

N321 Care Plan 1

Lakeview College of Nursing

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**Demographics (3 points)**

|                                     |                                 |                                |  |
|-------------------------------------|---------------------------------|--------------------------------|--|
| <b>Date of Admission</b><br>2/21/22 | <b>Client Initials</b><br>L. A. | <b>Age</b><br>81               | <b>Gender</b><br>Female  |
| <b>Race/Ethnicity</b><br>Caucasian  | <b>Occupation</b><br>Retired    | <b>Marital Status</b><br>Widow | <b>Allergies</b><br>Biaxin, clindamycin,<br>duloxetine, fluconazole,<br>Levaquin, penicillin,<br>prednisone, sulfa |
| <b>Code Status</b><br>Full code     | <b>Height</b><br>5'             | <b>Weight</b><br>101 lbs       |  |

**Medical History (5 Points)**

**Past Medical History:** Anxiety, arthritis, asthma, cancer- papillary urothelial neoplasm, COPD, GERD, hearing loss, HTN, malignant neoplasm of lateral wall of bladder.

**Past Surgical History:** Sinus surgery, skin cancer excision, femur fracture repair 9/2020, upper GI endoscopy 9/2021

**Family History:** Father: Hearing loss, Alzheimer's; brother & sister: Alzheimer's.

**Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use):**

**Tobacco:** never; **Alcohol:** less than one drink per week, quit many years ago; **Drugs:** never

**Assistive Devices:** At times uses a walker at home since femur fracture in 2020.

**Living Situation:** Lives alone with one pet dog named Izzie.

**Education Level:** High School

**Admission Assessment**

**Chief Complaint (2 points):** Jaundice

**History of Present Illness – OLD CARTS (10 points):**

81 year old female brought to emergency department by daughter for jaundice after being seen at her primary care provider's office for 6 months check-up. Patient noticed change in urine color 1 week ago and complains of epigastric abdominal pain, nausea with dry heaving, and dizziness.

Abdominal pain radiates to back flank area. States her urine was a tea color. Patient tried tums for epigastric pain with no relieve. During office visit, PCP noticed yellowing skin on abdomen and bilateral yellowing of the sclera. Patient has not had this symptom in the past and did not seek treatment prior to visit with PCP. Patient stated she waited a week to seek treatment because she knew she had a 6 month check up scheduled.

### **Primary Diagnosis**

**Primary Diagnosis on Admission (2 points):** Jaundice

**Secondary Diagnosis (if applicable):** Hyperbilirubinemia, pancreatic mass, abdominal pain

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

Jaundice is a yellow hue of the skin and sclera of the eyes caused by a buildup of bilirubin in the bloodstream. Bilirubin is a waste product from hemoglobin breakdown in the liver, and proper elimination through the bile duct system and into the small intestine is needed (Capriotti, 2020). When proper elimination of this waste product is inhibited, bilirubin accumulates in the bloodstream, where it binds to elastin. Principal amounts of elastin are found in the skin and sclera, thus leading to the physical presentation of jaundice (Capriotti, 2020).

Jaundice can be caused by liver, gallbladder, pancreas, and biliary tract disorders. In this case, the patient was found to have a stricture in the lower third of the common bile duct, which is the portion located in the pancreas. Obstruction of the common bile duct caused bile to back up into the right and left hepatic ducts, leading to accumulation of bile and bilirubin in the liver, thus causing hyperbilirubinemia. Routine laboratory tests to evaluate jaundice are total serum bilirubin, serum alanine transaminase (ALT), serum aspartate transaminase (AST), alkaline phosphatase, albumin, and prothrombin levels (Capriotti, 2020). Alkaline phosphatase and

prothrombin levels were within normal limits; all other mentioned labs were significantly elevated upon admission.

Jaundice also has manifestations within the GI/GU systems that affect the characteristics of urine and stool. Bilirubin is typically eliminated in stool after entering the small intestine and binding to food through digestion. Without bilirubin pigmentation, the stool is oily and clay-colored (Capriotti, 2020). When bilirubin is not eliminated through the GI system, it is eliminated through urine. Bilirubin in the bloodstream is filtered through the kidney, and its pigmentation is seen as tea-colored urine (Capriotti, 2020).

This patient first had a CT abdomen/pelvis to determine the cause of jaundice. This imaging showed dilation of the intrahepatic and extrahepatic biliary ducts, which an endoscopic retrograde cholangiopancreatography (ERCP) with brushing was recommended. The CT also showed a 9mm hypodense area on the head of the pancreas. The next day the ERCP was performed, and a stricture was visualized in the third lower portion of the common bile duct. ERCPA biliary sphincterotomy was performed, and dilation of the area was achieved. Dilation of the structured duct is necessary to allow drainage and relieve the symptoms of jaundice, and an ERCP is commonly the first-line intervention used (Yuan et al., 2021). During the ERCP, cells from this area were collected for cytology, with results still pending at the clinical time.

A decrease in total bilirubin serum level in successful stent placement after ERCP is determined by a decrease in total bilirubin serum level, signifying adequate drainage (Yuan et al., 2021). Upon admission, this patient's total bilirubin was 8.0 and decreased to 2.3 48 hours following stent placement. A follow-up endoscopic ultrasound (EUS) was scheduled to be performed on 2/25 to visualize better the pancreas and biliary system (Makmun et al., 2017).

