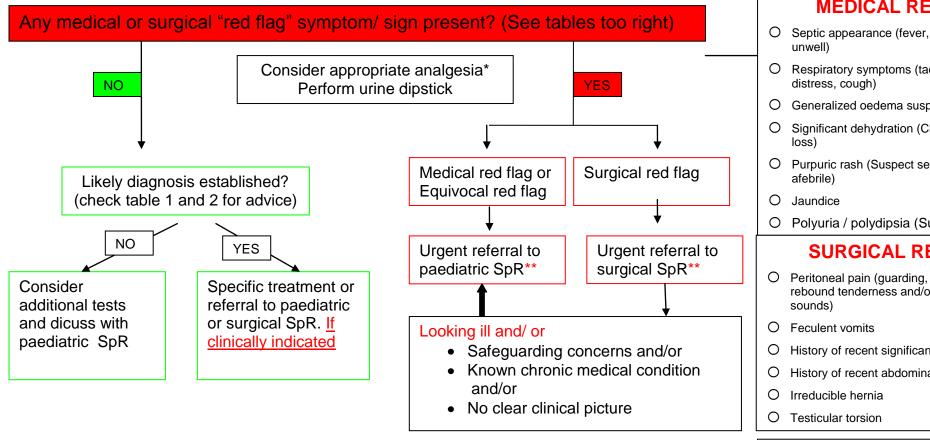
Paediatric Acute Abdominal Pain Pathway





- * Giving pain relief (including morphine if necessary) does not affect the validity of later examination and does not delay decisions to treat
- **If child is very sick inform appropriate (Paediatric and/or Surgical) Consultant ASAP

This guidance is written in the following text:

Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or quardian. Version 1 (7/1/13)

MEDICAL RED FLAGS

- O Septic appearance (fever, tachycardia, generally
- O Respiratory symptoms (tachypnoea respiratory
- Generalized oedema suspect nephrotic syndrome
- Significant dehydration (Clinically or >5% weight
- O Purpuric rash (Suspect sepsis if febrile or HSP if
- O Polyuria / polydipsia (Suspect Diabetes)

SURGICAL RED FLAGS

- O Peritoneal pain (guarding, generalised or localized rebound tenderness and/or abnormal bowel
- History of recent significant abdominal trauma
- History of recent abdominal surgery

EQUIVOCAL RED FLAG (MEDICAL OR SURGICAL)

- O Severe or increasing abdominal pain
- Non mobile or change in gait pattern due to pain
- Bilious (green) vomits
- "Red currant jelly" stool
- Abdominal distension
- Palpable abdominal mass
- Child younger than 5 years (except irreducible, testicular hernia torsion or recent abdominal injury

TABLE 1 - Quick guide to most common causes of acute abdominal pain in children

	Most important features	
Gastroenteritis	Diarrhoea, vomits, + family history	
Infantile colic	Young healthy infant with episodes of inconsolable cry and drawing up of knees, flatus	
Appendicitis	Fever, anorexia, nausea/vomiting, migration of pain from central to RIF (see Paediatric Appendicitis score)	
Mesenteric adenitis	Fever, peripheral lymphadenopathy (in 20%), pain more diffuse that in appendicitis, concomitant or antecedent URTI	
Intussusception		
	currant jelly stool	
Meckel's diverticulum	Usually painless rectal bleeding. Symptoms of intestinal obstruction or mimicking appendicitis possible	
Constipation	+ history, pain mainly left sided/ supra pubic, if acute look for organic causes (ie obstruction)	
UTI	Fever, dysuria, loin/ abdominal pain, urine dipstick positive for nitrites/ leucocytes	
Testicular torsion	Sudden onset, swollen tender testis with negative Prehn's sign (no relief/ increase of pain after lifting testicle)	
Irreducible hernia	Painful enlargement of previously reducible hernia +/- signs of bowel obstruction	
HSP	Diffuse / colicky abdominal pain, non-blanching rash (obligatory sign), swollen ankles/ knees, haematuria/ proteinuria	
HUS	Unwell child with bloody diarrhoea and triad of: anaemia, thrombocytopenia and renal failure	
Lower lobe pneumonia	Referred abdominal pain + triad of: fever, cough and tachypnoea	
Diabetic ketoacidosis	Known diabetic or hx of polydipsia/ polyuria and weight loss, BM >15, metabolic acidosis (HCO3 <15) and ketosis	
Sickle cell crisis	Nearly exclusively in black children. Refer to sickle cell disease guideline for differentiation with non-crisis causes.	
Trauma	Always consider NAI, surgical review necessary	
Psychogenic	Older child with excluded organic causes	

TABLE 2 - In girls > 10 yrs consider gynaecological causes of abdominal pain

Menarche	On average 2 yrs after first signs of puberty (breast development, rapid growth) in UK average at 13 yrs
Mittelschmerz	One sided, sharp, usually < few hours, in middle of cycle (ovulation)
Pregnancy	Sexually active, positive urine pregnancy test
Ectopic	Pain usually 5-8 weeks after last period, increase
pregnancy	by urination/ defecation, in late stage with bleeding (PV, intra abdominal)
PID	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 nauseal vomiting. Fever if necrosis develops.

Table 3 Appendicitis score for children with abdominal pain

Sign / symptom	Scoring
Fever (temp in axilla > 38°C)	1
Anorexia	1
Nausea or vomits	1
Pain on cough/ percussion or	2
hopping	
RIF tenderness	2
Migration of pain (from central to	1
RIF)	
WBC > 10.000	1
Neutrophils > 7.500	1

Likelihood of appendicitis increase with total score (0-10 points). When total score is <3 then appendicitis is unlikely and if it is > 6- appendicitis likely. In borderline cases abdominal imaging (USS, CT) may be helpful after discussion with surgeon and radiologist – Samuel et al, J of Paed Surgery 2002, 6: 877 and Goldman et al, J Pediatr,2008,153:278