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

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

Persistent Small Bowel-Small Bowel Intussusception

Intussusception caused by post pyloric enteral tubes

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

Air Enema

Complete a POCUS performed by a POCUS-credentialed user:

- Ultrasound images captured and sent to PACS
- Call to Radiology to organize ultrasound +/- air enema
- Communicate POCUS findings in US imaging request
- IV insertion with appropriate pain medication provided
- Air enema order placed

NO

Table 1: Decision to admit/discharge

Patient should be observed for 2-4 hours in ED 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)

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Patient should be admitted to the hospital when:

- Unwell: persistent abdominal symptoms eg. Abdominal pain, vomiting
- Presence of bowel obstruction
- High WBC count at presentation
- History of recurrent intussusception
- Ongoing rectal bleeding
- Lead point found
- Incomplete reduction of intussusception

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

- Recurrent pain
- Recurrent vomiting

Determine whether patient will be admitted vs. observed:

See Table 1

Admit to General Surgery

Monitor and repeat air enema

If no enema reduction, proceed with surgical management

If enema reduction, proceed with surgical management

Table 1:

<table>
<thead>
<tr>
<th>Condition or Symptom</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live close to hospital</td>
<td>Must be within 2 hours of hospital</td>
</tr>
<tr>
<td>Have a telephone to contact a Primary Care Provider</td>
<td>Must be able to reach a Primary Care Provider</td>
</tr>
<tr>
<td>Parental reliability</td>
<td>Must have a responsible adult</td>
</tr>
<tr>
<td>VSS, Afebrile</td>
<td>Must be afebrile at discharge</td>
</tr>
<tr>
<td>Normal physical exam</td>
<td>Must have a normal physical exam</td>
</tr>
<tr>
<td>Tolerating diet</td>
<td>Must be tolerating diet</td>
</tr>
<tr>
<td>Voiding well</td>
<td>Must be voiding well</td>
</tr>
<tr>
<td>No pain symptoms</td>
<td>Must have no pain symptoms</td>
</tr>
<tr>
<td>Idiopathic</td>
<td>Must have no history of intussusception</td>
</tr>
</tbody>
</table>

Printable version – Intussusception Management Pathway

Printable version – Tube Related Intussusception Care Pathway
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 #5-6 (with bowel resection)</th>
<th>DISCHARGE DAY 3 (to bowel resection); DAY 5 (with bowel resection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Chifamily are advised of pre-op bath. Wipes to be used upon arrival. Refer to procedure document</td>
<td>3. Out of bed</td>
<td>3. Ambulating</td>
<td>3. Ambulating</td>
</tr>
<tr>
<td>4. Adequate pain control</td>
<td>4. Incision int, no drainage; dry and intact</td>
<td>4. NPO until bowel function present, no abdominal distention, and no nausea/vomiting, then start clear fluids to diet as tolerated</td>
<td>4. NPO until bowel function present, no abdominal distention, and no nausea/vomiting, then start clear fluids to diet as tolerated</td>
</tr>
</tbody>
</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 250ml 9% NaCl at maintenance
- Normal saline bolus as indicated
- Refer to Fluid and Electrolyte Guidelines

**DIEt & FLUIDS**

- NPO until bowel function present, no abdominal distention, and no nausea/vomiting, then start clear fluids to diet as tolerated
- Administer 250ml 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-bilious, no nausea)
- May remove when tolerated NG to straight drainage or clamp and no nausea/vomiting, no abdominal distention, and no pain

**LABS & MEDICATION**

- Complete CEC 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 ceftriaxone 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 7 days if perforated

**REFERENCES**

- Wean morphine infusion to off (decrease by 5-10 mg every 24 hours)
- If pain/fever, administer acetaminophen as indicated
- Ketorolac/diphenoxil every 6 hours as needed for pain

**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.

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Intussusception Care Pathway
Evaluation Plan
- Length of stay (LOS) evaluation

References


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Attachments:

Intussusception final 2021.pdf
Pathway algorithm 2021.pdf