Acute Abdominal Pain Pathway

Clinical Assessment/ Management tool for Children

Management - Acute Setting





Patient presents

Abdominal Pain/ Abdominal Injury?

History:

- Trauma? Bleeding?
- Change in bowel habit?
- Dysuria/urinary frequency?
- Nausea / Vomiting?
- Nature of pain ?peritonitic

Past Medical History: • If female, history of gynaecological problems?

- Temp: capilla
- Temp; capillary refill, HR; BP
- Hydration status? AVPU?
- Anaemia? Jaundice?
- Guarding? Rebound tenderness?

Any known chronic medical conditions? Recent abdo surgery?

Investigations:

- Perform urine dipstick (consider formal MC+S in children <3 years) – clean catch urine
- Blood glucose
- Perform pregnancy test if started menstrual cycles

Consider presentation with respect to <u>safeguarding issues</u> (e.g. delay in presentation; injury not consistent with history or age/developmental stage of child).

Urgent Action

- Urgent referral to paediatric team use <u>STOPP</u> tool.
- If surgical red flags present ED Cons review
 - > < 5yrs consider urgent discussion with LGI

Urgent Action

place for ongoing management.

> 5yrs for urgent discussion with surgeons at HRI

Urgent referral to paediatric team. If surgical red flags

present paediatric team to review in PED to decide best

Immediate Action

- Assess for red flags (see table 1)
- Give appropriate analgesia*
- Try to establish likely diagnosis (see tables 2 and 3)
- · Consider further investigations as required
- Exercise additional caution when assessing young people with complex needs whose symptoms and signs can be more difficult to interpret

*giving pain relief (including morphine if necessary) does not affect the validity of later examination & does not delay decisions to treat)

Red Flags present?

Likely diagnosis established?

No

Yes - at HRI

Yes - at CRH

Yes

Safety netting advice sheet

• Home +/- management

• Refer to **Paediatric team** even if surgical cause likely

If diagnosis still uncertain, consider discussing with paediatric team – is this a functional cause (table 4)?

If decision to discharge ensure appropriate <u>safety netting</u> and provide family with <u>advice sheet.</u>

Table 1

Medical Red Flags

- Septic appearance (fever, tachycardia, generally unwell)
- Respiratory symptoms (tachypnoea, respiratory distress, cough)
- Generalised oedema suspect nephrotic syndrome
- Significant dehydration (clinically or >5% weight loss)
- Purpuric or petechial rash (suspect sepsis and/or meningococcal disease if febrile)
- Jaundice
- Polyuria / polydipsia (suspect diabetic ketoacidosis)

Surgical Red Flags

- Peritonitis (guarding, percussion tenderness, constant dull pain exacerbated by movement)
- Suggestion of bowel obstruction (colicky abdo pain, bilious vomiting, resonant bowel sounds)
- History of recent significant abdominal trauma
- History of recent abdominal surgery
- Irreducible hernia
- Testicular pain consider torsion, esp after puberty
- "Red currant jelly" stool

Red Flags (medical or surgical)

- Severe or increasing abdominal pain
- Blood in stool
- Abdominal distension
- Bilious (green) or blood-stained vomit
- Palpable abdominal mass
- Child unresponsive or excessively drowsy
- Child non-mobile or change in gait pattern due to pain
- Ongoing moderate to severe pain despite analgesia

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Table 2	
Differential Diagnosis	Most important features
Appendicitis	Fever, anorexia, migration of pain from central to RIF, peritonism (clinical or history suggestive), tachycardia, raised WCC. Consider the PAS score.
Constipation	History of infrequent, large or hard stools. Pain mainly left sided/ supra pubic. If acute look for organic causes (ie obstruction). New onset constipation is unusual in teenagers. A history of 'normal' does not exclude – what is normal?
Diabetic ketoacidosis	Known diabetic or history of polydipsia/ polyuria and weight loss, BM >15, metabolic acidosis (HCO ₃ <15) and ketosis
Gastroenteritis	Diarrhoea and/or vomiting, other family members affected
Haemolytic Uraemic Syndrome (HUS)	Unwell child with bloody diarrhoea and triad of: anaemia, thrombocytopenia & renal failure
Henoch Schoenlein Purpura (HSP)	Diffuse/colicky abdominal pain, non-blanching rash (obligatory sign), swollen ankles/knees, haematuria/ proteinuria
Infantile colic	Young healthy infant with episodes of inconsolable cry and drawing up of knees, flatus
Intussusception	Mostly < 2 yrs, pain intermittent with increasing frequency, vomits (sometimes with bile), drawing up of knees, lethargy, may be calm/well between episodes, redcurrant jelly stool (late sign)
Irreducible hernia	Painful enlargement of previously reducible hernia +/- signs of bowel obstruction
Lower lobe pneumonia	Referred abdominal pain and triad of: fever, cough and tachypnoea
Meckel's diverticulum	Usually painless rectal bleeding. Symptoms of intestinal obstruction. Can mimic appendicitis
Mesenteric adenitis	Generally occurs age 5-10 years. There is often a current or recent URTI. Can be hard to distinguish from appendicitis but no peritonism. Site and severity of pain typically not constant and child may be hungry.
Non-specific recurrent abdominal pain	With excluded organic causes. Non-specific recurrent abdominal pain
Pancreatitis	Central severe pain. Nausea. Unusual in children but important to not miss. Include amylase in blood tests.
Sickle cell crisis	Nearly exclusively in black children. Refer to <u>sickle cell disease</u> guideline for differentiation with non-crisis causes
Testicular torsion	More common after puberty. Sudden onset, swollen tender testis. Have low threshold for discussing all testicular pain with paediatric surgical team
Trauma	Always consider NAI. Surgical review necessary
υтι	Fever, dysuria, loin/abdominal pain, urine dipstick positive for nitrites/ leucocytes – Investigate and manage as per UTI pathway

Table 3

Female gynaecological pathologies	
Menarche	On average 2 yrs after first signs of puberty (breast development, rapid growth). Average age in UK is 13 yrs
Mittelschmerz	One sided, sharp, usually < few hours, in middle of cycle (ovulation)
Pregnancy	Sexually active, positive urine pregnancy test
Ectopic pregnancy	Pain usually 5-8 weeks after last period, increased by urination/ defaecation,. Late presentations associated with bleeding (PV, intra-abdominal)
Pelvic inflammatory disease	Sexually active. Risk increase with: past hx of PID, IUD, multiple partners. Fever, lower abdo pain, discharge, painful intercourse
Ovarian torsion	Sudden, sharp, unilateral pain often with nausea/ vomiting. Fever if necrosis develops

Table 4

Functional Abdominal Pain		
Indigestion (functional dyspepsia)	 Bothersome postprandial fullness Early satiety Epigastric pain and burning not associated with bowel habit 	
Irritable bowel syndrome (IBS)	 Abdominal pain at least 4 days per month, associated with change in bowel habit Pain associated with change in frequency or form of stool Pain related to defecation 	
Abdominal migraine (similar symptoms to a regular migraine, but no headache)	 Stereotypical, paroxysmal episodes of periumbilical or diffuse abdominal pain with few or no GI complaints between attacks Migraine in child (or family) 	
Non-specified functional abdominal pain	 No obvious organic aetiology Pain may be episodic or continuous Not associated with change in stool frequency/consistency Chronic abdominal pain may develop as a response to psychosocial stressors or emotional distress 	