Treatment thus far has consisted of bile duct stent placement to treat jaundice cause and patient comfort measures. Future treatment plans are pending cytology and EUS results.

**Pathophysiology References (2) (APA):**

Capriotti, T. (2020). *Davis advantage for pathophysiology* (2<sup>nd</sup> ed.). F.A. Davis.

Makmun, D., Fauzi, A., Abdullah, M., & Syam, A. F. (2017). The role of EUS-BD in the management of malignant biliary obstruction: The Indonesian perspective. *Diagnostic & Therapeutic Endoscopy*, 1(8). <https://doi.org/10.1155/2017/4856276>

Yuan, P., Zhang, L., Li, S., Li, X., & Wu, Q. (2021). Clinical results after biliary drainage by endoscopic retrograde cholangiopancreatography for analysis of metastatic cancer survival and prognostic factors. *Surgical Endoscopy*, 35(11), 6220–6226. <https://doi.org/10.1007/s00464-020-08121-2>

### 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         | 3.50-5.20    | 3.83            | 3.44          | RBCs are only slightly below reference range. This could either be caused by the acute liver injury from the blocked bile duct, or from continuous IV fluid infusion since admission (Kee, 2018). IV fluid infusion was discontinued this morning.      |
| Hgb         | 11-16        | 11.8            | 10.7          | Hemoglobin is only slightly below reference range. This could either be caused by the acute liver injury from the blocked bile duct, or from continuous IV fluid infusion since admission (Kee, 2018). IV fluid infusion was discontinued this morning. |
| Hct         | 34-47        | 36              | 32.5          | Hematocrit is only slightly below reference range. Radioactive agents were used during CT on 2/21 and ERCP on 2/22. Radioactive agents can cause decreased levels (Kee, 2018).  |
| Platelets   | 140-400      | 239             | 232           |   |
| WBC         | 4-11         | 5.50            | 5.59          |   |
| Neutrophils | 1.60-7.70    | 3.54            | NA            |   |
| Lymphocytes | 1-4.90       | 1.26            | NA            |   |
| Monocytes   | 0-1.10       | 0.64            | NA            |   |
| Eosinophils | 0-0.50       | 0.03            | NA            |   |
| Bands       | 0            | NA              | NA            |   |

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-        | 136-145      | 132             | 136           | Sodium regulates acid-base balance by binding to chloride. The acid state of the patient's body caused by malnutrition prompted the kidneys to excrete sodium and chloride in attempts to maintain acid-base balance (Kee, 2018)  |
| K+         | 3.5-5.1      | 3.1             | 3.8           | Patient had epigastric abdominal pain for one week and stated during my assessment that she had not been eating much prior to admission. Malnutrition/starvation could be the cause of this slight decrease (Kee, 2018).  |
| Cl-        | 98-107       | 95              | 103           | Chloride is slightly decreased due to the acidotic state of body fluids caused by malnutrition/starvation. The acidotic state causes the kidneys to excrete chloride (Kee, 2018).   |
| CO2        | 22-29        | 25              | 26            |   |
| Glucose    | 74-100       | 100             | 107           |   |
| BUN        | 10-20        | 9               | 9             | A slightly decreased BUN could be caused by this patient's malnutrition (Kee, 2018).  |
| Creatinine | 0.55-1.02    | 0.65            | 0.58          |   |
| Albumin    | 3.4-4.8      | 3.4             | 2.7           | After being admitted for four days the patient's albumin decreased slightly due to prolonged immobilization (Kee, 2018).  |
| Calcium    | 8.9-10.6     | 9.1             | 8.4           | Slightly decreased calcium level could be from either the NPO diet client was placed on prior to ERCP and the clear liquid diet following. IT could also be caused by the enoxaparin use since being admitted to the hospital (Kee, 2018). Both orders could be contributing to |

|                  |                |            |            |   |
|------------------|----------------|------------|------------|---|
|                  |                |            |            | decrease in calcium.  |
| <b>Mag</b>       | <b>1.6-2.6</b> | <b>1.5</b> | 1.6        | Hypokalemia is usually accompanied by hypomagnesemia (Kee, 2018). The low potassium and protein malnutrition prior to being admitted can be contributing to decrease magnesium level.   |
| <b>Phosphate</b> | <b>NA</b>      | <b>NA</b>  | <b>NA</b>  |   |
| <b>Bilirubin</b> | <b>0.2-1.2</b> | <b>8.0</b> | <b>2.3</b> | Bilirubin is elevated due to the patients obstructed biliary duct. Bilirubin was not able to escape through the duct and into the intestine, causing it to backup and be absorbed into the blood stream (Kee, 2018). The level started to decrease after a stent was placed in the duct.  |
| <b>Alk Phos</b>  | <b>40-150</b>  | <b>549</b> | <b>434</b> | Alkaline phosphate is elevated due to the patient's obstructive biliary disease (Kee, 2018).  |
| <b>AST</b>       | <b>5-34</b>    | <b>206</b> | <b>107</b> | AST is elevated due to liver and pancreatic damage from the patient's biliary obstruction (Kee, 2018). The level started to decrease after a stent was placed in the duct.  |
| <b>ALT</b>       | <b>0-55</b>    | <b>285</b> | <b>201</b> | ALT is elevated due to liver and pancreatic damage from the patient's biliary obstruction (Kee, 2018). The level started to decrease after a stent was placed in the duct.  |
| <b>Amylase</b>   | <b>NA</b>      | <b>NA</b>  | <b>NA</b>  |   |
| <b>Lipase</b>    | <b>8-78</b>    | 19         | <b>759</b> | Lipase was WNL upon admission but elevated to critical levels after ERCP performed the day before this lab was drawn. The ERCP and sphincterotomy caused a post procedural pancreatitis. This information was documented and explain in the patients EMR. Pancreatitis can cause elevated lipase for up to 2 weeks (Kee, 2018). |

|                    |    |    |    |  |
|--------------------|----|----|----|--|
| <b>Lactic Acid</b> | NA | NA | NA |  |
|--------------------|----|----|----|--|

