CONDITION

# Cholangitis

Learn how acute cholangitis develops, which symptoms need emergency care, and how doctors diagnose, drain, and treat an infected blocked bile duct.

**WHAT IT IS**
Acute inflammation of the bile ducts

**BODY SYSTEM**
Digestive system

**MAIN SYMPTOMS**
Fever, right upper abdominal pain, jaundice, chills

**WHAT CAUSES IT**
Bacterial infection behind a blocked bile duct

**HOW IT IS DIAGNOSED**
Blood tests and bile-duct imaging

**MAIN TREATMENT**
Antibiotics and bile-duct drainage

**CAN IT BE CURED?**
Sometimes - prompt treatment brings recovery

**IS IT AN EMERGENCY?**
Yes - fever or chills with jaundice or significant upper abdominal pain

**LONG-TERM OUTLOOK**
Many recover with prompt treatment, but recurrence or liver damage can occur

## Overview

Cholangitis is inflammation of the bile ducts. These small tubes carry bile from the liver and gallbladder into the small intestine. Bile is a digestive fluid that helps the body break down fats.

This article focuses on acute cholangitis , sometimes called ascending cholangitis. It usually develops when a bile duct becomes blocked and bacteria grow in the trapped bile. Pressure can build inside the ducts, allowing infection to spread into the bloodstream.

A gallstone lodged in the common bile duct is a frequent cause. Narrowing from scar tissue, a tumor, or a blocked bile-duct stent can also interfere with bile flow.

Acute cholangitis requires prompt hospital assessment. Treatment usually includes antibiotics like amoxicillin or doxycycline , fluids, and a procedure to drain the blocked duct. Many people

recover when the infection and blockage are treated quickly.

Acute cholangitis is different from chronic conditions such as primary biliary cholangitis and primary sclerosing cholangitis. Those diseases cause long-term bile-duct injury. However, primary sclerosing cholangitis can create narrowed ducts that increase the risk of an acute infection.

## Symptoms

Symptoms can begin suddenly or worsen over several hours or days. The common combination of fever, right upper abdominal pain, and jaundice is known as Charcot's triad . Jaundice means yellowing of the skin or whites of the eyes. Not everyone with cholangitis has all three symptoms.

Possible symptoms include:

Older adults and people with weakened immune systems may have less typical symptoms. They may develop confusion, low blood pressure, weakness, or a general decline without marked pain or fever.

Suspected acute cholangitis needs urgent medical assessment. Seek emergency care for fever or chills together with jaundice or significant upper abdominal pain. Emergency help is also needed for confusion, fainting, severe weakness, difficulty breathing, very low urine output, or signs of shock such as cold, clammy skin. These may indicate that infection is affecting the bloodstream or other organs.

Symptoms such as mild itching, intermittent discomfort, or jaundice without fever still need prompt medical review. They may reflect a bile-duct blockage even if an acute infection is not yet clear.

- Fever, chills, or shaking
- Pain in the upper right or upper middle abdomen
- Yellow skin or eyes
- Dark urine or pale, clay-colored stool
- Nausea or vomiting
- Loss of appetite
- Itching
- Weakness or unusual tiredness

## Causes and risk factors

Acute cholangitis usually requires two conditions: reduced bile flow and bacteria within the biliary system. A blockage raises pressure in the ducts and makes it harder for the body to clear bacteria.

Possible causes of blockage include:

Bacteria usually reach the ducts from the small intestine. They can move upward when normal bile flow is blocked. Cholangitis can also occur after procedures involving the bile ducts, especially if drainage is incomplete.

Risk may be higher in someone with a history of common bile-duct stones, previous cholangitis, bile-duct surgery, strictures, or biliary stents. A person who has had the gallbladder removed can still develop a stone in the common bile duct.

Primary sclerosing cholangitis and some tumors can cause repeated or persistent narrowing. In these situations, cholangitis may recur unless adequate drainage can be maintained.

- A gallstone in the common bile duct
- Scar-related narrowing, called a biliary stricture
- Narrowing after bile-duct surgery or liver transplantation
- Primary sclerosing cholangitis
- Cancer involving the pancreas, bile ducts, gallbladder, liver, or nearby structures
- A clogged, displaced, or narrowed bile-duct stent
- Less commonly, parasites in regions where biliary parasitic infections occur

## Diagnosis

Doctors assess the symptoms, medical history, examination findings, blood tests, and imaging results together. No single symptom confirms cholangitis.

The medical team may ask about gallstones, prior abdominal surgery, liver disease, cancer, recent endoscopic procedures, and bile-duct stents. During the examination, they check for jaundice, abdominal tenderness, fever, low blood pressure, confusion, and other signs of infection.

