Suspected Appendicitis Care Guideline

Inclusion Criteria: children 2 - 16 yrs old with acute abdominal pain
Exclusion Criteria: history of trauma, pregnant, previous abdominal surgery

Assessment
History: inquire specifically about onset & intensity of symptoms, anorexia, nausea/vomiting, diarrhea, migration of pain
Clinical examination: guarding/rigidity, localized tenderness, presence of rebound, observe walking, note fever

Interventions
- CBC with differential, CRP, UA, HCG if > 10yrs and female
- NPO
- IV fluids/bolus for evidence of hypovolemia
- Morphine 0.1 mg/kg IV q3h PRN pain or 3 mg IV q3h PRN if > 30 kg

Non-surgical diagnosis
- No
- History, exam, labs consistent with appendicitis
  - Equivocal
    - Appendix ultrasound, IV NS 20 mL/kg bolus
      - Equivocal
        - Phone consult with surgeon to decide re: CT scan
  - Negative
  - Positive
    - Surgery consult

Surgical Consult
- Surgery consult

Prep for OR
- NPO
- IV 20 cc/kg NS bolus then D5½ NS w/ 20 mEq/L KCL (rate dependent on age)
- Cefoxitin 40 mg/kg IV (max dose 2000mg) OR
- For strong suspicion of perforation, give ceftriaxone 50 mg/kg IV or 2000 mg IV q24 h > 40 kg AND metronidazole 30 mg/kg IV or 1500 mg IV q24h > 50 kg
- Consent for laparoscopic appendectomy, possible open appendectomy, possible central line insertion

Serial exams, temperature curve, repeat CBC, CRP

Transport to Pre-Op or Med/Surg Unit dependent on OR time

Appendix
- Ultrasound, IV NS 20 mL/kg bolus

Equivocal
- CT scan with oral/IV contrast
- If morbidly obese, proceed to CT scan with oral/IV contrast

Postoperative Management – p. 2
Non-operative Management – p. 3

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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Appendectomy (Post-operative) Care Guideline

Inclusion Criteria: Postoperative laparoscopic or open appendectomy patients, Interval/delayed appendectomy for perforated appendicitis
Exclusion criteria: Incidental appendectomy

Postoperative – All Patients
- Vital signs q 1 hr x 2, then q 4 hrs, strict I/O
- OOB/ambulate QID; begin today
- IV D5½ NS + KCL 20 mEq/L
- Incentive spirometry q 1 hr x 24 hrs, then q 6 hrs while awake
- Morphine 0.1 mg/kg/dose IV q 4 hrs PRN severe pain (<50 kg) AND +/- Ketorolac 0.5 mg/kg/dose IV q 6 hrs x 48 hrs then PRN pain (<30kg) for 72 hrs
- Odansetron 0.1 mg/kg/dose IV q 8 hrs PRN nausea/vomiting (<40 kg)

Uncomplicated Appendicitis (acute inflammatory or suppurative) or Normal Appendix
- Clear liquid diet when awake, then regular diet by 2nd meal if clears tolerated
- Saline lock IV when taking adequate fluids

Complicated Appendicitis (perforated or gangrenous)
- NPO until awake
- NGT to low intermittent suction (if placed) -note amount & color of drainage
- JP drain (if placed) – note amount & color of drainage
- Central line care (if placed)
- Ceftriaxone 50 mg/kg IV q24h or 2000 mg IV q24 h > 40 kg AND Metronidazole 30 mg/kg IV q24h or 1500 mg IV q24h > 50 kg

Discharge Criteria
- VS stable, afebrile x 24 hrs
- Tolerating diet
- Abdomen soft, non-distended, without significant tenderness
- Ambulating
- Comfortable on PO pain meds

Patient/Family Education
- Postop care; discharge instructions, signs/symptoms for complications, diet, bathing & wound care, activity restrictions, pain management, medications, return to school, follow up appointment

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### Inclusion Criteria:
- Children 2 - 16 yrs old with:
  - Symptoms ≥ 5 days
  - CT confirmed appendicitis

### Recommendations/Considerations
- There are no randomized trials comparing different antibiotic regimens for the nonoperative treatment of perforated appendicitis in children. The Surgical Infection Society recommends either multi-drug therapy or monotherapy as long as adequate Gram-negative and anaerobic coverage is provided.
- If abscess not drainable, use of Zosyn is recommended.
- For true allergy to penicillin, use gentamicin/clindamycin.
- Central line care should be performed per CHOC procedure (Mosby – CVAD).

### Interventions
- **If drainable abscess on CT scan** - percutaneous drainage by Interventional Radiology
- **Culture drainage**
- **If no drainable abscess** -> PICC line placement by PICC RN or Interventional Radiology
- **IV D5½ NS + KCL 20 mEq/L**
- **Diet for age as tolerated**
- **Clear liquids if unable to tolerate solids; advance as tolerated**
- **Morphine 0.1 mg/kg/dose IV q 4 hrs PRN severe pain (<50 kg) AND +/- Ketorolac 0.5 mg/kg/dose IV q 6 hrs x 48 hrs then PRN pain (<30 kg) for 72 hrs**
- **VAD care**
- **Arrange Home Care for IV Antibiotics (RN visits, meds, supplies, labs)**

### Antibiotics
- **Ceftriaxone 50 mg/kg IV q24h or 2000 mg IV q24h > 40 kg AND**
- **Metronidazole 30 mg/kg IV q24h or 1500 mg IV q24h > 50 kg**

### Continued Considerations
- **CBC and CRP when afebrile and tolerating regular diet**
- **Adjust antibiotics based on culture results and evaluate for transition to oral route when clinically appropriate**
- **If uncontrolled sepsis or bowel obstruction develops, consider proceeding to appendectomy**
- **If a drain was placed, assess for removal**
- **Change antibiotics to single agent home regimen before discharge; give a minimum of one dose (if requires IV route)**
- **Discharge on oral antibiotics, if culture results available, for 14 day total course**

### Parent/Patient Education
- **CVAD care**
- **Wound care**

### Discharge Criteria
- **Afebrile x 24 hours**
- **Tolerating regular diet**
- **CRP trending down**
- **Ambulating**
- **Comfortable on PO pain meds**

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