

Brigham and Women's Hospital Emergency Surgical Service Patient Care Pathways

Item: Acute Cholecystitis

Pathway: Acute cholecystitis pathway

Exclusion: Cancer, active chemotherapy, pregnancy, immunosuppression, transplant, mechanical circulatory support

Initial Evaluation

1. A thorough history and physical exam are required to make the diagnosis of acute cholecystitis
 - a. History should include prolonged (>4 hours) right upper quadrant / epigastric pain. May include fever, nausea, emesis, anorexia
 - b. Physical exam includes right upper quadrant / epigastric tenderness with voluntary and involuntary guarding
 - c. Laboratory tests include CBC, Chem 7, LFTs, Bilirubin, Lipase, Lactate, INR
2. Abdominal ultrasound demonstrating cholelithiasis, thickened or edematous gallbladder wall
3. If diagnosis is unclear, HIDA can be obtained

Initial Management: Antibiotics

1. Start antibiotics to cover gram negative aerobes, *E.coli*, *K.pneumonia*, anaerobes (*B.fragilis*)
2. IV antibiotics to include Ceftriaxone 1-2 grams IV q 24 hours and Flagyl 500mg IV q 8 hours. If allergy to Cephalosporins then Ciprofloxacin 400mg IV q 12 hours and Flagyl 500mg IV q 8 hours.
3. Antibiotics stopped post operatively or if non-operative management transitioned to PO Augmentin (875/125) q 12 hours (cipro flagyl for penicillin allergy) for 4 days following placement of percutaneous cholecystostomy and for total of 10 days of antibiotics if no intervention.

Surgical Management

1. The definitive treatment of acute calculous cholecystitis is early laparoscopic cholecystectomy.
2. Patients with high risk for CBD stones should have preoperative MRCP, ERCP, EUS or IOC.
3. Postoperative antibiotics are not recommended in uncomplicated cholecystitis.
4. High risk patients and those with Grade II and III cholecystitis may require cholecystostomy tube.
5. Patients with cholecystostomy tube should follow-up in SOW clinic.

Evidence

Sensitivity and specificity of HIDA for acute cholecystitis is 90-97% and 71-90%.²

Early cholecystectomy is safe and preferred for acute cholecystitis with decreased LOS, wound infection.³

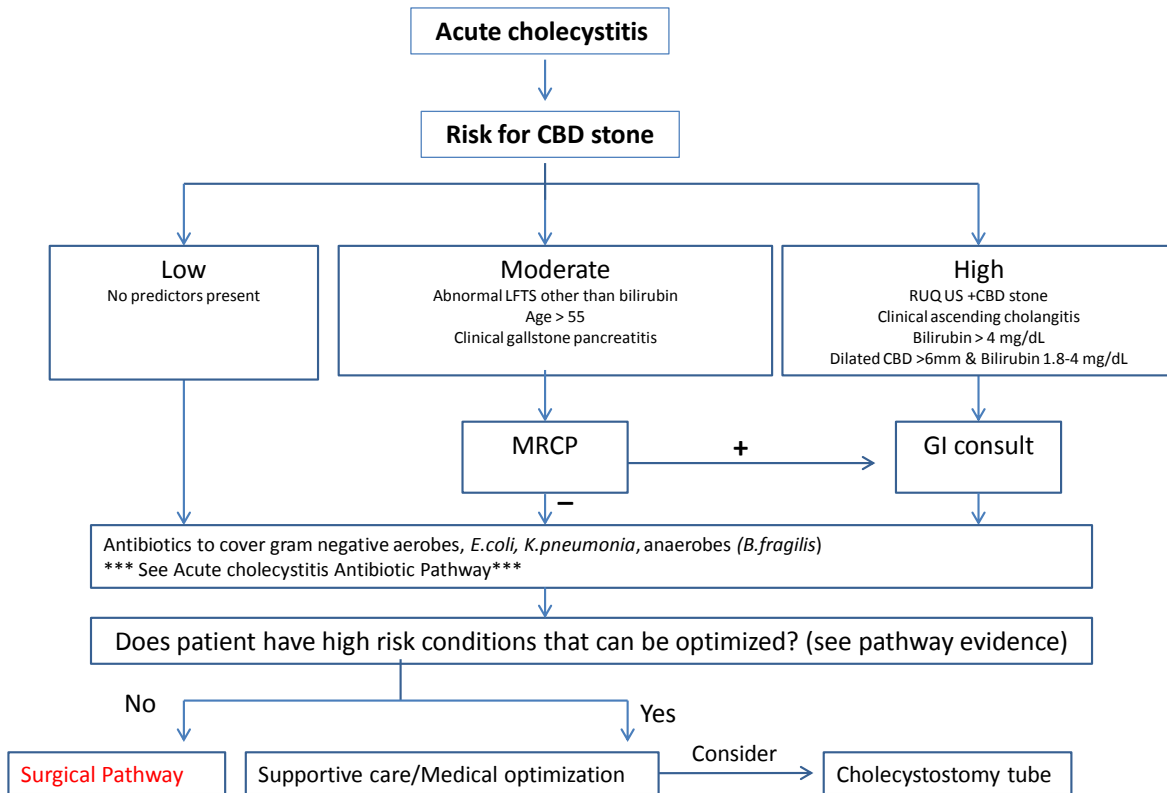
Early cholecystectomy has been defined as within 4 days of diagnosis.⁴

