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
• Peritonitis or abnormal abdominal exam

YES

Urgent General Surgery consult, start IV and complete blood work

NO

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
Radiology to notify General Surgery and Emergency MRP to discuss ultrasound
Ensure adequate pain management and IV access
ED Nurse to accompany patient to Air enema

Transit Small Bowel-Small Bowel Intussusception (not the cause of symptoms)
Observe in ED
No General Surgery consult required; ED medical management and discharge

Persistent Small Bowel-Small Bowel Intussusception
Radiology to notify General Surgery and Emergency MRP to discuss ultrasound
Child returns to ED for NPO and blood work

Intussusception caused by post pyloric enteral tubes
Follow the Management of GJ and Combination G/G Tube-Related Intussusception pathway for guidance

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

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/discharge
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

Patient should be admitted to the hospital when:
• Unwell (persistent obstructive symptoms e.g. Abdominal pain, vomiting)
• Present with bowel obstruction
• Had high WBC count at presentation
• Live in a more remote location
• Ongoing rectal bleeding
• Lead point found
• Incomplete reduction of intussusceptions

Patient should have another Ultrasound to rule out recurrent intussusception when they are feeling:
• Recurrent pain
• Recurrent vomiting

*POCUS performed by a POCUS-credentialed user:
• Ultrasound intussusception images captured and sent to PACS
Call to Radiology to organize ultrasound +/- air enema
Communicate POCUS findings in US imaging report
IV insertion with appropriate pain medication provided
Air enema order placed

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 ression); DAY #3-5 (with total ression)</th>
<th>DISCHARGE: DAY 3 (to bowel ression); DAY 5 (with total ression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Child/ family 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. Able to tolerate NG to drainage/ cann/ remove</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 0.9% NaCl at maintenance with oral intake
- 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 0.9% NaCl with 20mEq KCl 1/2 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 tolerating NG to straight drainage or camp (no nausea/vomiting, no abdominal distension, and no pain)

**LABS & MEDICATION**
- Complete CECT with differential
- Coagulation, electrolytes, type and screen, and Sickie 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/ gentamicin 1/2/1 dose every 7 days if perforated
- Wearn morphine infusion to off (decrease by 5-10 mg every 24 hours)

**PRINTABLE VERSION**

**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

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