Answers

CHAPTER 35 NURSING CARE OF PATIENTS WITH LIVER, PANCREATIC, AND GALLBLADDER DISORDERS

AUDIO CASE STUDY

Kelsey and Cirrhosis

1. There are more than 10 possible causes of cirrhosis, such as alcohol use (but not always), hepatitis B or C, right-sided heart failure, hepatotoxic drugs or toxins, and nonalcoholic steatohepatitis. See Box 35.1.
2. Cirrhosis signs include jaundiced sclerae and skin, several bruises, itching, a much-distended abdomen, and pitting ankle edema. Hepatic encephalopathy signs include lethargy, confusion, and difficulty communicating, all of which indicate the involvement of the central nervous system.
3. Ammonia level.
4. Lactulose was ordered via retention enema for 30 to 60 minutes. Mr. Guido was not responsive and could not take the medication orally.

VOCABULARY

Sample sentences will vary for the Vocabulary problems.

1. (**4**)
2. (**3**)
3. (**10**)
4. (**5**)
5. (**7**)
6. (**11**)
7. (**12**)
8. (**1**)
9. (**8**)
10. (**2**)
11. (**9**)
12. (**6**)

LIVER

Across

2. HBV
6. Caput medusae
9. TIPS
10. Asterixis
11. HAV

Down

1. Encephalopathy
2. Hepatorenal
3. Portal
4. Hepatitis
5. RUQ
6. Cirrhosis
7. Ascites
8. Varices

GALLBLADDER

1. (**4**)
2. (**6**)
3. (**7**)
4. (**5**)
5. (**1**)
6. (**8**)
7. (**9**)
8. (**3**)
9. (**2**)
10. (**10**)

PANCREAS

1. (**A**) Serum glucose may elevate because **damage to the islets of Langerhans** causes decreased insulin production.
2. (**A**) The digestive enzyme amylase is released in large quantities by an **inflamed pancreas**.
3. (**N**)
4. (**A**) Pleural effusion is caused by a **local inflammatory reaction to the irritation from pancreatic enzymes**.
5. (**N**)
6. (**A**) **Gallstones** may plug the pancreatic duct, causing jaundice.
7. (**A**) Presence of Cullen sign indicates **extensive hemorrhagic destruction of the pancreas**.

8. (**A**) Turner sign, a purplish discoloration of the flanks, indicates **extensive hemorrhagic destruction of the pancreas**.
9. (**A**) Chvostek sign indicates **neuromuscular irritability from decreased serum calcium levels**.
10. (**A**) Foul-smelling, fatty stools indicate **malabsorption of dietary fats from decreased lipase**.

PRIORITAZATION

1. First you need to ensure that Mr. Johnson's airway is protected due to his vomiting and place him on his side. You will collaborate with the RN to help initiate all the IV orders. You will ensure that his bolus IV is started immediately and then maintain his IV infusion after the bolus. You will collaborate with the RN to administer the IV morphine for pain, and you will administer the Compazine per rectum for the nausea and vomiting. You will ensure that Mr. Johnson is NPO and asks for assistance when using the restroom. You will collaborate with the laboratory to ensure that his lipase and amylase are drawn tomorrow morning.
2. Mr. Johnson's indicators that he is improving include decreased pain level, no vomiting, heart rate and respirations are now normal, and his blood pressure is improved. His vital signs indicate that his fluid levels have stabilized.
3. Mr. Johnson's amylase and lipase are still elevated and are essentially the same as yesterday's values. There is no significant trend up or down. He still has a low-grade temperature and continues to be nauseated. His pain level remains high. This data still indicates inflammation of the pancreas.

CRITICAL THINKING AND CLINICAL JUDGMENT

1. The data collected about Ms. Smythe that support the diagnosis of cirrhosis include a grossly distended abdomen, jaundiced sclerae and skin, multiple bruises, and pitting edema of the lower extremities. Ms. Smythe also scratches her arms and legs frequently, indicating pruritus. Her laboratory data indicate that her serum bilirubin, ammonia, and prothrombin time are elevated and that her serum albumin, total protein, and potassium are below normal.
2. You note that Ms. Smythe is irritable, has difficulty answering questions, and appears to doze off often during the interview. Other observations you might make include asterixis, increasing difficulty in arousing the patient, muscle twitching, and fetor hepaticus.
3. The pitting edema and abdominal distention are due to the decreased amount of serum albumin being produced by the impaired liver. Reduced levels of this protein permit fluid to seep into the abdominal cavity and other body tissues.
4. The HCP orders lactulose or rifaximin (Xifaxan) to rid the patient's body of excess ammonia. Lactulose lowers the pH of the colon, inhibiting ammonia from moving into the blood so that it can be excreted in the stool and inhibiting ammonia-producing bacteria. Lactulose also causes water to be drawn into the colon, which increases ammonia's transport from the body. Antibiotics may also be given to reduce bacteria in the gut that produce ammonia. Rifaximin (Xifaxan) is commonly used.
5. You will obtain the rest of her vital signs and pulse oximetry, check her orientation, and peripheral pulses.
6. **C:** I am **c**oncerned about Ms. Smythe. She was admitted 2 days ago. She just vomited with bright red blood in her emesis. She is cold and her pulse is thready at 115 beats/minute.
   U: I am **u**ncomfortable with her current situation.
   S: I believe she is not **s**afe and has upper gastrointestinal bleeding. She needs immediate medical attention.
7. You will ensure that she has nothing per mouth (NPO) and signs the consent, and you will explain that she is having an endoscopy to stop the bleeding. You will ensure that if she continues to vomit that her airway is protected. You will continue to monitor her vital signs. You will ensure that she has a patent IV.
8. You will measure and record Ms. Smythe's abdomen and weigh her daily. You will promptly report any weight gain or increase in circumference. Because Ms. Smythe will usually be ordered a low-sodium diet and will have fluids restricted, carefully monitor and record intake and output. You will monitor Ms. Smythe's vital signs and mental status every 4 hours and report changes promptly. You will administer diuretics as ordered.

