Introduction

The purpose of this pathway is to assist the health care team with clinical decisions regarding the management of a patient with intussusception.

Target Population:

- **Inclusion:** Children age 0-18 years old with no underlying disease or comorbidity who have been suspected to have or diagnosed with intussusception.
- **Exclusion:** to be removed from this pathway if child has significant comorbidities, significant postoperative/post procedure complications (eg. bowel obstruction, bowel perforation, or prolonged TPN therapy) or a change in diagnosis.

Target Users:

- Emergency physicians, radiologists, surgeons, residents, fellows, nurse practitioners and nurses on the ward.
Child arrives in ED with suspected Intussusception

Does child meet the following criteria?

• Child is less than 6 months of age
• Length of illness is greater than 24 hours
• Vital signs are abnormal
• Child is dehydrated and lethargic
• History of red currant jelly stools
• Peritoneal signs or abnormal abdominal exam

YES

Urgent General Surgery consult, start IV and complete blood work

Complete Imaging

• Ultrasound is the exam of choice pre and post treatment (Comprehensive US vs POCUS® (Point of Care Ultrasound))
• Abdominal x-ray is exam of choice when suspecting perforation or there is clinical peritonitis

Determine type of intussusception

Colonic Involvement

Transitory Small Bowel-Small Bowel Intussusception (not the cause of symptoms)

Persistent Small Bowel-Small Bowel Intussusception

Intussusception caused by post pyloric enteral tube

Follow the Management of GJ and Combination G/G Tube-Related Intussusception pathway for guidance

Air Enema

Completely reduced?

YES

Admit to General Surgery Monitor and repeat air enema

NO

Determine whether patient will be admitted vs. observed
See Table 1

If no enema reduction, proceed with surgical management

Table 1: Decision to admit/dischage

Patient should be observed for 2-4 hours in ER and may be discharged if:

• Live close to hospital
• Have a telephone to contact a Primary Care Provider
• Parental reliability
• VSS, Afebrile
• Normal physical exam
• Tolerating diet
• Voiding well
• No pain symptoms
• Idiopathic

**Ensure follow up with Primary Care Provider/Pediatrician (follow up with General Surgeon if intussusception recurs)**

Patient should be admitted to the hospital when:

• Unusual gastrointestinal symptoms eg. Abdominal pain, vomiting
• Presence of bowel obstruction
• High WBC count at presentation
• Loss in or a remote resection
• Ongoing rectal bleeding
• Lead point found
• Incomplete reduction of intussusceptions

Patient should have another Ultrasound to rule out recurrent intussusception when they are having:

• Recurrent pain
• Recurrent vomiting
Patients scheduled for surgery typically receive pre and post-surgical care as described below

<table>
<thead>
<tr>
<th>PRE-OPERATIVE</th>
<th>IMMEDIATELY POST-OPERATIVELY</th>
<th>POST-OP DAY #1-2 (to bowel resection); DAY #5-4 (with total resection)</th>
<th>DISCHARGE: DAY 3 (to bowel resection); DAY 5 (with bowel resection)</th>
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</thead>
<tbody>
<tr>
<td>1. Hydration maintained</td>
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<td>2. Patient prepared for CRF</td>
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<td>3. Child/family are advised of pre-op bath. Wipes to be used upon arrival. Refer to procedure document</td>
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<tr>
<td>4. Adequate pain control</td>
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<tr>
<td>1. Aftertaste</td>
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<tr>
<td>2. Adequate pain control</td>
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<tr>
<td>3. Out of bed</td>
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<tr>
<td>4. Incision int, no drainage; dry and intact</td>
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<tr>
<td>1. Aftertaste</td>
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<td>2. Adequate pain control</td>
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<tr>
<td>3. Ambulating</td>
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<tr>
<td>4. Able to tolerate NG to drainage camp/ remove</td>
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<tr>
<td>5. Incision dry &amp; intact</td>
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<td>3. Ambulating</td>
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<tr>
<td>4. Able to tolerate diet</td>
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<tr>
<td>5. Incision dry and intact</td>
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<td>6. Child caregiver teaching completed</td>
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<td>7. Family understands discharge teaching</td>
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</table>

- **GOALS**
  - Obtain history
  - Complete physical exam
  - Assess vital signs
  - Complete pain assessment (refer to Pain Assessment Guidelines)
  - Ensure child has adequate pain control (refer to Pain Management Guidelines)
  - Obtain accurate in and out
  - Obtain weight and height

- **PHYSICAL EXAM**
  - Ensure that patient is NPO
  - Administer 250/30 ml 0.9% NaCl at maintenance
  - Normal saline bolus as indicated
  - Refer to Fluid and Electrolyte Guidelines

- **DIET & FLUIDS**
  - NPO until bowel function present, no abdominal distension, and no nausea/vomiting, then start clear fluids to diet as tolerated
  - Administer 250/30 ml 0.9% NaCl at maintenance
  - Normal saline bolus as indicated
  - Refer to Fluid and Electrolyte Guidelines

- **NG TUBE**
  - NG tube to low intermittent suction/ straight drain
  - May put to straight drainage if clinically indicated (decreased output volume, non-bloody, no nausea)
  - May remove when tolerate NG to straight drainage or clamp no nausea/vomiting, no abdominal distension, and no pain
  - NG tube to low intermittent suction/ straight drain
  - May put to straight drainage if clinically indicated (decreased output volume, non-bloody, no nausea)
  - May remove when tolerate NG to straight drainage or clamp no nausea/vomiting, no abdominal distension, and no pain

- **LABS & MEDICATION**
  - Complete CBC with differential
  - Coagulation, electrolytes, type and screen, and Sickle Cell screen (if indicated)
  - Labs as clinically indicated
  - IV morphine continuous infusion
  - Acetaminophen as indicated for pain/fever
  - Continue cefuroxime IV for 24 hours post-op then reassess
  - Ketorolac every 6 hours for pain management for 48 hours (age appropriate and clinically indicated)
  - Ampicillin/ceftriaxone for 7 days if perforated
  - Wear morphine infusion to off (decrease by 5-10 mg every 24 hours)
  - If pain/fever, administer acetaminophen as indicated
  - Ketorolac/dobutrex every 6 hours as needed for pain

**Related Documents**

- Care of Patients Receiving Continuous Infusion of Opioids
- Care of Patients Receiving Patient Controlled and Nurse Controlled Analgesia
- SickKids e-formulary

**Implementation Plan**

- Education and awareness building by General Surgery Program (Surgeons, NPs, fellows, nurse educator) at: fellow orientation (once per year) nursing orientation (every 3 months), and residents’ orientation (every month).
- Surgeons to communicate any updates in practice to Division of General Surgery and Radiology.
- Radiologists to communicate any updates in practice to Division of General Surgery and Radiology.
Evaluation Plan
- Length of stay (LOS) evaluation

References


Guideline Group and Reviewers

Guideline Group Membership

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Intussusception Care Pathway
Attachments:

Intussusception final 2021.pdf

Pathway algorithm 2021.pdf