Medications

Enoxaparin (Lovenox): 40 mg = 0.4 mL, SubQ, daily.
- **Class:** pharmacologic class: low-molecular-weight heparin. Therapeutic class: anticoagulant (Jones & Bartlett, 2023)
- **Patient use:** help reduce probability of patient getting a blood clot.
- **Prior to admin:** look at platelet count to make sure result is not too low.

Melatonin: 6 mg= 2 tbs, oral, HS, PRN
- **Class:** minerals & electrolytes, miscellaneous anxiolytics, sedatives & hypnotics, Nutraceutical products (Drugs.com, 2023).
- **Patient use:** to help pt. sleep at night (insomnias)
- **Prior to admin:** make sure pt. is not allergic, take BP to make sure its not too low/high.

Morphine: 1 mg= 0.1 mL, IV push, Q2H, PRN
- **Class:** Pharmacologic class: opioid. Therapeutic class: opioid analgesic. Controlled substance schedule II (Jones & Bartlett, 2023).
- **Patient use:** to relieve severe abdominal pain from diverticulitis.
- **Prior to admin:** check pt. vital signs before administering as this med. Will decrease pulse, RR and BP.

Metronidazole (Flagyl): 500 mg = 100 mL, IV piggyback, Q6H
- **Class:** pharmacologic class: Nitroimidazole. Therapeutic class: antiprotozoal (Jones & Bartlett, 2023).
- **Patient use:** to help treat infection within the body that is causing the diverticulitis.
- **Prior to admin:** make sure to infuse antibiotic over 30 to 60 minutes.

Levofloxacin (Levaquin): 750 mg= 150 mL, IV piggyback, Q48H
- **Class:** pharmacologic class: Fluroquinolone. Therapeutic class: antibiotic (Jones & Bartlett, 2023).
- **Patient use:** antibiotic medication that treats bacterial infection in the diverticulum.
- **Prior to admin:** make sure IV fluids are ready to be administered as soon as antibiotic is finished. Needs to be taken with plenty of fluids.

Pantoprazole (Protonix): 40 mg- 1 tab, oral, daily
- **Class:** pharmacologic class: proton pump inhibitor. Therapeutic class: antiulcer (Jones & Bartlett, 2023).
- **Patient use:** to help with any signs or symptoms of GERD.
- **Prior to admin:** educate patient to swallow tablet whole, has a delayed-release coding on tablet.

Hydroxyzine pamoate (Vistaril): 25 mg= 1 tab, oral, QID, PRN
- **Class:** Pharmacological class: Piperazine derivative. Therapeutic class: anxiolytic, antiemetic, antihistamine, sedative-hypnotic (Jones & Bartlett, 2023).
- **Patient use:** patient has a history of anxiety.
- **Prior to admin:** Make sure educate patient to take whole, do not chew or crush up.

Lab Values/Diagnostics

Sodium: 132 (L)
- Normal range: 136-145
- Can be low result showing that the patient has a infectious colonic perforation.

Calcium: 8.0 (L)
- Normal range: 8.6- 10.3
- Because of the patient being 91, this is a non-modifiable complication of the body not being able to absorb calcium as it should.

RBC: 3.57 (L)
- Normal range: 3.80-5.41
- Loss of blood because of the inflammation of the diverticulum.

Hgb: 11.0 (L)
- Normal range: 11.3- 15.2
- Goes along with the loss of blood within the diverticulum.

Hct: 32.2 (L)
- Normal range: 33.2- 45.3
- Could be a sign that the patient is experiencing a lower gastrointestinal bleed with her diverticulitis.

Platelets: 135 (L)
- Normal range: 149-393
- Because of the bacterial infection that the patient is experiencing with her diverticulitis.

CT abdomen and pelvis w contrast: for abdominal pain. Findings- no acute pancreatic inflammation, Cystic lesion of the junction of the pancreatic body and tail measuring 1.5-0.7 cm.