REVIEW QUESTIONS

*The correct answers are in **boldface.***

1. (**2**) is correct. This choice is a low-fat diet that is recommended after cholecystectomy. (1, 3, 4) These are all high-fat diets.
2. (**4**) is correct. The patient with acute pancreatitis is at risk for hypovolemia. (1, 2, 3) should be part of the care plan but are not the priority until patient is stabilized.
3. (**2, 3, 5**) are correct. Deep breaths can cause more incisional pain, so providing analgesics and assisting with splinting will allow the patient to take deep breaths with less pain. Encouraging coughing and deep breathing will assist in keeping the lungs expanded and help maintain an effective breathing pattern. (1) A supine position will make breathing more difficult and impair the breathing pattern. (4) Although it is important to monitor bowel sounds postoperatively, this will not maintain an effective breathing pattern. (6) Maintaining bedrest will not promote an effective breathing pattern.
4. (**1**) is correct. These are symptoms of hepatic encephalopathy, and rifaximin (Xifaxan) is ordered to decrease the ammonia levels. (2) Propranolol is given to prevent bleeding of esophageal varices. (3) Multivitamins are given to supplement nutritional deficiencies. (4) Prochlorperazine is given for nausea and vomiting.

5. (**3**) is correct. A low vitamin K level and elevated prothrombin time puts the patient at risk of bleeding. (1, 2, 4) These are appropriate interventions for a patient with cirrhosis, but do not directly relate to the laboratory values.
6. (**1, 2, 3, 4**) are correct. The nurse will continue to monitor for changes in the patient's condition, which could indicate improvement or deterioration in the patient's status. The nurse should inform the HCP that the calcium is low (hypocalcemia), which could lead to cardiac dysrhythmias. Hypovolemic shock can be present with acute pancreatitis, so the HCP should be informed of the low urine output. (5) The patient with acute pancreatitis has severe pain and should receive pain medications.
7. (**3**) is correct. This is a low-sodium meal, which is appropriate for ascites. (1, 2, 4) are all high in sodium.
8. (**2**) is correct. The nurse should question an order of acetaminophen with a patient who has liver failure since it is hepatotoxic. (1, 3) Daily weights and monitoring intake and output are appropriate to monitor fluid status with patients who have acute liver failure. (4) Antiemetics are appropriate to control nausea.
9. (**2, 3, 6**) are correct. Straining and heavy lifting will further increase pressure, which may cause bleeding, as could aspirin use. (1, 4, 5) Coughing could rupture a varix (enlarged tortuous vein), and increasing fluid intake can further increase pressure. Vitamin K supplements will not alter portal hypertension.
10. (**3, 4, 6**) are correct. They require further teaching, as there is no vaccine for hepatitis C or D and personal grooming items should not be shared. (1, 2, 5) are appropriate for prevention.
11. (**1, 2, 4, 6**) are correct. These drugs contain acetaminophen, which can be toxic to the liver. (3, 5) Antibiotics do not contain acetaminophen.
12. (**1, 2**) are correct. Bruising can indicate bleeding, which can become serious without intervention. Fever can indicate infection, which requires prompt treatment. (3, 4, 5) They do not require immediate reporting and are associated with hepatitis.
13. (**4**) is correct. The nurse should first ensure that the patient is on her side and that the airway is clear. The nurse can direct the assistive personnel to get help and then obtain vital signs. (1, 2, 3) The patient's airway should be stabilized before the other interventions such as obtaining vital signs.
14. (0.25) mL

$$\frac{12.5\ \cancel{\text{mg}} \mid 1\ \text{mL}}{\mid 50\ \cancel{\text{mg}}} = 0.25\ \text{mL}$$

15. The area where the nurse would look for the presence of Cullen sign on a patient with acute pancreatitis.