administering (Comerford & Durkin, 2023).

Naproxen- NSAID. Taking for analgesic and anti-inflammatory properties. The nurse should check the patient's history for GI bleed, ulcer, or perforation because naproxen can increase the risk of fatal events relating to these symptoms (Comerford & Durkin, 2023).

Pantoprazole- PPI; Antiulcer drug. Taking for long-term maintenance related to GERD. The nurse should monitor magnesium levels in patients taking long-term treatment with this drug (Comerford & Durkin, 2023).

Silver sulfadiazine- Topical antibiotic. Taking for wounds. The nurse should check for allergies to sulfa before administering (Multum, 2023).

Tramadol- Synthetic centrally active analgesic; analgesic/controlled substance schedule IV. Taking for chronic pain possibly related to history of arthritis. The nurse should assess patient pain level before administration and risk factors for abuse (Comerford & Durkin, 2023)

References (3) (APA):

Brown, B. D., & Hood Watson, K. L. (2023). *Cellulitis*. National Center for Biotechnology Information. <https://pubmed.ncbi.nlm.nih.gov/31747177/>

Comerford, K. C., & Durkin, M. T. (Eds.). (2023). *Nursing2023 drug handbook*. Wolters Kluwer.

Multum, C. (2023). *Chlorhexidine topical Uses, Side Effects & Warnings*. Drugs.com. <https://www.drugs.com/mtm/chlorhexidine-topical.html>

Multum, C. (2023). *Silver sulfadiazine topical uses, side effects & warnings*. Drugs.com. <https://www.drugs.com/mtm/silver-sulfadiazine-topical.html>

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2020). *Mosby's Diagnostic and Laboratory Test Reference*. Elsevier.

Physical therapy for General Weakness & Deconditioning. Physical Therapy for General Weakness & Deconditioning: Reddy Care Physical & Occupational Therapy: Physical Therapists. (2023). <https://www.reddycare.net/blog/physical-therapy-for-general-weakness-deconditioning>

Pruthi, S. (2022). *Cellulitis*. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/cellulitis/symptoms-causes/syc-20370762>

Labs continued:

RBC- (3.8 10(6)/mcl- 5.3 10(6)/mcl) **3.42 10(6)/mcl-** may be related to anemia caused by chronic illness such as h/o HTN, arthritis, GERD (Pagana et. al., 2020).

HGB- (12 g/dL- 15.8 g/dL) **8.9 g/dL-** may be related to anemia caused by chronic illness such as h/o HTN, arthritis, GERD (Pagana et. al., 2020).

HCT- (36%- 47%) **28.2 %-** may be related to anemia caused by chronic illness such as h/o HTN, arthritis, GERD (Pagana et. al., 2020).

RDW- (11.8 %- 15.5%) **16.2%-** may be related to iron deficiency anemia possibly due to patient diet in the hospital (Pagana et. al., 2020).

MPV (9.7 fL-12.4 fL) **7.6 fL-** may be related to undiagnosed aplastic anemia (Pagana et. al., 2020).

Neutrophils (47%- 73%) **74.8%-** may be related to undiagnosed aplastic anemia or dietary deficiency (Pagana et. al., 2020).

Lymphocytes (18%- 42%) **12.4%-** may be related to undiagnosed immunodeficiency disease (Pagana et. al., 2020).

Diagnostics- none performed during this admission.

Active Order continued:

Admission weight- monitor for medications, obesity.

COVID vaccine screen- checking for isolation precautions.

I&O- monitor for fluid and electrolytes, metabolism.

Notify physician when prior to admission medication review complete- doctor wants medication reconciliation for patient safety.

Nursing night call instructions for IV and restraints- probably protocol.

Discharge orders reviewed by pharmacy- medications prepared for patient discharge.

D/C foley- discontinue foley catheter in preparation for discharge.

D/C IV- discontinue IV in preparation for discharge.

Insert IV peripheral- IV was inserted on admission to administer fluids and medications.

Orthostatic vitals- patient expressed dizziness on getting up.

Up with assistance- prevent patient fall.

Vitals per unit- protocol vitals for patients.

Wound care- The patient needs wound cleaning and dressing d/t cellulitis and open wounds.

Wound consult- patient needs doctor consultation regarding wounds.

