Introduction

This pathway is for use with children aged 2-18 years old with no underlying disease or co-morbidity who have a confirmed diagnosis of appendicitis (either non-perforated or perforated) by the General Surgery Team who require a surgical appendectomy or medical management. Patients are to be removed from this pathway if there are significant postoperative complications (eg. bowel obstruction or prolonged TPN) or a change in diagnosis.

Target Users

- General Surgery Surgeons, Residents, Fellow, Nurse Practitioners, and nurses on the inpatient units

Definitions

- **Non-perforated appendicitis** - Appendix is normal, injected, inflamed or suppurative. Presence of cloudy fluid +/- local fibrinous exudate, or gangrenous appendicitis but with no visible hole in appendix, abscess or free fecalith
- **Perforated appendicitis** - Visible hole in appendix, free fecalith, diffuse peritonitis with fibrinous exudate or abscess
- **Appendectomy** - surgical removal of the appendix
- **Fever** - a fever is defined as any temperature reading greater than 38°C
Appendicitis Algorithm

Recommendations - Printable Version

Appendicitis Management Pathway

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# Inpatient Non-Perforated Appendicitis Care Pathway

## Pre-Operative
1. Hydration maintained
2. Adequate pain control
3. Patient prepared for OR
4. Chin strap is used

## Post-Operative
1. Alkaline
2. Adequate pain control
3. Ambulating
4. Able to tolerate diet (clear fluids to regular diet)
5. Incision intact, no drainage, dry and intact

## During: Within 24 Hours Post-Op
1. Alkaline
2. Adequate pain control
3. Ambulating
4. Able to tolerate diet
5. Incision dry and intact
6. Child caregiver teaching

### Goals

- Obtain history
- Complete physical exam
- Assess vital signs
- Complete pain assessment (refer to Pain Assessment Guidelines)
- Obtain accurate in and out

### Physical Exam

- Ensure that patient is NPO
- Administer O2 at 6 L/min and 6.3% NaCl with 20mm Hg O2 at maintenance
- Status as indicated
- Refer to Fluid and Electrolyte Guidelines

### Diet

- Activity as tolerated
- Consent for surgery
- Pre-procedures for child and caregiver
- Review parental involvement in care (pre and post-operatively)

### Pain

- Acetaminophen as needed for pain
- NPO as needed for pain management
- Morphine IV bolus PRN

### Inclusion criteria

- Wound infection
- Vomiting
- Fever
- Pain

### Follow-up

- Confirm need for follow-up with Primary Surgeon
- Family doctor/pediatrician in 1-2 weeks

### Activity

- Ambulate in hallway
- May return to normal daily activities as patient feels able

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Inpatient Perforated Appendicitis Care Pathway

**DAY OF ADMISSION**

1. Hydration maintained
2. Adequate pain control
3. Patient prepared for OR if surgical management required
4. Reassess before administration of enema. Wipe to be used upon arrival. Refer to **Interventional Approach**

**DAY #1**

1. Admission
2. Adequate pain control
3. Ambulating
4. Able to tolerate oral fluids (immediately post-op)
5. Run rectal or no drainage, dry and intact
6. If Na NG tube present, advance from intermittent suction to straight drainage

**DAY #2 - #3**

1. Admission
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Incision dry and intact
6. Child and family understand discharge teaching
7. Child and family understand discharge teaching
8. Audit perioperative antibiotic

**DAY #4**

1. Admission
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Incision dry and intact
6. Child and family understand discharge teaching
7. Audit perioperative antibiotic

**DAY #5**

1. Admission
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Incision dry and intact
6. Child and family understand discharge teaching
7. Audit perioperative antibiotic

**PHYSICIAN CARE**

- History & Physical
- Vital Signs
- Height and Weight
- Pain Assessment (focus on abdomen) every 4 hours
- Accurate In & Out

**NURSING CARE**

- CVST 0.9% NaCl with 20mm KCl
- Orders as clinically indicated with 0.9% NS or Lactated Ringer’s
- Refer to **Fluid and Electrolyte Guidelines**

**DIET**

- Diet as tolerated
- If NPO, ensure that child is receiving 4 fluids with CVST
- Assess need for PN therapy

**PAIN MANAGEMENT**

- Pain medication as needed morphine / fentanyl
- Start IV/infusion of IV ondansetron and metoclopramide (Refer to **Interventional Approach** for dosage)

**POSTOPERATIVELY**

- Asysthenin as needed for pain control
- Morphine IV as required
- Please check with Primary Surgeon if NSAsIDs can be prescribed (Ketorolac vs. Ibuprofen)
- IV ondansetron 0.125mg/kg and metoclopramide 0.5mg/kg every 8 hours for 12 hours (Refer to Appendicitis Management Pathway Algorithm Refer to **Interventional Approach** for dosage)

**MEDICATIONS**

- Consider an abdominal ultrasound to evaluate for drainage into abdominal collection if child is not improving or clinically worsens
- If collection is found, refer to **Appendicitis Algorithm** for child with drainable collection

**SURGICAL IMAGING**

- Pre-op procedures for parent and child
- Consent for surgery signed

**FAMILY / PATIENT EDUCATION**

- When diet will be started
- Need for pain management
- Need for medication
- Potential involvement in care

**INCISION CARE**

- Leave skin-strips until fall off on own or remove after 10 days
- Once skin-strips removed, may soak incision gently with soap and water
- Signs and symptoms of wound infection:
  - Fever
  - Redness around incision
  - Drainage from incision
  - Increasing pain around incision

**BATHING**

- May shower or bath, 48 hours after surgery

**ACTIVITY**

- Ambulate to chair daily
- Progress to ambulating in hallway

**PRINTABLE VERSION**

**Related Documents**

- E-formulary
- Sepsis Pathway
- Pain Management Guidelines
- Pain Assessment Guidelines
- Fluid & Electrolyte Guidelines

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References


6. Children’s Hospital of Philadelphia: Appendicitis without Known GI Disease Clinical Pathway- Emergency

7. Cincinnati Children’s Hospital: Appendicitis Clinical Pathway- Inpatients

8. Cincinnati Children’s Hospital: Appendectomy Clinical Pathway


14. Inpatient and Surgical Care: Appendectomy for Ruptured Appendicitis or Generalized Peritonitis Care Guideline


28. University Hospitals of Cleveland: Pediatric Appendicitis/Simple Laparoscopic/Open Technique Care Path


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Attachments:
appendicitis algorithm.docx
appendicitis algorithm.pdf
Non perforated appy pathway.pdf
Non perforated appy pathway.rtf
Perforated appy pathway.pdf
Perforated appy pathway.rtf