

Acute Cholecystitis

DIAGNOSIS:

Diagnostic Criteria for Acute Cholecystitis
A. Local signs of gallbladder inflammation <ul style="list-style-type: none"> a. Murphy's sign OR b. RUQ pain, tenderness, or mass B. Systemic signs of inflammation <ul style="list-style-type: none"> a. Fever b. WBC elevated c. CRP elevated C. Imaging findings characteristic of acute cholecystitis
Suspected Acute Cholecystitis: one item in A + one item in B Definitive Acute Cholecystitis: one item in A + one item in B + C

- Procalcitonin is not recommended for diagnosis of acute cholecystitis due to limited data.
- Ultrasound is the test of choice to diagnose acute cholecystitis. Findings include pericholecystic fluid, distended gallbladder, edematous gallbladder wall and gallstones.
- Contrast-enhanced CT is an alternative test to diagnose acute cholecystitis. It can be considered if complications such as gangrene, perforation or abscess are suspected.
- Hepatobiliary iminodiacetic acid (HIDA) nuclear medicine scan also has good performance for diagnosis of acute cholecystitis. However, it is more time and resource intensive, and requires a small amount of radiation exposure.

MANAGEMENT:

Antibiotic Recommendations by Severity		Duration
Mild Cholecystitis <i>No features of moderate or severe cholecystitis</i>	<i>Mild cholecystitis is predominantly an inflammatory process. Antibiotics are for prophylaxis.</i> cefazolin 2 g IV q8h <i>If cefazolin allergy:</i> ciprofloxacin 400 mg IV q12h ¹	≤ 24 hours post-op
Moderate Cholecystitis <i>Perforation, abscess, gangrene, symptoms >72hr, or medically managed cholecystitis</i>	ceftriaxone 1-2 g IV q24h <i>If ceftriaxone allergy:</i> ciprofloxacin 400 mg IV q12h ¹	4-7 days See below
Severe Cholecystitis <i>Sepsis, septic shock, or healthcare-associated infection</i>	piperacillin-tazobactam 3.375 g IV q6h ² <i>If penicillin allergy or ESBL risk factors:</i> meropenem 500 mg IV q6h	4-7 days See below

Doses may require adjustment for renal insufficiency

¹ Or ciprofloxacin 500 mg PO BID if hemodynamically stable, able to swallow, and functioning GI tract.

² If suspect or isolated *Pseudomonas* use piperacillin-tazobactam 4.5 g IV q6h

Source Control

- Treatment is predominantly surgical but onset of symptoms and comorbidities may factor into timing of surgery
- Percutaneous cholecystostomy (IR drainage) is recommended in patients who are septic but cannot undergo surgical source control (high surgical risk or refusing surgery). Percutaneous cholecystostomy is also recommended in patients managed medically who deteriorate or fail to show improvement after 48 hours of antibiotic therapy.

ORAL TRANSITION

Consider transition to oral antibiotics when patient is:

1. Hemodynamically stable
2. Improving clinically
3. Afebrile for 24 hours
4. Able to ingest oral medications and has a functioning GI tract

Oral antibiotic options:

- amoxicillin-clavulanate 875-125 mg one tab PO BID
- *If penicillin allergy:*
 - cefuroxime 500 mg PO BID
OR
 - ciprofloxacin 500 mg PO BID

DURATION

- **Acute cholecystitis without perforation**, pericholecystic abscess, or gangrene should have antibiotics discontinued \leq 24 hours after cholecystectomy.
- **Acute cholecystitis managed with percutaneous cholecystostomy** should have antibiotics discontinued 4 days (96 hours) after cholecystostomy, assuming adequate source control.
- **Acute cholecystitis with perforation**, pericholecystic abscess, or gangrene should have antibiotics discontinued 4 days (96 hours) after definitive source control (cholecystectomy or IR drainage).
- **Acute cholecystitis without definitive source control** should continue antibiotics for 5-7 days. Monitor clinical parameters including fever, WBC, and GI function. Repeat imaging may be necessary. Patients who don't respond fully within 5-7 days should be reassessed for potential source control intervention.