Blood tests may include:

An abdominal ultrasound is often an early imaging test. It can show gallstones, widened bile ducts, or gallbladder inflammation. However, ultrasound does not find every common bile-duct

stone.

Computed tomography, or CT, can look for duct widening, tumors, abscesses, and other causes of abdominal symptoms. Magnetic resonance cholangiopancreatography, or MRCP, is a specialized MRI that creates detailed pictures of the bile ducts without placing an instrument inside them.

Endoscopic ultrasound may help find small stones or investigate a suspected blockage. A thin flexible instrument with an ultrasound probe is passed through the mouth while the person is sedated.

Endoscopic retrograde cholangiopancreatography, or ERCP, combines endoscopy and X-rays to enter the bile duct through the small intestine. Because ERCP can drain the duct and remove a blockage, it is mainly used as a treatment rather than as a routine diagnostic test.

Doctors also assess severity. Low blood pressure, confusion, breathing problems, kidney injury, abnormal clotting, or other organ dysfunction can indicate severe disease and may affect how urgently drainage and intensive monitoring are needed.

- A complete blood count to look for an increased or decreased white blood cell count
- Liver tests, including bilirubin and enzymes that may rise when bile flow is blocked
- Kidney function, electrolytes, and blood-clotting tests
- Markers of inflammation
- Blood cultures to check whether bacteria are present in the bloodstream
- Lactate or other tests when severe infection or poor circulation is suspected

## Treatment and management

Treatment takes place in a hospital. The immediate goals are to support circulation, control infection, and restore bile flow.

Initial care may include intravenous fluids, pain relief, treatment for nausea, and close monitoring of blood pressure, urine output, oxygen levels, and blood tests. People with severe infection may need care in an intensive care unit.

Antibiotics are usually started promptly and are selected to cover bacteria commonly found in the intestinal and biliary systems. The exact antibiotic and treatment length depend on illness severity, allergies, kidney and liver function, culture results, local resistance patterns, and whether drainage has been successful. Antibiotic treatment alone may not be enough if a blocked duct remains under pressure.

Most people who need urgent bile-duct drainage are treated with ERCP. During the procedure, the doctor may:

The patient is usually sedated or given anesthesia. ERCP has risks, including pancreatitis, bleeding, infection, and a tear in the digestive tract. The clinical team weighs these risks against the danger of leaving an infected obstruction untreated.

If ERCP is not possible or does not provide drainage, alternatives may include drainage through the skin and liver, called percutaneous transhepatic biliary drainage. Surgery is sometimes needed, but it is generally not the first drainage method when a less invasive approach is available.

After the acute infection improves, treatment turns to the underlying cause. A person whose cholangitis was caused by gallstones may be advised to have the gallbladder removed after stabilization to reduce the chance of future stone-related problems. Timing depends on the overall condition and findings.

A stricture may need further sampling, dilation, stent treatment, or surgery. When a tumor is suspected, care may involve gastroenterology, surgery, oncology, and interventional radiology specialists.

- Remove a common bile-duct stone
- Make a small opening to improve drainage
- Widen a narrowed area
- Place a temporary plastic or metal stent
- Drain infected bile or pus

## Complications

Bacteria from an infected bile duct can enter the bloodstream. This may cause sepsis, a serious body-wide response to infection. Severe sepsis can lead to shock and injury to the kidneys, lungs, brain, heart, or blood-clotting system.

Other possible complications include a liver abscess, persistent blockage, recurrent cholangitis, or infection of a biliary stent. ERCP itself can cause complications such as pancreatitis or bleeding, although the procedure may still be essential for drainage.

Long-lasting or repeated obstruction can damage the bile ducts and liver. The risk and type of long-term problems depend on the underlying cause, how completely the duct can be drained, and whether strictures or stones return.

## Follow up

Before leaving the hospital, patients should understand what caused the blockage, whether it was fully treated, and whether a stent remains in place. Some stents must be removed or exchanged within a planned period. Missing that follow-up can allow the stent to clog and infection to return.

Routine follow-up may include repeat liver blood tests, review of culture results, and imaging or another endoscopic procedure. People treated for gallstone-related cholangitis may need a surgical consultation about gallbladder removal. Those with a stricture, chronic bile-duct disease, or suspected tumor may need ongoing specialist care.

Take antibiotics exactly as directed and contact the treating team if side effects make them difficult to take. Do not stop or extend antibiotics without medical guidance.

Seek urgent medical advice if jaundice, dark urine, pale stool, upper abdominal pain, fever, or chills return. Go to emergency care for confusion, fainting, trouble breathing, severe weakness, persistent vomiting, or rapidly worsening symptoms.

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