



Acute Cholangitis & Cholecystitis

Tokyo Guidelines · Cholangitis gets drained, cholecystitis gets removed — antibiotics alone fix neither

GRADE III → DRAIN
organ dysfunction = urgent

TWO DIFFERENT DISEASES *same right upper quadrant, entirely different urgency*

CHOLANGITIS — the duct

Infection behind an obstructed bile duct. Charcot's triad: fever, jaundice, right upper quadrant pain. Add hypotension and confusion for Reynolds' pentad, which signals suppurative cholangitis. **This is obstructed sepsis and the pressure must be released** — antibiotics cannot sterilize a closed system.

CHOLECYSTITIS — the gallbladder

Cystic duct obstruction with gallbladder inflammation. **Murphy's sign**, localized tenderness, often a palpable mass. **Jaundice is not typical** — if the bilirubin is high, think a stone in the common duct, cholangitis, or Mirizzi syndrome.

IMAGING FIRST

Ultrasound is the initial test — stones, wall thickening, pericholecystic fluid, sonographic Murphy, duct caliber. **A normal duct does not exclude a stone**: go to MRCP or endoscopic ultrasound when the biochemistry suggests obstruction, and to CT for complications and alternative diagnoses.

DIAGNOSE AND GRADE *the Tokyo Guidelines structure both diagnosis and timing*

Element	Detail
Cholangitis diagnosis	Three domains: A systemic inflammation (fever or rigors, raised white count or CRP), B cholestasis (jaundice, raised ALP, GGT or transaminases), C imaging (biliary dilatation or a demonstrated cause). Suspected = A plus B or C; definite = A plus B plus C.
Cholecystitis diagnosis	A local signs (Murphy's sign, right upper quadrant pain, tenderness or mass), B systemic signs (fever, raised CRP or white count), C characteristic imaging . Suspected = A plus B; definite = A plus B plus C.
Grade III — severe	Any new organ dysfunction : vasopressor-requiring hypotension, altered consciousness, PaO ₂ /FiO ₂ below 300, oliguria or creatinine above 2 mg/dL, INR above 1.5, or platelets below 100. This is the grade that dictates urgency.
Grade II — moderate	Cholangitis : two or more of white count above 12 or below 4, fever 39°C or more, age 75 or over, bilirubin 5 mg/dL or more, or hypoalbuminemia. Cholecystitis : white count above 18, palpable tender mass, symptoms beyond 72 hours, or marked local inflammation such as gangrene, emphysematous change or a pericholecystic abscess.
Grade I — mild	Meets neither of the above. Mild does not mean delay indefinitely — it means the intervention can be planned rather than emergent.

WHAT TO DO, AND WHEN *source control is the treatment; the antibiotic is support*

- 1 Resuscitate and start antibiotics immediately.** Take **blood cultures** first, and bile cultures at the time of drainage. In septic shock give antibiotics **within the hour**; otherwise **within 6 hours** of diagnosis.
- 2 Cholangitis: drain the duct.** Grade III demands urgent drainage alongside organ support; Grade II demands early drainage. Grade I can be treated medically first, but **drain if there is no response within about 24 hours**. ERCP with sphincterotomy and stone extraction or stenting is first-line; use **percutaneous transhepatic drainage or an endoscopic ultrasound-guided route** when ERCP fails or the anatomy is altered.
- 3 Cholecystitis: take the gallbladder out.** Early laparoscopic cholecystectomy on the index admission is preferred for Grade I and for Grade II in the operatively fit, and is **better than delayed surgery** for complications, length of stay and readmission. Delaying by six weeks simply exposes the patient to a second attack.
- 4 When the patient is too unwell or too comorbid**, use **percutaneous cholecystostomy** to control the sepsis and reconsider surgery once recovered. Grade III cholecystitis should only go straight to surgery in experienced hands with a favorable comorbidity profile.
- 5 Do not forget the definitive step.** After ERCP for gallstone cholangitis or after gallstone pancreatitis, **cholecystectomy on the same admission or very soon after** prevents a high rate of recurrent biliary events. Patients discharged with the gallbladder in situ commonly return worse.

ANTIBIOTICS AND THE ATYPICAL CASES *cover Gram-negatives, then narrow*

Issue	Approach
Choice of agent	Target enteric Gram-negatives (<i>E. coli</i> , <i>Klebsiella</i>) and anaerobes. Community-acquired mild disease can use a cephalosporin-based regimen ; moderate to severe or healthcare-associated disease needs broader cover such as piperacillin-tazobactam or a carbapenem . Add anaerobic cover if there is a bilioenteric anastomosis or a stent , and consider enterococcal cover in severe or healthcare-associated infection. Then de-escalate on cultures.
Duration	Roughly 4 to 7 days after adequate source control in cholangitis. After cholecystectomy for uncomplicated Grade I or II disease, antibiotics can usually stop within 24 hours ; continue for several days if there was perforation, gangrene or emphysematous change . Bacteremia with Gram-positive organisms warrants a longer course.
Acalculous cholecystitis	In the critically ill, ventilated, burned, or long-term parenteral nutrition patient with unexplained sepsis. No stones, high mortality , and gangrene develops quickly. Percutaneous cholecystostomy is usually the answer.
Mirizzi and malignancy	A stone impacted in the cystic duct compressing the common duct produces obstructive jaundice with cholecystitis, and materially raises the risk of bile duct injury at surgery. Painless jaundice with a distended gallbladder points to malignant obstruction instead — image before stenting blindly.
Post-ERCP watch	Pancreatitis, bleeding, perforation and cholangitis. New severe pain after ERCP is not simply the procedure — check amylase or lipase and consider imaging.

PEARLS & PITFALLS

- Antibiotics do not treat an obstructed duct.** If the bile is under pressure, the patient needs drainage regardless of how good the antibiotic is.
- Jaundice with cholecystitis is a warning** — look for a common duct stone, cholangitis or Mirizzi rather than assuming it is all gallbladder.
- Grade the severity explicitly.** Organ dysfunction converts a routine admission into an emergency drainage.
- Early cholecystectomy beats interval surgery** for cholecystitis and after gallstone pancreatitis. Do not discharge the gallbladder.
- Think acalculous cholecystitis** in the ventilated patient with unexplained sepsis and no other source.
- Take blood cultures before antibiotics and bile cultures at drainage** — they are what let you narrow therapy safely.