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

| <b>Lab Test</b>      | <b>Normal Range</b> | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Reason for Abnormal</b> |
|----------------------|---------------------|---------------------------|----------------------|----------------------------|
| <b>INR</b>           | <b>0.9-1.1</b>      | NA                        | 1.0                  |                            |
| <b>PT</b>            | <b>11.7-13.8</b>    | NA                        | 12.5                 |                            |
| <b>PTT</b>           | NA                  | NA                        | NA                   |                            |
| <b>D-Dimer</b>       | NA                  | NA                        | NA                   |                            |
| <b>BNP</b>           | NA                  | NA                        | NA                   |                            |
| <b>HDL</b>           | NA                  | NA                        | NA                   |                            |
| <b>LDL</b>           | NA                  | NA                        | NA                   |                            |
| <b>Cholesterol</b>   | NA                  | NA                        | NA                   |                            |
| <b>Triglycerides</b> | NA                  | NA                        | NA                   |                            |
| <b>Hgb A1c</b>       | NA                  | NA                        | NA                   |                            |
| <b>TSH</b>           | NA                  | NA                        | NA                   |                            |

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

| <b>Lab Test</b>            | <b>Normal Range</b>     | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Reason for Abnormal</b> |
|----------------------------|-------------------------|---------------------------|----------------------|----------------------------|
| <b>Color &amp; Clarity</b> | <b>Colorless-yellow</b> | Yellow                    | NA                   |                            |
| <b>pH</b>                  | 5-7                     | 6                         | NA                   |                            |
| <b>Specific Gravity</b>    | <b>1.003-1.035</b>      | 1.003                     | NA                   |                            |
| <b>Glucose</b>             | <b>Negative</b>         | Neg                       | NA                   |                            |

|                      |                 |     |    |  |
|----------------------|-----------------|-----|----|--|
| <b>Protein</b>       | <b>Negative</b> | Neg | NA |  |
| <b>Ketones</b>       | <b>Negative</b> | 15  | NA | Ketone bodies in the urine were produced due to the patient's malnutrition/starvation causing an acidotic state (Kee, 2018). |
| <b>WBC</b>           | <b>0-25</b>     | 2   | NA |  |
| <b>RBC</b>           | <b>0-2</b>      | 1   | NA |  |
| <b>Leukoesterase</b> | <b>Negative</b> | Neg | NA |  |

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

| <b>Test</b>           | <b>Normal Range</b> | <b>Value on Admission</b> | <b>Today's Value</b> | <b>Explanation of Findings</b> |
|-----------------------|---------------------|---------------------------|----------------------|--------------------------------|
| <b>Urine Culture</b>  | NA                  | NA                        | NA                   |                                |
| <b>Blood Culture</b>  | NA                  | NA                        | NA                   |                                |
| <b>Sputum Culture</b> | NA                  | NA                        | NA                   |                                |
| <b>Stool Culture</b>  | NA                  | NA                        | NA                   |                                |

**Lab Correlations Reference (1) (APA):**

Kee, J. L. (2018). *Laboratory and diagnostic tests with nursing implications* (10th ed.). Pearson.

### **Diagnostic Imaging**

#### **All Other Diagnostic Tests (5 points):**

**2/21/22: ECG 12 lead:** Sinus rhythm with premature atrial complexes, possible left atrial enlargement, poor precordial R wave progression, abnormal ECG.

**2/21/22: CT abdomen/pelvis with contrast:** 1. Interval development of intrahepatic and extrahepatic biliary ductal dilation for which ERCP with brushings to recommended. Neoplasm is high on the differential diagnosis. The pancreatic head has 9 mm hypodense area which was not identified previously. But the pancreatic duct itself is not dilated. Of note, there may be separate ampulla for the pancreatic duct. 2. Mild ground glass density of the peritoneal fat/tomentum and cachexia but is worsened. Recommendations for follow-up chest CT.

**2/22/22: Endoscopic retrograde cholangiopancreatography:** A single localized biliary stricture was found in the lower third of the main bile duct. The stricture was indeterminate. The upper third of the main bile duct and the middle third of the main bile duct were dilated. A biliary sphincterotomy was performed. The lower third of the main bile duct was successfully dilated. Cells for cytology obtained in the lower third of the main duct. One temporary stent was placed into the common bile duct.

**2/22/22: ERCP Cytology:** Results pending.

**2/24/22: Xray of kidney, ureter, bladder:** The amount of gas and stool in colon is somewhat prominent which may represent constipation. No apparent bowel obstruction. Biliary stent in place. Surgical clips in the right upper quadrant.