Demographic Data

Date of Admission: 03/16
Admission Diagnosis/Chief Complaint: abd pain, diverticulitis, chronic back pain.
Age: 91
Gender: female
Race/Ethnicity: white
Allergies: NKA
Code Status: FULL
Height in cm: 163 cm
Weight in kg: 52.6 kg
Psychosocial Developmental Stage: appropriate for age.
Cognitive Developmental Stage: A&Ox4
Braden Score: 18
Morse Fall Score: 60
Infection Control Precautions: No precautions.

Admission History

91 yr-old female pt. came into ED with complaints of abdominal pain. Pt. states she woke up that morning with severe lower abdominal pain. Pain is sharp and constant. Pain is increased in her LLQ along with some pain in the RLQ as well. Pt. rated pain 10/10 on the numeric pain scale. Pt. came straight in ED when pain occurred, has not tried anything to ease pain.

Medical History

Previous Medical History: anxiety, CAD, HA, high cholesterol, former smoker, chronic back pain.

Prior Hospitalizations: For hysterectomy/tonsillectomy (date N/A), and for all back infusion, last one on (11/27/2023).

Previous Surgical History: cataracts (2016), hysterectomy (date N/A), tonsillectomy (date N/A), Bilateral lumbar facet joint denervation using fluoroscopy (11/27/2023).

Social History: past alcohol user 08/29/2019. Former smoker, quit w cigarettes, more than 30 days ago. Substance use of marijuana, daily starting at age 89, 09/12/2022, uses gummy forms. Lives with spouse at home.

Pathophysiology

Disease process: Diverticulitis is not fully understood. Studies show that it can results from obstruction and trauma to the diverticulum with subsequent ischemia and infection (Strate & Morris, 2019). This means that patients with diverticulitis results from a complex interaction of diet and lifestyle factors, mediations, genetics, and the gut microbiome (Strate & Morris, 2019). "Other explanations are feces or food particles become trapped in diverticula, resulting in bacterial overgrowth, distention, increased intraluminal pressure, muscle spasms, vascular compromise, and subsequent micro- or macro perforation (Hinkle, pg 1300 p 10, 2022). These results in defects of the mucosal barrier and immune function that led to an inflammatory cascade and mucosal inflammation (Strate & Morris, 2019).

S/S of disease: If patient is obese, intake of high fat diet, inactivity, and chronic use of medications/antibiotics. Other mild signs and symptoms could be "bowel irritability with intervals of alternation constipation and diarrhea, with nausea, anorexia, and bloating or abdominal distention (Hinkle, pg 1301 p 2, 2022). Patient could report acute onset of mild to severe pain in the left lower quadrant, along with tenderness and mass on palpation (Hinkle, 2022).

Methods of diagnosis: An adnominal CT scan with contrast agent is the diagnostic test of choice to confirm diverticulitis (Hinkle, 2022). This scan can also check for perforation and abscesses. Abdominal x-ray can also show free air under the diaphragm if a perforation has occurred from the diverticulitis (Hinkle, 2022). These tests can show whether the patient has uncomplicated diverticulitis or complicated diverticulitis and the need for surgical repair (Hinkle, 2022).

Treatment of diagnosis: Medical treatments depends on the severity of the diagnosis. Typically, these treatments with uncomplicated diverticulitis can be controlled with diet and medications. Along with rest, oral fluids, and analgesic medications that are recommended (Hinkle, 2022). Patient in the hospital will be initiated with a clear liquid diet until inflammation subsides, then can progress to high-fiber, low-fat diet along with education on intake of 2 L/day (Hinkle, 2022). Doing this can help with "increase in stool volume, decrease colonic transit time, and reduce intraluminal pressure" (Hinkle, pg. 1301 p 8, 2022). Broad-spectrum of antibiotics are also prescribed, along with opioids for pain.

