

## Acute Cholangitis

### DIAGNOSIS:

| Diagnostic Criteria for Acute Cholangitis   |
|---|
| A. Systemic signs of inflammation <ul style="list-style-type: none"> <li>a. Fever or rigors</li> <li>b. WBC elevated</li> <li>c. CRP elevated</li> </ul> B. Cholestasis <ul style="list-style-type: none"> <li>a. Jaundice (clinically evident or elevated Total-Bilirubin)</li> <li>b. Abnormal liver enzymes: ALT, AST, ALP, GGT</li> </ul> C. Imaging findings consistent with acute cholangitis <ul style="list-style-type: none"> <li>a. Biliary ductal dilatation</li> <li>b. Evidence of etiology on imaging (stricture, stone, stent, etc)</li> </ul> |
| <b>Suspected Acute Cholangitis:</b> one item in A + one item in either B or C<br><b>Definitive Acute Cholangitis:</b> one item in A + one item in B + one item in C   |

- Charcot's triad (fever, jaundice, and RUQ pain) strongly suggests acute cholangitis, but its absence does not rule out acute cholangitis.
- Procalcitonin may increase with severity of acute cholangitis, but its impact on decision making is unknown.
- Ultrasound can be used to diagnose acute cholangitis. Findings include biliary ductal dilatation or stones. However, test sensitivity is not high.
- Contrast-enhanced CT can be used to diagnose acute cholangitis. Findings include biliary ductal dilatation, stenosis, or stones.
- Magnetic resonance cholangiopancreatography (MRCP) has high sensitivity and specificity for acute cholangitis, it can be considered when ultrasound and CT scan are unclear. However, accessibility may be limited.

### MANAGEMENT:

| Antibiotic Recommendations by Severity   |  | Duration                      |
|--|--|-------------------------------|
| <b>Mild-Moderate Cholangitis</b><br><br><i>No features of severe cholangitis</i>             | ceftriaxone 1-2 g IV q24h<br><i>If ceftriaxone allergy: ciprofloxacin 400 mg IV q12h<sup>1</sup></i><br><br><i>If biliary-enteric anastomosis: ADD metronidazole 500 mg IV/PO q12h</i>                     | <b>5-7 days<br/>See Below</b> |
| <b>Severe Cholangitis</b><br><i>Sepsis, septic shock, or healthcare-associated infection</i> | piperacillin-tazobactam 3.375 g IV q6h <sup>2</sup><br><i>If penicillin allergy or ESBL risk factors: meropenem 500 mg IV q6h</i><br><br><i>If known VRE colonization: ADD linezolid 600 mg IV/PO q12h</i> |                               |

Doses may require adjustment for renal insufficiency

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

<sup>2</sup> If suspect or isolated *Pseudomonas* use piperacillin-tazobactam 4.5 g IV q6h

### Source Control

- Biliary decompression with endoscopic retrograde cholangiopancreatography (ERCP). Alternative if ERCP not available or feasible is IR drainage by percutaneous transhepatic biliary drainage.

### 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 cholangitis managed with endoscopic or percutaneous drainage** should have antibiotics discontinued 5-7 days after successful source control procedure.
- **Acute cholangitis managed medically without source control** procedure should continue antibiotics for 5-7 days. Monitor clinical parameters including fever, WBC, and GI function. Patients who don't respond fully within 5-7 days should be reassessed for potential source control intervention.
- **Bacteremia is common with acute cholangitis**, antibiotics can usually be discontinued 5-7 days after successful source control procedure if there is good clinical response. Bacteremia with *Enterococcus* or *Streptococcus* may require longer duration of therapy, Infectious Disease consultation recommended.
- **Acute cholangitis with concurrent liver abscess** requires a prolonged course of antibiotics. Infectious Disease consultation recommended.