#### **Diagnostic Test Correlation (5 points):**

- 12 Lead ECG was performed once the patient presented to the emergency department due to her epigastric pain that radiated to the back. It is standard to rule out MI with ECG in the emergency department with any signs or symptoms of an MI.
- CT of abdomen and pelvis with contrast was performed to visualize the patient's liver and pancreas to determine the cause of jaundice.
- The CT impression recommended a follow up ERCP to further explore the biliary ductal dilation. A ERCP confirms the or diagnoses a hepatobiliary or pancreatic disorder.
- A cytology was ordered of the cells removed during the biliary sphincterotomy while ERCP was being performed to determine the etiology.
- A KUB Xray was ordered to visualize the amount of stool within the bowel. The patient had not had a BM for 5 days.
- An endoscopic ultrasound was ordered to be performed the next day. This test is mostly utilized for early detection of cancer, staging of cancer, or in this case, visualization of the biliary tree.

**Diagnostic Test Reference (1) (APA):**

Kee, J. L. (2018). *Laboratory and diagnostic tests with nursing implications* (10th ed.). Pearson.

**Current Medications (10 points, 1 point per completed med)  
\*10 different medications must be completed\***

**Home Medications (5 required)**

|                           |  |  |   |   |   |
|---------------------------|--|--|---|---|---|
| <b>Brand/<br/>Generic</b> | Tylenol/<br>acetaminophen  | ProAir HFA/<br>albuterol HFA   | Norvasc/<br>amlodipine  | Lipitor/<br>Atorvastatin  | Questran/<br>cholestyramine   |
| <b>Dose</b>               | 500 mg   | 90 mcg   | 5 mg  | 20 mg   | 2 g   |
| <b>Frequency</b>          | q 4 hrs PRN  | 2 puffs q 4 hrs<br>PRN   | Daily   | Daily   | BID with<br>meals   |
| <b>Route</b>              | Oral   | Inhalation   | Oral  | Oral  | Oral  |
| <b>Classification</b>     | <b>Pharm:</b><br>Nonsalicylate,<br>para-<br>aminophenol<br>derivative<br><b>Therapeutic:</b><br>Antipyretic,<br>nonopioid<br>analgesic | <b>Pharm:</b><br>Adrenergic<br><b>Therapeutic:</b><br>Bronchodilator | <b>Pharm:</b><br>Calcium<br>channel<br>blocker<br><b>Therapeutic:</b><br>Antianginal,<br>antihypertensive | <b>Pharm:</b><br>HMG-CoA<br>reductase<br>inhibitor<br><b>Therapeutic:</b><br>Antihyperlipidemic | <b>Pharm:</b><br>Bile acid<br>sequestrant<br><b>Therapeutic:</b><br>Antihyperlipidemic,<br>antipruritic |

|                                   |  |  |   |  |  |
|-----------------------------------|--|--|---|--|--|
| <p><b>Mechanism of Action</b></p> | <p>Inhibits the enzyme cyclooxygenase, blocking prostaglandin production and interfering with pain impulse generation in the peripheral nervous system. Acetaminophen also acts directly on temperature-regulating center in the hypothalamus by inhibiting synthesis of prostaglandin E2.</p> | <p>Albuterol attaches to beta2 receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert ATP to cyclic adenosine monophosphate. This reaction decreases intracellular calcium levels. It also increases intracellular levels of cAMP, as shown. Together, these effects relax bronchial smooth-muscle cells and inhibit histamine release.</p> | <p>Binds to dihydropyridine and nordihydropyridine cell membrane receptor sites on myocardial and vascular smooth-muscle cells and inhibits influx of extracellular calcium ions across slow calcium channels. This decreases intracellular calcium level, inhibiting smooth muscle cell contractions and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance, and reducing systolic and diastolic blood pressure. Decreased peripheral vascular resistance also decreases myocardial workload, oxygen demand, and</p> | <p>Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of LDL receptors on liver cells to enhance LDL uptake and breakdown</p> | <p>Increases bile acid excretion in feces. The resulting decreased bile acid level increases the activity of the enzyme that regulates cholesterol synthesis in the liver. As a result, the liver increases its cholesterol synthesis to produce more bile acids. However, the liver's synthesis of cholesterol typically cannot match the amount needed to synthesize bile acids, which reduces the cholesterol level. Also, a decreased cholesterol level causes liver cells to increase their uptake of LDLs, which further reduces the cholesterol level. Cholestyramine may</p> |
|-----------------------------------|--|--|---|--|--|

|  |   |   |   |   |  |
|--|---|---|---|---|--|
|  |   |   | possibly angina. Also, by inhibiting coronary artery muscle cell contractions and restoring blood flow, drug may relieve Prinzmetal's angina. |   | relieve pruritus by decreasing the body's bile acid level. The reduces the amount of excess bile acids that are deposited in the dermis and that typically causes pruritus in patients with cholestasis. |
| <b>Reason Client Taking</b>                | Pain management   | Chronic asthma; COPD  | HTN   | HLD   | To relieve pruritus associated with partial biliary obstruction  |
| <b>Contraindications (2)</b>               | Severe hepatic impairment, severe active liver disease  | Hypersensitivity to albuterol, Hypersensitivity to components of albuterol  | Hypersensitivity to amlodipine, Hypersensitivity to components of amlodipine  | Active hepatic disease<br>Pregnancy   | Complete biliary obstruction, Hypersensitivity to cholestyramine   |
| <b>Side Effects/ Adverse Reactions (2)</b> | CV:<br>Hypotension<br>GI:<br>hepatotoxicity   | CV:<br>Arrhythmias<br>RESP:<br>Bronchospasm   | CV:<br>Arrhythmias<br>GI:<br>Pancreatitis   | Arthralgia<br>Myalgia   | CNS:<br>Dizziness<br>BI: Bloating  |
| <b>Nursing Considerations (2)</b>          | Use cautiously in patients with hepatic impairment or active hepatic disease, alcoholism, chronic malnutrition, or severe | Use cautiously in patients with cardiac disorders, DM, digitalis intoxication, hypertension, hyperthyroidism, or history of seizures. | Use cautiously in patients with heart block, heart failure, impaired renal function, hepatic disorder, or severe aortic stenosis.             | Be aware that atorvastatin may be used with colestipol or cholestyramine for additive antihyperlipidemic effects. | Be aware that long-term use may increase bleeding tendency from hypoprothrombinemia caused by vitamin K deficiency. If   |

