Acute Cholecystitis, Choledocholithiasis, and Acute Cholangitis

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KEYWORDS

• Gallstone • Cholelithiasis • Biliary colic • Acute cholecystitis • Choledocholithiasis • Acute cholangitis • Cholecystectomy • Cholecystostomy

HOSPITAL MEDICINE CLINICS CHECKLIST

1. Cholelithiasis is common, but often asymptomatic. When symptomatic, the usual presentation is biliary colic.
2. Gallstone disease most commonly affects women (especially if pregnant), older patients, the obese, and those of Hispanic heritage.
3. The most common complication of gallstone disease is acute cholecystitis, which presents similarly to biliary colic, but with fever and more severe symptoms that do not spontaneously resolve. Physical examination may show a positive Murphy sign.
4. Acalculous cholecystitis is usually seen in critically ill or postoperative patients.
5. Choledocholithiasis, or gallstones in the common bile duct, presents with biliary colic and jaundice, or with complications such as cholangitis or gallstone pancreatitis. Serum bilirubin level is typically greater than 4 mg/dL with a marked increase in alkaline phosphatase.
6. Acute cholangitis caused by bacterial infection in an occluded bile duct presents with the Charcot triad of right upper quadrant pain, jaundice, and fever. Blood and bile cultures are often positive.
7. Ultrasonography is the imaging method of choice in suspected gallstone disease. HIDA (99mTc-hepatic iminodiacetic acid) scan is second-line imaging

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for diagnosis of acute cholecystitis. Magnetic resonance cholangiopancreatography, endoscopic ultrasonography, and endoscopic retrograde cholangiopancreatography (ERCP) are of equal accuracy for diagnosis of choledocholithiasis.

8. Hospitalization for intravenous antibiotics and early laparoscopic cholecystectomy is recommended for acute cholecystitis.
9. Antibiotics for acute cholecystitis and cholangitis should be targeted against enteric bacteria per Infectious Diseases Society of America guidelines.
10. If medical instability or comorbidities preclude early laparoscopic cholecystectomy, acute cholecystitis can be managed with antibiotics and percutaneous cholecystostomy followed by elective cholecystectomy in 2 to 3 months.
11. Current evidence suggests that early surgical intervention for acute cholecystitis yields improved morbidity, shorter hospital stay, and reduced symptom recurrence.
12. Choledocholithiasis generally warrants intervention for stone removal; typically ERCP with biliary sphincterotomy. Afterward, early cholecystectomy is recommended to prevent recurrent biliary events.
13. Gallstone disease is often complicated by pancreatitis. Early ERCP is only required for concurrent cholangitis and biliary obstruction. Cholecystectomy should be performed before hospital discharge unless the pancreatitis was severe or necrotizing.
14. Acute cholangitis is managed with antibiotic treatment and decompression, either endoscopically or with percutaneous cholecystostomy.

DEFINITIONS

What is cholelithiasis?

Cholelithiasis refers to the development of stones in the gallbladder because of crystallization of cholesterol (80%) or pigment (20%).[1] Cholelithiasis may result in biliary colic or complications such as acute cholecystitis, choledocholithiasis, gallstone pancreatitis, or cholangitis. The risk of developing these complications in a patient with asymptomatic gallstones is low at 1% to 2% per year.[1]

What is biliary colic?

Approximately 20% of those with asymptomatic stones develop symptoms over 15-year follow up.[2] Symptoms are usually caused by transient inflammation or obstruction when gallstones migrate into the cystic duct or common bile duct. The characteristic presentation is biliary colic, a severe constant ache or fullness in the right upper quadrant (RUQ) or epigastrium, with frequent radiation to the right shoulder. Nausea and vomiting are often associated. Episodes are frequently precipitated by a meal and spontaneously remit after 15 minutes to 5 hours.

What is acute cholecystitis?

Acute cholecystitis is caused by inflammation of the gallbladder wall. The usual trigger is cystic duct obstruction with resultant inflammation, although other inflammatory