Preoperative Cholecystectomy Care Guideline

CHOC Children's

Care Guideline Overall
GRADE: B

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 ≥ 9yrs old
- NPO with maintenance IVFs (D5 ½ NS with 20meqKCL)

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

Discharge Criteria

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

Further Recommendations/Considerations

Patients who need antibiotic therapy:

- Has fever
- Toxic appearance
- Needs surgical consult
- Radiology exam shows gallbladder wall thickening

Recommendations/Considerations

The gallbladder is an organ under the liver on the right side of the abdomen, which stores bile. Bile is then ejected from the gallbladder into the intestine to help digest the fat in foods.

Cholecystitis: acute inflammation of the gallbladder

Cholelithiasis: presence of gallstone in the gallbladder

Choledocholithiasis: gallstones present in the common bile duct (CBD), causing an obstruction, which can cause jaundice and liver damage

Gallstone Pancreatitis: gallstones blocking the pancreatic duct, which stops pancreatic enzymes from getting into the small intestine, causing pancreatitis

Biliary dyskinesia: poor gallbladder contractility and emptying, causing pain

Laboratory Findings: leukocytosis, elevated CRP (cholecystitis), elevated liver enzymes and T&D bilirubin (choledocholithiasis), elevated lipase (gallstone pancreatitis)

Patients who have sickle cell or are TPN dependent are more prone to gallstones.

Consider refraining from the use of NSAIDs prior to surgery. (Grade X, Level V)

Patient Education

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

Approved Evidence Based Medicine Committee
9-20-2019

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.

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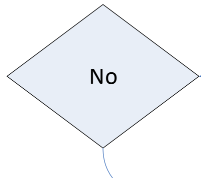
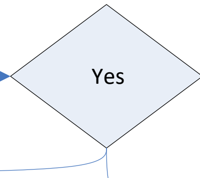
Ultrasound Positive for gallbladder wall thickening, with or without stones in the gallbladder or cystic duct dilation



Nonsurgical diagnosis/possible outpatient follow-up



Cholelithiasis (can present with or without cholecystitis)

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 (in AM if admitted overnight and is clinically stable)

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

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

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 1/2NS + 20meq KCL)

Pain management
IV Acetaminophen or Morphine PRN

Consent for Cholecystectomy vs d/c home for “cooling off” with antibiotics; schedule for outpatient surgery

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