|  |   |   |  |   |   |
|--|---|---|--|---|---|
|  | <p>hypovolemia.</p> <p>Monitor renal function in patients on long term therapy. Keep in mind that blood or albumin in urine may indicate nephritis; decreased urine output may indicate renal failure; and dark brown urine may indicate presence of the metabolite phenacetin.</p> | <p>Albuterol can worsen these conditions.</p> <p>Monitor serum potassium level because albuterol may cause transient hypokalemia.</p> | <p>Monitor patients with impaired hepatic function closely because amlodipine is extensively metabolized by the liver, and expect to titrate dosage slowly when administering drug to patients with severe hepatic impairment.</p> | <p>Expect liver function tests to be performed before atorvastatin therapy starts and then thereafter as clinically necessary. If clinical symptoms such as hyperbilirubinemia and jaundice occurs, notify prescriber and expect therapy to be discontinued until cause of liver dysfunction has been identified.</p> | <p>this occurs, patient will require treatment with vitamin K.</p> <p>Monitor for deficiencies of fat-soluble vitamins, such as A and D. If long-term therapy prevents absorption of these vitamins, expect to provide supplementation.</p> |
|--|---|---|--|---|---|

**Hospital Medications (5 required)**

|                      |                                |                                  |                                |  |   |
|----------------------|--------------------------------|----------------------------------|--------------------------------|--|---|
| <b>Brand/Generic</b> | <b>Lovenox/<br/>enoxaparin</b> | <b>Lexapro/<br/>escitalopram</b> | <b>Zofran/<br/>ondansetron</b> | <b>Doxidan/<br/>docusate<br/>calcium</b> | <b>Spiriva<br/>Respimat/<br/>tiotropium<br/>bromide</b> |
|----------------------|--------------------------------|----------------------------------|--------------------------------|--|---|

|                            |   |  |   |  |  |
|----------------------------|---|--|---|--|--|
| <b>Dose</b>                | 30 mg   | 5 mg   | 4 mg  | 25 mg  | 2 sprays   |
| <b>Frequency</b>           | Daily at 1300   | Daily in AM  | Daily PRN<br>May repeat X<br>1  | BID PRN  | Daily  |
| <b>Route</b>               | SubQ  | Oral   | IV push   | Oral   | Inhalation   |
| <b>Classification</b>      | <b>Pharm:</b><br>Low-<br>molecular-<br>weight<br>heparin<br><b>Therapeutic</b><br>:<br>Anticoagulan<br>t  | <b>Pharm:</b><br>SSRI<br><b>Therapeutic</b><br>:<br>Antidepressa<br>nt   | <b>Pharm:</b><br>Selective<br>serotonin<br>receptor<br>antagonist<br><b>Therapeutic:</b><br>Antiemetic  | <b>Pharm:</b><br>Surfactant<br><b>Therapeut<br/>ic:</b><br>Laxative,<br>stool<br>softener  | <b>Pharm:</b><br>Anticholiner<br>gic<br><b>Therapeutic</b><br>:<br>Bronchodilat<br>or  |
| <b>Mechanism of Action</b> | Potentiates the action of antithrombin III, a coagulation inhibitor. By binding with antithrombin III, enoxaparin rapidly binds with and inactivates clotting factors. Without thrombin, fibrinogen cant convert to fibrin and clots cant form. | Inhibits reuptake of the neurotransmitter serotonin by CNS neurons, thereby increasing the amount of serotonin available in nerve synapses. An elevated serotonin level may result in elevated mood and reduced anxiety or depression. | Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve terminals in the intestine. This action reduces nausea and vomiting by preventing serotonin release in the small intestine and by blocking signals to the CNS. May also bind to other serotonin receptors and to mu-opioid | Acts as a surfactant that softens stools by decreasing surface tension between oil and water in feces. This action lets more fluid penetrate stool, forming a softer fecal mass. | Prevents acetylcholine from attaching to muscarinic receptors on membranes of smooth-muscle cells. By blocking acetylcholine's effects in the bronchi and bronchioles, relaxes smooth muscles and causes bronchodilation |

