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

[Flowchart diagram]

Appendicitis Algorithm

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## Appendicitis Management Pathway

**Pre-Operative**
1. Hydration maintained
2. Adequate pain control
3. Patient prepared for OR
4. Child and family are advised of pre-op bath. Wipes to be used upon arrival. Refer to pre-op procedure document.

**Post-Operative**
1. Alkaline
2. Adequate pain control
3. Ambulation
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. Alkaline
2. Adequate pain control
3. Ambulation
4. Able to tolerate diet
5. Incision dry and intact
6. Child caregiver teaching

<table>
<thead>
<tr>
<th>Goal</th>
<th>Pre-Operative</th>
<th>Post-Operative</th>
<th>Discharge: Within 24 hours Post-op</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL EXAM</strong></td>
<td>Obtain history</td>
<td>Complete physical exam</td>
<td>Ensure child has adequate pain control (refer to Pain Management Guidelines)</td>
</tr>
<tr>
<td></td>
<td>Complete diagnostic exam</td>
<td>Monitor vital signs as per Bedside PWE (refer to Pre-op Clinical Pathway)</td>
<td>Monitor vital signs as per Bedside PWE (refer to Post-op Clinical Pathway)</td>
</tr>
<tr>
<td></td>
<td>Complete pain assessment (refer to Pain Assessment Guidelines)</td>
<td>Obtain accurate in and out</td>
<td>Obtain accurate in and out</td>
</tr>
<tr>
<td></td>
<td>Obtain accurate inc and out</td>
<td>Complete abdominal assessment</td>
<td>Complete abdominal assessment</td>
</tr>
</tbody>
</table>

**NEW/REV**
- Ensure that patient is NPO
- Administer D5W and 0.9 NaCl with 20mEq NaHCO3 at maintenance
- Bolus as indicated
- Refer to Fluid and Electrolyte Guidelines

**Medication**
- Ceftriaxone/ Metronidazole IV if allergy to Ceftriaxone or Ceftriaxone/ Metronidazole. Refer to the e-formulary
- Pain medication as needed, morphine/ acetaminophen NOAIDs. Refer to the e-formulary

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

**Diet**
- Advance diet as tolerated

**Pain**
- Acetaminophen and/or ibuprofen (if not contraindicated) for 48 hours then as needed
- Review need for pain management

**Incontinence care**
- Leave sterase strips until fall off or removed after 10 days
- Once sterase 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 bath, 48 hours after surgery

**Activity**
- Ambulate in hallways
- 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/pediatrician in 1-2 weeks

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## 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. Girls: under 16 wks can be treated with non-paracale. Refer to procedure document

### DAY #1
1. Abdominal
2. Adequate pain control
3. Ambulating
4. Able to tolerate clear liquids (immediately post-op)
5. Increase oral intake: dry and solid
6. If NPO, nasogastric tube present, advance from intermittent suction to straight drainage

### DAY #2 - #3
1. Abdominal
2. Adequate pain control
3. Ambulating
4. Able to tolerate regular diet
5. Increase oral intake: solid
6. If drainage present, advance from straight drainage to stamp and remove

### DAY #4
1. Abdominal
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. Refer to antibiotics guidelines

### DAY #5
1. Abdominal
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. Refer to antibiotics guidelines

### Related Documents
- E-formulary
- Sepsis Pathway
- Pain Management Guidelines
- Pain Assessment Guidelines
- Fluid & Electrolyte Guidelines
References


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

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 Appendix with Abscess 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](#)