Active Orders

- **Heat/ice therapy**
- **Strict I&O**
- **Intermittent SCD use**
- **Braden assessment**
- **Morse fall risk assessment.**
- **Ambulate with assistance.**
- **Soft diet**
- **Medication administration**

Physical Exam/Assessment

General: Alert, pt. seems to be comfortable resting in bed. Appears age appropriate and well-nourished. No acute signs of distress.

Integument: Skin is pink, warm, and dry. No diaphoresis. No rash or lesions noted.

HEENT: Head is normocephalic, atraumatic. Hearing intact. Moist mucosal membranes. No signs of drainage from nose, throat, or ears. Nose symmetrical, no deviation. Neck is non-tender, no JVD, lymph nodes nonpalpable.

Cardiovascular: Regular rate and rhythm, no murmurs, gallops, or rubs. No noted edema.

Respiratory: Clear on auscultation bilaterally in all lobes. No rales, rhonchi or wheezing noted. Breathing is non-labored. Chest rises and falls symmetrically with respirations.

Genitourinary: Output appropriate. Clear with no odor. No pain or retention.

Gastrointestinal: Bowel sounds present in all 4 quadrants. Soft and nondistended. Tenderness to the suprapubic area and left lower quadrant with palpation.

Musculoskeletal: No gross deformities or swelling. Capillary refill less than 3 seconds.

Neurological: Awake and alert x 4. No slurred speech and no facial drooping. Cooperative, appropriate mood and affect.

Most recent VS (include date/time and highlight if abnormal): 03/18 @ 0800- T: 36.3, P: 75, BP: 134/69, RR: 16, O2: 96%.

Pain and pain scale used: 03/18 @ 0800: 6/10 on the numeric scale.

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
Acute pain related to the inflammation of the diverticulum as evidence by the patient have LLQ pain, along with palpation during assessment (Phelps, 2023)	**Inactivity relating to the severe pain in the abdomen as evidence by the patient stating, "I cannot move, the pain is sharp and constant" (Phelps, 2023)**	**Diarrhea related to the inflammation and infection of the diverticulitis as evidence by the adnominal pain/cramping (Phelps, 2023)**
Rationale **The patients chief of complaint was her abdominal pain in her LLQ and radiating to her RLQ.**	**Rationale** **Patient came into the ED after waking early in the morning with sharp, constant pain in the lower abdomen.**	**Rationale** **Patient came in experiencing diarrhea instead on constipation with the infection of her diverticulitis.**
Interventions **Intervention 1: Administer medication as ordered/PRN.** **Intervention 2: Keep pt. NPO or on a clear liquid diet to help inflammation decrease.**	**Interventions** **Intervention 1: Once pain is controlled, get pt. up and moving 3x a day, as tolerated.** **Intervention 2: Assist pt. to get out of bed and walk to the bathroom to use the toilet in the bathroom, rather than using the commode next to her bed.**	**Interventions** **Intervention 1: maintain the CT scan results to help see where the inflammation/infection is in the diverticulum.** **Intervention 2: monitor dehydration symptoms.**
Evaluation of Interventions **Patient started showing signs on inflammation decreasing and was able to tolerate a regular diet by the time of discharge.**	**Evaluation of Interventions** **Patients pain was controlled and was able to walk with the assistance of PT around the whole unit without pain.**	**Evaluation of Interventions** **Patient had more formed stools upon discharge prior to when first coming into ED.**

References (3) (APA):

Hinkle, J. L., Cheever, K. H., & Overbaugh, K. J. (2022). *Brunner & Suddarth's textbook of Medical-Surgical Nursing*. Wolters Kluwer.

Jones, & Bartlett. (2023). *2023 Nurse's Drug Handbook*. Jones & Bartlett Learning.

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

Puckey, M. (2024, March 1). *Lovenox: Uses, dosage, side effects*. Drugs.com. https://www.drugs.com/lovenox.html

Strate, L. L., & Morris, A. M. (2019, April). *Epidemiology, pathophysiology, and treatment of diverticulitis*. Gastroenterology. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716971/