|   |  |   |   |  |   |
|---|--|---|---|--|---|
|   |  |   | receptors.  |  |   |
| <b>Reason Client Taking</b>               | Prevention of DVT during hospitalization   | Anxiety & Depression  | As needed for nausea and vomiting   | Constipation   | Maintenance for asthma and COPD   |
| <b>Contraindications (2)</b>              | Active major bleeding<br><br>Hypersensitivity to benzyl alcohol if only the multidose vial is available  | Concomitant therapy with pimozide<br><br>Use within 14 days of MAO inhibitor therapy including intravenous methylene blue or linezolid  | Concomitant use of apomorphine<br><br>Hypersensitivity to ondansetron   | Fecal impaction<br><br>Undiagnosed abdominal pain  | Hypersensitivity to atropine<br><br>Hypersensitivity to ipratropium   |
| <b>Side Effects/Adverse Reactions (2)</b> | CNS:<br>Confusion<br>GI:<br>Cholestatic and hepatocellular liver injury  | CNS:<br>Serotonin syndrome<br>CV:<br>Atrial fibrillation  | CNS:<br>hypotension<br>CV:<br>Arrhythmias   | CNS:<br>Dizziness<br>GI:<br>Abdominal cramps and distention  | CNS:<br>CVA<br>CV:<br>Atrial fibrillation   |
| <b>Nursing Considerations (2)</b>         | Use extreme caution in patients with an increased risk of hemorrhage, as from active ulcerative or angiodysplasia GI disease; bacterial endocarditis; congenital or acquired bleeding disorder; concurrent treatment with platelet | Use cautiously in patients with history of mania or seizures, patients with severe renal impairment, and those with disease or conditions that produce altered metabolism or hemodynamic responses<br><br>Know that | Know that if hypokalemia or hypomagnesemia is present, these electrolyte imbalances should be corrected before ondansetron is administered because of increased risk for QT-interval prolongation, which could predispose the | Expect excessive or long-term use to cause dependence on laxatives for bowel movements, electrolyte imbalances, osteomalacia, steatorrhea, and vitamin and | Know that when used for maintenance therapy in patients with asthma, it may take up to 8 weeks to realize maximum benefits<br><br>Be aware that tiotropium should never be used to relieve acute bronchospasm |

|  |   |   |  |  |  |
|--|---|---|--|--|--|
|  | <p>inhibitor; hemorrhagic stroke; or recent brain, ophthalmologic, or spinal surgery</p> <p>Be aware that drug isn't recommended for patients with prosthetic heart valves, especially pregnant women, because of risk of prosthetic valve thrombosis. If enoxaparin is needed, monitor peak and trough anti-factor Xa levels often and adjust dosage as needed</p> | <p>when dosage increases, monitor patients for possible serotonin syndrome, which may include agitation, chills, confusion, diaphoresis, diarrhea, fever, hyperactive reflexes, poor coordination, restlessness, shaking, talking or acting with uncontrolled excitement, tremor, and twitching. In its most severe form, serotonin syndrome can resemble neuroleptic malignant syndrome, which includes autonomic instability with possible changes in vital signs, a high fever, muscle rigidity, and mental status changes</p> | <p>patient to develop torsades de pointes</p> <p>Monitor patient closely for signs and symptoms of hypersensitivity to ondansetron because hypersensitivity reaction, including anaphylaxis and bronchospasm, may occur.</p> | <p>mineral deficiencies</p> <p>Assess for laxative abuse syndrome, especially in women with anorexia nervosa, depression, or personality disorders</p> |  |
|--|---|---|--|--|--|

**Medications Reference (1) (APA):**

Jones & Bartlett Learning. (2021). *2021 Nurse’s drug handbook* (20th ed.).  
 Jones & Bartlett Learning.

**Assessment**

**Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS**

|  |  |
|--|--|
| <p><b>GENERAL:</b><br/> <b>Alertness:</b><br/> <b>Orientation:</b><br/> <b>Distress:</b><br/> <b>Overall appearance:</b></p>   | <p>Alert and orientated X3 with no signs of distress. The patient is sitting up in bed and appears well groomed.</p>   |
| <p><b>INTEGUMENTARY:</b><br/> <b>Skin color:</b><br/> <b>Character:</b><br/> <b>Temperature:</b><br/> <b>Turgor:</b><br/> <b>Rashes:</b><br/> <b>Bruises:</b><br/> <b>Wounds:</b><br/> <b>Braden Score: 20</b><br/> <b>Drains present: Y</b><input type="checkbox"/> <b>N</b><input checked="" type="checkbox"/><br/> <b>Type:</b></p> | <p>Skin color is normal for ethnicity, warm and dry upon palpation. Abdomen has 2 small bruises around enoxaparin injection sites and <b>yellow discoloration above umbilical</b>. Normal skin turgor. No wounds, rashes, or drains present.</p>                         |
| <p><b>HEENT:</b><br/> <b>Head/Neck:</b><br/> <b>Ears:</b><br/> <b>Eyes:</b><br/> <b>Nose:</b><br/> <b>Teeth:</b></p>   | <p>Head and neck are symmetrical, trachea is midline. <b>Superficial cervical nodes palpable Bilateral. Bilateral sclera yellow</b>. No visible drainage from eyes. Bilateral auricles no visible deformities, lumps, or lesions. Nose is midline. Teeth are intact.</p> |
| <p><b>CARDIOVASCULAR:</b></p>  | <p>Clear S1 and S2 without murmurs, gallops, or</p>  |

