Acute Abdominal Pain Pathway

Clinical Assessment/ Management tool for Children

Management - Primary Care and Community Settings

Healthier Together

NHS

Patient presents

Abdominal Pain/ Abdominal Injury?

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

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

Investigations:
Consider if appropriate to:
- Perform urine dipstick (consider formal MC+S in children <3 years) – clean catch urine
- Blood glucose if DKA suspected
- Perform pregnancy test

Past Medical History:
- If female, history of gynaecological problems?
- Any known chronic medical conditions? Recent abdo surgery?

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

Immediate Action

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

**giving pain relief does not affect the validity of later examination & does not delay decisions to treat)*

Red Flags present?

Yes

Urgent Action
- Urgent referral to paediatric or surgical team per local pathway

No

Likely diagnosis established?

Yes

If appropriate
- Manage locally by safety netting advice sheet or refer to Paediatric/ Surgical team for treatment

No

If diagnosis still uncertain, consider additional tests and consider discussing with paediatric team. Ensure appropriate safety netting and provide family with **advice sheet**

Table 1

Medical Red Flags	Surgical Red Flags	Red Flags (medical or surgical)
• 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)	• 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	• Severe or increasing abdominal pain • Significant 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, loss of appetite, migration of pain from central to RIF, peritonism (clinical or history suggestive), tachycardia, raised CRP (or CRP rise after 12 hours)
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.
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.
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
UTI	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