Acute Cholecystitis

Acute cholecystitis is inflammation of the gallbladder.

The gallbladder is an organ located below the liver that stores bile, a fluid that helps digest fats in the small intestine. Typical symptoms of acute cholecystitis include pain in the right upper area of the abdomen, fever, and nausea. Most commonly, acute cholecystitis occurs when the duct from the gallbladder to the small intestine is blocked by gallstones, resulting in swelling of the gallbladder due to accumulation of bile. Approximately 5% to 10% of people develop acute cholecystitis without gallstones (acalculous cholecystitis). Acute complicated cholecystitis occurs when patients develop serious consequences from cholecystitis, such as rupture of the gallbladder.

How Common Is Acute Cholecystitis?
Acute cholecystitis affects more than 200,000 individuals per year in the US. Although about 20 million people in the US have gallstones, most do not experience symptoms related to them. However, about 10% to 15% of individuals with gallstones develop acute cholecystitis over their lifetime.

Risk Factors for Acute Cholecystitis
Some risk factors for acute cholecystitis due to gallstones include female sex, obesity, pregnancy, high-fat or low-fiber diet, rapid weight loss, and increased age. Risk factors for acalculous cholecystitis are critical illness, diabetes, male sex, HIV infection, atherosclerotic cardiovascular disease, and receipt of intravenous nutrition.

Diagnosis of Acute Cholecystitis
Right upper abdominal ultrasound is the first recommended imaging study to diagnose acute cholecystitis. Gallbladder ultrasound is accurate, low-cost, and easily accessible; can be performed rapidly; and does not expose patients to ionizing radiation. Computed tomography (CT), hepatobiliary scintigraphy, and magnetic resonance imaging (MRI) are other imaging studies that are less commonly used to diagnose acute cholecystitis.

Treatment of Acute Cholecystitis
The recommended treatment of acute cholecystitis is surgical removal of the gallbladder (cholecystectomy). In the US, standard care is laparoscopic cholecystectomy, which is minimally invasive surgery performed via 3 small incisions in the abdomen to remove the gallbladder. Laparoscopic cholecystectomy performed 1 to 3 days after diagnosis of acute cholecystitis is associated with fewer postoperative complications, shorter hospitalization, and lower costs compared with surgery done more than 3 days after diagnosis. Between 2% and 15% of patients undergoing cholecystectomy require a transition from a laparoscopic approach to an “open” approach, which involves a longer incision in the abdomen to remove the gallbladder safely.

In uncomplicated acute cholecystitis, intravenous antibiotics are recommended prior to surgery but not after the operation. Patients with acute complicated cholecystitis and those with signs of infection should receive antibiotics for a longer duration.

For patients at high risk of surgical complications (such as critically ill or older patients with multiple medical problems), an alternative to cholecystectomy is image-guided placement of a catheter through the skin of the abdomen into the gallbladder (percutaneous cholecystostomy) to allow drainage of the gallbladder.

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