|   |   |
|---|---|
| <p><b>Heart sounds:</b><br/> <b>S1, S2, S3, S4, murmur etc.</b><br/> <b>Cardiac rhythm (if applicable):</b><br/> <b>Peripheral Pulses:</b><br/> <b>Capillary refill:</b><br/> <b>Neck Vein Distention:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Edema</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Location of Edema:</b></p>   | <p>rubs. Bilateral carotid pulses are palpable 2+. Peripheral pulses 2+ bilateral throughout. Capillary refills less than 3 seconds bilaterally. No edema present in all extremities.</p>   |
| <p><b>RESPIRATORY:</b><br/> <b>Accessory muscle use:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Breath Sounds: Location, character</b></p>  | <p>Normal rate and pattern of respirations, chest rises and fall symmetrically, non-labored with no accessory muscle use. Lung sounds clear throughout anterior/posterior bilaterally, no wheezes, crackles, or rhonchi noted.</p>  |
| <p><b>GASTROINTESTINAL:</b><br/> <b>Diet at home:</b><br/> <b>Current Diet</b><br/> <b>Height:</b><br/> <b>Weight:</b><br/> <b>Auscultation Bowel sounds:</b><br/> <b>Last BM:</b><br/> <b>Palpation: Pain, Mass etc.:</b><br/> <b>Inspection:</b><br/>         <b>Distention:</b><br/>         <b>Incisions:</b><br/>         <b>Scars:</b><br/>         <b>Drains:</b><br/>         <b>Wounds:</b><br/> <b>Ostomy:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Nasogastric:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>         <b>Size:</b><br/> <b>Feeding tubes/PEG tube</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>         <b>Type:</b></p> | <p>Weight of 101 lbs, height 5ft. Current diet order for clear liquids only. Client states at home she had a well-balanced diet of fruits, vegetables, grains, carbohydrates, and protein.<br/>         Last BM 2/19/22.<br/>         Bowel sounds are hyperactive. Abdomen is mildly distended, soft, and non-tender. No incision, scars, drains, or wounds on inspection. No masses or organomegaly noted on palpation.</p> |
| <p><b>GENITOURINARY:</b><br/> <b>Color:</b><br/> <b>Character:</b><br/> <b>Quantity of urine:</b><br/> <b>Pain with urination:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Dialysis:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Inspection of genitals:</b><br/> <b>Catheter:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/>         <b>Type:</b><br/>         <b>Size:</b></p>   | <p>Urine is clear in color and character. Urine output of 400 mL in AM, patient ambulates to bathroom with no assist and did not use urine hat in the afternoon.</p>  |
| <p><b>MUSCULOSKELETAL:</b><br/> <b>Neurovascular status:</b></p>  | <p>IV infusions were stopped in afternoon and patient was free to ambulate with no assist. Fall</p>   |

|   |   |
|---|---|
| <p><b>ROM:</b><br/> <b>Supportive devices:</b><br/> <b>Strength:</b><br/> <b>ADL Assistance:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/><br/> <b>Fall Risk:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/><br/> <b>Fall Score:</b> 6<br/> <b>Activity/Mobility Status:</b><br/> <b>Independent (up ad lib)</b> <input type="checkbox"/><br/> <b>Needs assistance with equipment</b> <input type="checkbox"/><br/> <b>Needs support to stand and walk</b> <input type="checkbox"/></p>      | <p>risk is 6 using John Hopkins fall risk assessment tool. Strength is equal bilaterally.</p>   |
| <p><b>NEUROLOGICAL:</b><br/> <b>MAEW:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/><br/> <b>PERLA:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/><br/> <b>Strength Equal:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no -<br/> <b>Legs</b> <input type="checkbox"/> <b>Arms</b> <input type="checkbox"/> <b>Both</b> <input type="checkbox"/><br/> <b>Orientation:</b><br/> <b>Mental Status:</b><br/> <b>Speech:</b><br/> <b>Sensory:</b><br/> <b>LOC:</b></p> | <p>Orientated to person, place, and time. Affect is pleasant. No LOC. Hearing deficit with assistive devises used. Speech pattern is normal with mild aphasia.</p>    |
| <p><b>PSYCHOSOCIAL/CULTURAL:</b><br/> <b>Coping method(s):</b><br/> <b>Developmental level:</b><br/> <b>Religion &amp; what it means to pt.:</b><br/> <b>Personal/Family Data (Think about home environment, family structure, and available family support):</b></p>   | <p>Member of local Methodist church. Daughters provide daily support. Patient has a pet dog that provides emotional support and walking her keeps patient active.</p> |

**Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS**

| Time | Pulse | B/P    | Resp Rate | Temp | Oxygen |
|------|-------|--------|-----------|------|--------|
| 0722 | 82    | 128/65 | 18        | 98.4 | 92%    |
| 1230 | 71    | 146/73 | 20        | 97.3 | 98%    |

**Pain Assessment, 2 sets (2 points)**

| Time | Scale | Location | Severity | Characteristics | Interventions |
|------|-------|----------|----------|-----------------|---------------|
| 0722 | 0     |          |          |                 |               |

|      |   |  |  |  |  |
|------|---|--|--|--|--|
| 1230 | 0 |  |  |  |  |
|------|---|--|--|--|--|

**IV Assessment (2 Points)**

| <b>IV Assessment</b>  | <b>Fluid Type/Rate or Saline Lock</b>   |
|---|---|
| <b>Size of IV: 22G</b><br><b>Location of IV: Left lower forearm</b><br><b>Date on IV: 2/23/22</b><br><b>Patency of IV: Flushes easily</b><br><b>Signs of erythema, drainage, etc.: None</b><br><b>IV dressing assessment:</b> | IV infusion was discontinued. IV dressing is clean, dry, and intact. Transparent dressing tegaderm is used. |

