Appendicitis Management Pathway

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 Management Pathway

Recommendations - Printable Version

![Appendicitis Algorithm Diagram]

- **Recommendations**
  - **Printable Version**
  - **Appendicitis Algorithm**

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## Inpatient Non-Perforated Appendicitis Care Pathway

### Pre-Operatively
1. Hydration maintained
2. Adequate pain control
3. Patient prepared for OR
4. CHILD/Family are advised of pre-op bath. Wipes to be used upon arrival. Refer to [procedure document](#).

### Phases of Care
- **Goals**: Obtain history, Complete physical exam, Assess vital signs, Complete pain assessment (refer to [Pain Assessment Guidelines](#)).
- **Fluids**: Ensure patient is NPO, Administer D5W and 0.9 NaCl with 20mm HCO₃ at maintenance, Suction as indicated, Refer to [Fluid and Electrolyte Guidelines](#).
- **Medication**: Activity as tolerated, Consent for surgery, Pre-op medications for child and caregiver, Review parental involvement in care (pre and post-operatively).

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

### Discharge: Within 24 hours post-op
1. Analgesia
2. Adequate pain control
3. Ambulating
4. Able to tolerate diet
5. Incision dry and intact
6. Child caregiver teaching

### Activity Education
- Diet: Advance diet as tolerated
- Pain: Acetaminophen and ibuprofen (if not contraindicated) for 48 hours then as needed, Refer to [pain management guidelines](#)
- Inclusion care: Leave drain sites undisturbed and leave in place for 24 hours, Once drain sites removed, may wash incision gently with soap and water
- Signs and symptoms of wound infection: Fever, Redness around incision, Drainage from incision, Increasing pain around incision
- Follow-up: May shower or bathe, 48 hours after surgery
- Activity: Ambulate in hallway, May return to normal daily activities as patient feels able

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**PRINTABLE VERSION**
### Inpatient Perforated Appendicitis Care Pathway

#### DAY OF ADMISSION
1. Hydration maintenance
2. Adequate pain control
3. Patient prepared for OR if surgical management required
4. Orthostatic symptoms are alleviated or one-unit bath. Vomiting is to be used upon arrival. Refer to Pain Management Guidelines.

#### DAY # 1
1. Analgesia
2. Adequate pain control
3. Ambulating
4. Able to tolerate clear liquids (immediately post-op)
5. Increase intake, no drainage; dry and intact
6. If Nasogastric Tube present, advance from intermittent suction to straight drainage

#### DAY # 2 & # 3
1. Analgesia
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Increase fluid and intake
6. Increase activities; advanced from straight drainage to stamp and remove

#### DAY # 4
1. Analgesia
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Increase fluid and intake
6. Child and family understand discharge planning
7. Avoid oral antibiotics

#### DAY # 5
1. Vital signs as per PERFORM (Refer to Sepsis Clinical Pathway)
2. Pain assessment (focus on abdomen) every 4 hours
3. Adjust pain control
4. Arrange In & Out
5. Wound assessment (removal surgical dressing, leave sterile strips)
6. Abdominal assessment

#### TREATMENT
- **Pre-operatively:**
  - Pain medication as needed (morphine / acetaminophen)
  - Start IV/Intravenous of IV NaCl and maintenance (Refer to E-formulary for dosage)

- **Post-operatively:**
  - Analgesia as needed for pain/fever
  - Morphine IV as required
  - Please check with Primary Surgeon if NSADs can be prescribed (Ketorolac or Ibuprofen)
  - IV fluids of IV NaCl and maintenance (refer to E-formulary for dosage)

#### Activity
- Ambulating
- Ambulating to chair daily
- Progress to ambulating in hallway X 5

#### EXPECTED OUTCOMES
- Consider an abdominal ultrasound to evaluate for drainable intrabdominal collection if child is not improving or clinically worsens
- If collection is found, refer to Appendicitis Algorithm for child with drainable collection

#### Family / Patient Education
- Early procedures for parent and child
- Consent for surgery signed
- When diet will be started
- Need for pain management
- Need for mobilizing
- Potential involvement in care

#### Incision care
- Leave sterile strips until fall off on own or remove after 10 days
- Once sterile strips removed, may wash 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 bathe; 48 hours after surgery

#### Activity:
- Ambulate in hallway at least 5 times
- May return to normal daily activities as patient feels able

#### When to call surgeon's office:
- Wound infection
- Vomiting
- Fever
- Pain

#### Follow-up:
- Confirm need for follow-up with Primary Surgeon
- Family doctor/ED/Amcan in 1-2 weeks

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**PRINTABLE VERSION**

**Related Documents**

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

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References


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

8. Cincinnati Children’s Hospital: Emergency 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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appendicitis algorithm.pdf
Non perforated appy pathway.pdf
Non perforated appy pathway.rtf
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