PAEDIATRIC ACUTE CARE GUIDELINE	
Intussusception	
Scope (Staff):	All Emergency Department Clinicians
Scope (Area):	Emergency Department

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http://kidshealthwa.com/about/disclaimer/

Intussusception

Intussusception occurs when a section of bowel invaginates into the lumen of the immediately distal bowel, resulting in infarction and gangrene of the inner bowel. It most commonly occurs at the ileocaecal junction.

Background

- Peak age 5-10 months (may occur from 3 months to 5 year old)
- Most common cause of acute intestinal obstruction in children 6-36 months
- 60% of cases are < 1 year old and 80-90% are < 2 year old

Complications

- Perforation of bowel, with peritonitis
- Necrosis of bowel requiring bowel resection
- Shock and sepsis
- Re-intussusception after spontaneous or active reduction

History

- Typically, episodes of sudden intense pain with screaming and flexion of the legs, often associated with pallor
    - Episodes last several minutes and recur at 5-20 minute intervals
    - The infant usually looks relatively well between episodes

- Less commonly, episodes of lethargy, irritability, altered mental status
    - May be mistaken for a child presenting with convulsions or sepsis/meningitis – the child appears floppy and semi-conscious
- The classical TRIAD of pain, abdominal mass and red currant jelly stool is only seen in < 15% of cases
- 1/3 of cases present with a history of recent viral illness
- Recent rotavirus vaccination (there is a small risk of intussusception in infants following the rotavirus vaccination)
    - In WA all cases of intussusception are to be reported – Intussusception Notifications

Examination

- The child can present as pale, lethargic and hypovolemic
- Abdomen may be distended and tender
- Palpable abdominal mass (sausage shaped) in the right quadrant
    - The mass can be difficult to palpate
- Dehydration or shock develop as symptoms progress
- Vomiting (may become bile-stained if bowel obstruction has occurred)
- “Red currant jelly” stool (blood and mucous in stool) is a **late** sign

Investigations

Abdominal X-Ray

- Mainly to look for signs of bowel obstruction or perforation
- It may be normal
- Signs of intussusception are:
    - Paucity of bowel gas on the right side of the abdomen
    - Distended loops of small bowel with air/fluid filled level
    - Look for obscured liver edge, crescent sign and target signs
    - Free gas if perforated

Ultrasound (USS)

- Diagnostic investigation of choice – highly sensitive and specific for intussusception (a “target” or “doughnut” sign is classic)

Blood Tests

- Electrolytes, Urea, Creatinine, Blood gas
- FBC
- Cross match if “red currant jelly” stool

Initial management

- Insert intravenous (IV) cannula and obtain blood tests
- If shocked, correct using IV boluses of 20 mL/kg of 0.9% saline
- Nil by mouth
- If signs of bowel obstruction insert nasogastric tube and leave on free drainage
- **Analgesia**:
    - IV morphine 0.05mg/kg to 0.1 mg/kg titrated. See PMH ED Guideline: Analgesia
- Arrange for an urgent **abdominal ultrasound**, and urgent **surgical review**
    - If the abdominal ultrasound is positive:
        - Follow directly by attempted non-operative reduction by means of an air enema unless the Surgeon and Radiologist agree that air reduction is unsafe and operative treatment is required
- **Air enema**
    - Contraindications: signs of peritonitis/perforation
    - Antibiotics must be administered prior to the air emema or surgical reduction
        - IV Piperacillin/Tazobactam 100mg/kg (maximum of 4 grams Piperacillin component). See ED Guideline: Antibiotics
    - ED Nurse **+/-** Emergency Doctor should accompany child to radiology to administer IV morphine for analgesia prior to attempted reduction
    - Surgical registrar must be in attendance
    - Performed by an experienced radiologist (up to 95% success rate)
- **Surgical reduction** is necessary if there are signs of peritonitis / perforation, or if air enema fails to reduce the intussusception
    - Prepare the patient for theatre

Nursing

- Baseline observations include heart rate, respiratory rate, temperature and pain score. Blood pressure, oxygen saturations and neurological observations if clinically indicated.
- Minimum of 1 hourly observations should be recorded whilst in the ED
- Any significant changes should be reported immediately to the medical team
- Ensure appropriate medication, monitoring, suction, oxygen and emergency equipment is available for transfer and reduction procedure
- Fluid input/output is to be monitored and documented

Tags

abdomen, abdominal, air enema, AXR, blood, bloody, bowel, crying, dehydration, diarrhoea, disease, doughnut, floppy, gangrene, ileocaecal, infant, infarction, intussusception, irritable, leg flexion, mass, morphine, mucous, notifiable, pain, pallor, Piperacillin, red currant jelly, rlq,

sausage, screaming, shock, stool, Tazobactam, u/s, ultrasound, X-Ray, xray

References

PMH ED Guideline: Intussusception. Last Updated January 2015
• Kitagawa S and Miqdady M (2014) Intussusception in children. *UpToDate*. Accessed at www.uptodate.com
• National Health and Medical Research Council. Australian Immunisation Handbook, 10th Edition 2013. Department of Health and Ageing.

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