Preoperative Cholecystectomy Care Guideline

**Inclusion Criteria:** Children 2-21 yrs old with RUQ abdominal pain or epigastric pain

**Exclusion Criteria:** History of trauma, pregnant, previous abdominal surgery, concern for tumor/abdominal mass, concerns for cholangitis, sepsis, concern for necrotizing pancreatitis

**Assessment**

**History:** Inquire specifically about onset and intensity of symptoms, location of pain, nausea/vomiting, jaundice, fever, association with meals, radiation of pain, family history of gallbladder disease

**Clinical Examination:** Localized tenderness, Murphy’s sign, jaundice, +/- obesity

**Interventions**

- CBC w/diff, CRP, CMP, DBili, lipase, urine HCG if ➥ 9 yrs old
- NPO with maintenance IVFs (D5 ½ NS with 20meq KCL)
- Acetaminophen IV while NPO
  - *<50 kg: 15 mg/kg/dose every 6 hours or 12.5 mg/kg/dose every 4 hours; maximum single dose: 15 mg/kg up to 750 mg; maximum daily dose: 75 mg/kg/day not to exceed 3,750 mg/day
  - ➥50 kg: 1,000 mg every 6 hours or 650 mg every 4 hours; maximum single dose: 1,000 mg; maximum daily dose: 4,000 mg/day
- Give Acetaminophen orally, if not NPO
  - *Weight-directed dosing: Infants, Children, and Adolescents: 10 to 15 mg/kg/dose every 4 to 6 hours as needed; do not exceed 5 doses in 24 hours; maximum daily dose: 75 mg/kg/day not to exceed 4,000 mg/day
  - Morphine 0.1mg/kg IV q3h PRN pain
  - Ondansetron
    - ≤40 kg: 0.1 mg/kg/dose as a single dose; maximum dose: 4 mg/dose
    - >40 kg: 4 mg/dose as a single dose
  - Abdominal limited RUQ US

**Criteria for Admission**

- US positive for gallbladder wall thickening, with or without stones in the gallbladder or cystic duct dilation (see page 2)
- History of multiple visits to the ED for discomfort/pain related to cholelithiasis

**If cholelithiasis without cholecystitis, choledocholithiasis or pancreatitis**

- May d/c from ED if stable (pain controlled, afebrile, normal WBC)
- Have follow up appointment with surgery scheduled as an outpatient, with plan for future cholecystectomy

**Further Recommendations/Considerations**

**Patients who need antibiotic therapy:**
- Has fever
- Toxic appearance
- Needs surgical consult
- Radiology exam shows gallbladder wall thickening

**Discharge Criteria**

- Tolerating food
- Able to ambulate
- Pain managed by oral medications

**Patient Education**

- Cerner instructions as appropriate for diagnosis - Cholecystectomy, Post-Op Care, Pain Management, Post-Op Constipation, Low Fat Diet

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.
Ultrasound Positive for gallbladder wall thickening, with or without stones in the gallbladder or cystic duct dilation

No

Nonsurgical diagnosis/possible outpatient follow-up

Yes

Cholelithiasis (can present with or without cholecystitis)

No stone found in CBD or pancreatic duct

Pain management
IV Acetaminophen or Morphine PRN
NPO with maintenance IV fluids (D5 ½ NS + 20meq KCL)
Consent for cholecystectomy when labs normalize

MRCP
No stone found in CBD or pancreatic duct
Pain management
IV Acetaminophen or Morphine PRN
NPO with maintenance IV fluids (D5 ½ NS + 20meq KCL)
Consent for cholecystectomy when labs normalize

Choledocholithiasis: Ultrasound shows – CBD 5mm or greater, with elevated LFTs (AST/ALT) and Hyperbilirubinemia (Total and Direct Bilirubin)
OR
Gallstone pancreatitis: Elevated Amylase/Lipase if gallstone obstructing pancreatic duct

Admit to pediatrics with Surgery Consult

IV antibiotics: Cefoxitin (80-160 mg/kg/day q 4-6hrs) or Ceftriaxone (50-75 mg/kg/dose q day) and Flagyl (22.5 to 40 mg/kg/day q 6-8 hrs), if symptoms of cholecystitis present

If stone is seen on imaging in CBD or pancreatic duct – go straight to ERCP
ERCP +/- sphincterotomy and/or stent placement
*note – done at UCI, requires d/c and readmission
Pain management
IV Acetaminophen or Morphine PRN
NPO with maintenance IV fluids (D5 ½ NS + 20meq KCL)
Consent for cholecystectomy when labs normalize

Cholecystitis

Admit to pediatrics with Surgery Consult

IV antibiotics: Cefoxitin (80-160 mg/kg/day q 4-6hrs) or Ceftriaxone (50-75 mg/kg/dose q day) and Flagyl (22.5 to 40 mg/kg/day q 6-8 hrs)

NPO with maintenance IV fluids (D5 ½ NS + 20meq KCL)
Pain management
IV Acetaminophen or Morphine PRN
Consent for “cooling off” with antibiotics; schedule for outpatient surgery

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References
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