Cholecystitis Assessment

Cholecystitis is gallbladder inflammation caused by biliary obstruction or bacteria entering the gallbladder. Bile is produced in the liver and stored and concentrated in the gallbladder. The condition may be acute or chronic depending on the cause (refer to the Picmonic on "Cholecystitis Causes"). Symptoms include right upper quadrant abdominal pain, nausea, vomiting, indigestion, fever, clay colored stools, and jaundice. Instruct the patient to avoid fatty or spicy foods that may exacerbate symptoms. Assess the patient's white blood cell count and monitor for signs of infection. An ultrasound may be used to determine cholecystitis and rule out other possible causes of the patient's symptoms. Refer to the Picmonic on "Cholecystitis Interventions" for further information.



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RUQ Pain

RUQ Pain-bolts

As gallstones pass through the cystic duct or common bile duct, they lodge into the ducts and cause obstruction and visceral pain. “Biliary colic” refers to severe and constant pain caused by gallstones obstructing the common bile duct (unlike traditional intestinal colic, which is intermittent from obstructed peristalsis). The patient may experience excruciating pain lasting up to an hour with symptoms of tachycardia, diaphoresis, and prostration. Ingesting a high-fat meal or lying down may induce biliary colic. After the pain subsides, the patient may experience residual tenderness in the right upper quadrant of the abdomen as well as abdominal rigidity.

Referred Shoulder Pain

Ruffled Shoulder Pain-bolt

Acute pain and tenderness associated with cholecystitis is located in the right upper quadrant of the abdomen. The pain often refers to the right shoulder and scapula.

Clay Colored Stools

Stool made of Clay

Since biliary obstruction prevents bilirubin from reaching the small intestine to be converted to urobilinogen, the patient with cholecystitis may excrete clay colored stools.

Jaundice

Jaundice-janitor

Jaundice in the context of cholecystitis usually indicates biliary obstruction rather than isolated gallbladder inflammation, since uncomplicated cholecystitis rarely produces significant conjugated hyperbilirubinemia. When bile flow is blocked, typically by a common bile duct stone or external compression, bilirubin accumulates and causes yellowing of the skin and sclera, and patients may also develop clay colored stools from the absence of bile pigments in the intestine. Because jaundice alone does not reflect liver synthetic function, clinicians should assess albumin and prothrombin time when liver injury is suspected. Ultrasound serves as the first-line study to identify biliary obstruction and clarify the cause of jaundice in patients being evaluated for cholecystitis.

Nausea and Vomiting

Vomiting

The patient with acute cholecystitis may experience nausea and vomiting. Nausea after eating meals is a common symptom of cholecystitis. Administering antiemetics will help alleviate symptoms. After the patient vomits, frequent mouth rinses may be done to provide comfort.

Dyspepsia (Indigestion)

Disc-pop

Indigestion is an initial symptom of acute cholecystitis. Dyspepsia or heartburn is a common symptom of chronic cholecystitis.

Fever

Fever-beaver

Manifestations of inflammation related to cholecystitis include fever. The patient with cholecystitis may also have an elevated white blood cell (WBC) count caused by inflammation.

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Considerations

Increased WBCs

Up-arrow White-mac-man

The patient with cholecystitis may exhibit signs of infection such as fever and increased WBC count. Monitoring the patient's temperature and WBC is critical for early detection and treatment of infection.

Fatty or Spicy Foods

Fat Spicy-pepper

Biliary obstruction prevents bile from entering the small intestine for fat digestion. The patient with cholecystitis will develop an intolerance to fatty or spicy foods. Ingesting fatty foods will cause flare ups of biliary colic with symptoms including nausea, anorexia, and a sensation of fullness. The pain frequently occurs 3-6 hours after eating a high-fat meal.

Ultrasound

Ultrasound-machine

Ultrasound may be performed to diagnose cholelithiasis, or gallstones causing gallbladder inflammation. The diagnostic tool may also be completed to ensure the absence of calcification that may indicate cancer. In patients with cholecystitis, ultrasound is performed to rule out other possible causes of symptoms. The ultrasound may show biliary sludge or gallbladder wall thickening indicating inflammation.

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