Clinical Guideline
INTUSSUSCEPTION – MANAGEMENT OF SUSPECTED OR CONFIRMED INTUSSUSCEPTION IN THE BRHC EMERGENCY DEPARTMENT

SETTING
Bristol Royal Hospital for Children Emergency Department

FOR STAFF
All clinical staff including emergency clinicians and nursing staff

PATIENTS
Any child or young person with suspected or confirmed intussusception

GUIDANCE

Intussusception is a paediatric surgical emergency. It carries a high incidence of morbidity / mortality if left untreated and can lead to bowel ischaemia and / or perforation. It may present in various ways, including:

- Episodic abdominal pain
- Periods of pallor and floppiness / lethargy
- Vomiting (bilious or non-bilious)
- Blood / mucous in stools (“redcurrant jelly stool”) – (late sign)

70% occur in children less than 1 year of age (peak age 5 – 10 months) but it may occur at any age and clinical suspicion is key.

The key management points are i) prompt resuscitation including restoration of circulating volume where appropriate and analgesia ii) early surgical review iii) urgent abdominal ultrasound

Treatment for confirmed diagnosis is reduction by air insufflation under fluoroscopic guidance with antibiotic and analgesic cover. If this is unsuccessful or complicated by perforation then emergency surgical intervention is required.

General Principles:

- Any child arriving from another hospital with suspected intussusception should have a clinical review (“Eyeball”) including a full set of observations and pain score on arrival. Any concerns should be escalated immediately to a senior member of the CED emergency team. The surgical team should be contacted on the child’s arrival and attend within 30 minutes. Any delay in this process should be escalated to the doctor in charge of the CED (0800 – 0000 → CED consultant in charge; 0000 – 0800 – ST4+ senior paediatric trainee) who should liaise with the on-call paediatric surgical consultant if there are clinical concerns, significant delay or the surgical team cannot be contacted.

- All other children should be triaged within 15 minutes and have a documented full set of observations including weight and pain score. If intussusception is suspected at triage then the child should be triaged as a P2 and a clinical review arranged within 10 minutes.
Clinical suspicion of intussusception following history and examination

**Low** index of suspicion (and no other cause found) *

- Discuss case with surgical registrar and notify CED doctor in charge (ST4+ 0000-0800 / CED consultant 0800 - 1600)

  - Analgesia as required
  - Urgent surgical review within 60 minutes. If a delay to review > 60 mins is anticipated then notify CED doctor in charge.
  - Urgent USS within 60 minutes (following discussion with surgical registrar or CED doctor in charge if surgical review delayed) – contact: i) consultant radiologist (in hours) or ii) radiology registrar on call (out of hours).

  - If not already done: Insert NG tube and secure IV access (taking bloods - FBC, CRP, U&E, capillary blood gas, glucose & blood culture (minimum set))
  - Give fluid resuscitation (20mls/kg 0.9% saline) as required
  - Prescribe and give adequate analgesia as required**
  - Prescribe and prepare antibiotics within 40 minutes of diagnosis being suspected (to take to USS & given prior to air reduction or given immediately if signs of peritonitis) **
  - Urgent surgical review within 30 minutes
  - Urgent USS within 40 minutes- discuss with consultant radiologist (in hours) or radiology registrar on call (out of hours).

**High** index of suspicion or previously confirmed intussusception*

- CED team to consider alternative diagnoses +/- liaise with medical team if ongoing clinical concerns

  - If surgically expected patient and ongoing clinical concerns, surgeons to liaise with medical team regarding ongoing management

  - Immediate progression to air enema reduction
  - Surgeon to accompany patient to reduction

Further management as per surgical team

Confirmed intussusception

- Return to ED
- Insert NG tube
- IV Access & bloods (as per high risk pathway)
- Prescribe & prepare antibiotics** & analgesia***
- Radiology team to prepare for reduction
- Surgeon to accompany patient to reduction

Further management as per surgical team

No intussusception

- Assess and treat any instability of ABCD

Consider alternative diagnoses +/- liaise with medical team if ongoing clinical concerns

- Give antibiotics if not already given
INDEX OF SUSPICION CLASSIFICATION

<table>
<thead>
<tr>
<th>Low index of suspicion</th>
<th>High index of suspicion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episodic abdominal pain without haemodynamic instability or vagal features (pallor / floppiness)</td>
<td>Episodic, severe, crampy, progressive abdominal pain associated with haemodynamic instability/ pallor/ floppiness</td>
</tr>
<tr>
<td>Episodes of blood in stool without pain or haemodynamic instability</td>
<td>Bloody/ Mucous stool with abdominal pain +/- haemodynamic instability</td>
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<td>“Sausage shaped” abdominal mass palpable in the right side of the abdomen</td>
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ANTIBIOTICS – SINGLE DOSE TO BE GIVEN PRIOR TO REDUCTION

Click Here for Link To Bristol Royal Hospital For Children Empirical Medical Antibiotic Guideline

Antibiotics given as per trust guidance for intra-abdominal sepsis:

**FIRST LINE- Triple therapy**

- Amoxicillin 30mg/kg IV (max 1g/dose)
- Cefuroxime 50mg/kg IV (max 1.5g/dose)
- Metronidazole <2months- 15mg/kg IV loading, ≥2 months- 7.5mg/kg. (max dose 500mg/dose)
- Gentamicin 5mg/kg IV (max 520mg/dose)

**PENICILLIN ALLERGIC**

- Cefuroxime 50mg/kg IV (max 1.5g/dose)
- Metronidazole (<2months- 15mg/kg IV loading, ≥2 months- 7.5mg/kg. max dose 500mg/dose)

***ANALGESIA***

Click Here for Link to BRHC pain management guideline

Intravenous Morphine Sulphate

- Titrate to pain and give in boluses of 50microgram/kg to a max dose of
  - 100 micrograms/kg in 1-12 months
  - 200 micrograms/kg > 1 year
- Ensure naloxone is prescribed – dose for respiratory depression is 10microgram/kg repeated as necessary.

RELATED DOCUMENTS

Name of document
DMS address ie http://nww.avon.nhs.uk/dms/download.aspx?did=n.nn

AUTHORISING BODY

BRHC CED Governance Group

SAFETY

If there are unusual or unexpected safety concerns (to staff or patient), emphasize them here

QUERIES

Children’s Emergency Doctor in Charge (Ext 28666) or On Call Surgical Registrar (via switchboard)