Complication risks was significantly higher if time from admission to surgery exceeds 4 days.⁵

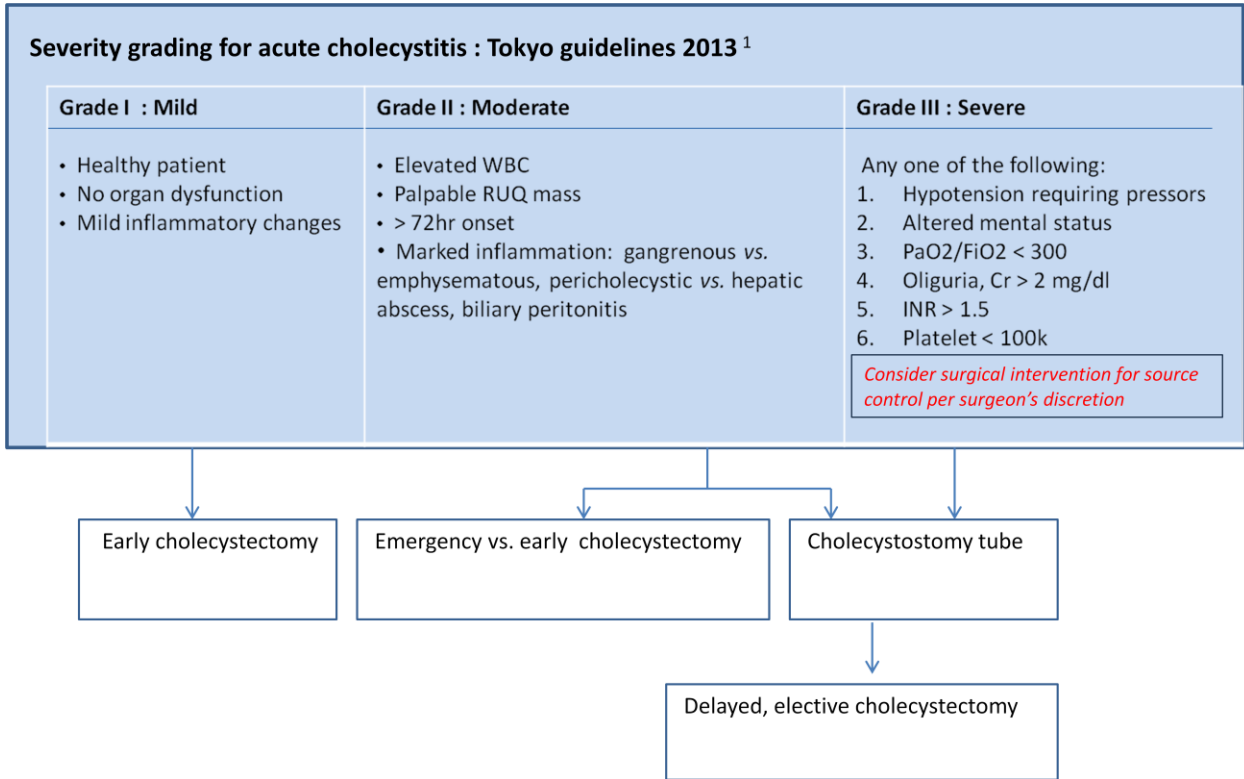
There is no significant difference between complication rate and conversion to open cholecystectomy between early (<7 days) and delayed (>6 weeks) cholecystectomy.⁶

High risk condition: preoperative mechanical ventilation, preoperative pneumonia, CHF with exacerbation within 1 month, MI within 6 months, angina within 1 month, claudication and/or leg gangrene, acute renal failure within past 24 hours, transfusion of > 4 PRBC within 72 hours of surgery, INR > 1.5, ASA class \geq 3, preoperative septic shock, age \geq 65.⁷

Acute Cholecystitis Preoperative Pathway



Acute Cholecystitis **Surgical Pathway**



Acute Cholecystitis **Antibiotic Pathway**

Cholecystitis to OR:

IV antibiotics to include Ceftriaxone 1-2 grams IV q 24 hours and Flagyl 500mg IV q 8 hours until surgery. If allergy to Cephalosporins then Ciprofloxacin 400mg IV q 12 hours and Flagyl 500mg IV q 8 hours. No postoperative antibiotics.

Cholecystitis with percutaneous drainage:

IV antibiotics to include Ceftriaxone 1-2 grams IV q 24 hours and Flagyl 500mg IV q 8 hours until drainage. If allergy to Cephalosporins then Ciprofloxacin 400mg IV q 12 hours and Flagyl 500mg IV. Antibiotics transitioned to PO Augmentin (875/125) q 12 hours (cipro flagyl for penicillin allergy) for a total of 4 days antibiotics from time of drainage.

Cholecystitis managed with Antibiotics:

IV antibiotics to include Ceftriaxone 1-2 grams IV q 24 hours and Flagyl 500mg IV q 8 hours will be administered for 3 days. If allergy to Cephalosporins then Ciprofloxacin 400mg IV q 12 hours and Flagyl 500mg IV q 8 hours for 3 days. Antibiotics transitioned to PO Augmentin (875/125) q 12 hours (cipro flagyl for penicillin allergy) on day 3 for a total of 10 days of antibiotics total.

References

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