**Intake and Output (2 points)**

| <b>Intake (in mL)</b> | <b>Output (in mL)</b> |
|-----------------------|-----------------------|
| <b>340 water</b>      | <b>400 urine</b>      |

**Nursing Care**

**Summary of Care (2 points)**

**Overview of care:** Monitor LFTs, control pain, and give antiemetics as needed.

**Procedures/testing done:** ECG, CT abdomen/pelvis with contrast, ERCP, KUB Xray

**Complaints/Issues:** Abdominal bloating

**Vital signs (stable/unstable):** Stable

**Tolerating diet, activity, etc.:** Tolerating diet and activity well

**Physician notifications:** Notify of any critical labs

**Future plans for client:** Endoscopic ultrasound scheduled for 2/25

**Discharge Planning (2 points)**

**Discharge location:** Home

**Home health needs (if applicable):** NA currently

**Equipment needs (if applicable):** NA currently

**Follow up plan:** Consult and co-manage with GI

**Education needs:** Acute pain management

**Nursing Diagnosis (15 points)**

**\*Must be NANDA approved nursing diagnosis and listed in order of priority\***

| <p><b>Nursing Diagnosis</b></p> <ul style="list-style-type: none"> <li>• Include full nursing diagnosis with “related to” and “as evidenced by” components</li> <li>• Listed in order by priority – highest priority to lowest priority pertinent to this client</li> </ul> | <p><b>Rationale</b></p> <ul style="list-style-type: none"> <li>• Explain why the nursing diagnosis was chosen</li> </ul>   | <p><b>Interventions (2 per dx)</b></p>   | <p><b>Outcome Goal (1 per dx)</b></p>                       | <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>• How did the client/family respond to the nurse’s actions?</li> <li>• Client response, status of goals and outcomes, modifications to plan.</li> </ul> |
|---|--|--|---|---|
| <p><b>1.</b> Risk for imbalanced fluid volume related to pancreatitis as evidence by decreased electrolytes on admission and clear liquid diet</p>  | <p>Patient is at risk because of previous electrolyte imbalances, clear liquid diet with potential for NPO prior to future imaging or procedures, and the use of IV fluid infusion</p> | <p><b>1.</b> Collect and evaluate serum electrolyte levels</p> <p><b>2.</b> Educate patient and family regarding fluid restrictions or need for increased fluids</p> | <p><b>1.</b> Patient will remain hemodynamically stable</p> | <p>The patient was tolerating the clear liquid diet well after being NPO for two days. She is eager to consume adequate number of fluids to avoid having continuous IV infusion started again</p>                       |
| <p><b>2.</b> Constipation related to</p>  | <p>Patient reported no</p>   | <p><b>1.</b> Encourage fluid intake of</p>   | <p><b>1.</b> Patient resumes regular bowel</p>              | <p>The patient expresses</p>  |

|   |  |  |  |   |
|---|--|--|--|---|
| <p>distended abdomen as evidence by hyperactive bowel sounds and absence of BM for 5 days</p>       | <p>BM for 5 days. Hyperactive bowel sounds were heard on auscultation and laxatives were administered</p>                                    | <p>2,500 mL daily<br/><br/>2. Teach patient gentle massage along the transverse and descending colon to stimulate bowels and aid stools passage</p>  | <p>elimination schedule</p>                                      | <p>understanding of fluid intake and gentle message</p>                               |
| <p>3. Deficient knowledge related to current disease process as evidence by interview responses</p> | <p>During the patient interview she stated imaging results showed a spot on her bladder and the follow up EUS was to further investigate</p> | <p>1. Establish environment of mutual trust and respect to enhance learning<br/><br/>2. Communicate openly and honestly with patient and encourage family to participate and provide support</p> | <p>1. Patient expresses desire to overcome lack of knowledge</p> | <p>Patient and family responded well to new information regarding disease process</p> |

**Other References (APA):**

Phelps, L. (2020). Sparks & Taylor’s nursing diagnosis reference manual (11<sup>th</sup> ed.). Walters Kluwer.

**Concept Map (20 Points):**

**Subjective Data**

Reported epigastric and back pain

**Nursing Diagnosis/Outcomes**

1. Risk for imbalanced fluid volume related to pancreatitis as evidence by decreased electrolytes on admission and clear liquid diet  
Patient will remain hemodynamically stable
2. Constipation related to distended abdomen as evidence by hyperactive bowel sounds and absence of BM for 5 days  
Patient resumes regular bowel elimination schedule
3. Deficient knowledge related to current disease process as evidence by interview responses  
Patient expresses desire to overcome lack of knowledge

**Objective Data**

Vitals:  
BP: 128/65  
Pulse: 82  
Resp rate: 18  
Temp: 98.4  
O2: 92

**Client Information**

L. A.  
81 years old  
Female  
Full code  
Retired  
Widow  
Methodist

**Nursing Interventions**

Collect and evaluate serum electrolyte levels  
Educate patient and family regarding fluid restrictions or need for increased fluids  
Encourage fluid intake of 2,500 mL daily  
Teach patient gentle massage along the transverse and descending colon to stimulate bowels and aid stools passage  
Establish environment of mutual trust and respect to enhance learning  
Communicate openly and honestly with patient and encourage family to participate and provide support





