Worcestershire Acute Hospitals NHS Trust

# Abdominal pain (PIP)

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## The following guidance is taken from the Partners In Paediatrics (PIP)

# ABDOMINAL PAIN

## RECOGNITION AND ASSESSMENT

**Symptoms and signs**

- Pain may be localised or generalised
- Vomiting
- Anorexia
- Weight loss
- Fever
- Crying and irritability
- Character of the pain:
  - colicky (spasmodic/comes in waves) or
  - constant, sharp

**Typical features of some important causes of acute abdominal pain in children**

***Appendicitis***

- History of localised pain with increased severity
- On examination:
  - low grade fever
  - mid-abdominal pain migrating to RIF
  - guarding and rebound tenderness
  - pain on percussion
- Young children may not have typical features e.g. irritability, grunting, diarrhoea, vomiting, limp, right hip pain

***Intussusception***

- Typical age at presentation: 2 months–2 yr
- History of intermittent colicky abdominal pain 2–3 times/hr initially with increasing frequency
- Looks pale with pain
- Lethargic between episodes of pain
- Vomiting prominent feature
- Diarrhoea common
- Passage of blood and/or mucus *per rectum* (redcurrant jelly stools) late sign
- Follows respiratory or diarrhoeal illness
- Clinical features of intestinal obstruction
- On examination:
  - a sausage-shaped mass crossing midline in the right upper quadrant, epigastrium or behind umbilicus may be palpable
  - may be associated with Henoch-Schönlein purpura (children can be aged >2 yr)
  - abdominal distension and hypovolaemic shock are late signs

***Pneumonia and empyema***

- History of fever and cough
- On examination:
  - tachypnoea
  - recession +/- focal signs at one base
  - decreased breath sounds and dullness to percussion

**Other differential diagnoses**

***Surgical problems***

- Intestinal obstruction
- Torsion of ovary or testis
- Meckel's diverticulitis
- Renal pelvis-ureteric junction obstruction
- Renal or biliary calculus
- Enterocolitis secondary to Hirschprung's disease

***Medical problems – relatively common***

- Mesenteric adenitis (history of sore throat)
- Constipation
- Gastroenteritis
- Inflammatory bowel disease
- Lower lobe pneumonia
- Acute pyelonephritis
- Henoch-Schönlein purpura
- Hepatitis
- Acute cholecystitis
- Gastritis/peptic ulcer
- Coeliac disease (chronic history)
- Recurrent functional abdominal pain (affects 10–20%)
- Irritable bowel syndrome

***Medical problems – rare but important***

- Lead poisoning
- Diabetes
- Sickle cell crisis
- Acute porphyria
- Pancreatitis
- Primary peritonitis
- Non-accidental injury

***Gynaecological problems***

- Ectopic pregnancy
- Torsion of ovarian cyst
- Miscarriage
- Pelvic inflammatory disease (PID)
- Mittelschmerz pain (mid menstrual cycle)
- Imperforate hymen

**Chronic abdominal pain red flag symptoms (consider referral to paediatric gastroenterologist)**

- Persistent vomiting
- Family history of:
  - inflammatory bowel disease
  - coeliac disease
  - peptic ulcer disease
- Dysphagia
- Pain on swallowing
- GI blood loss
- Nocturnal diarrhoea
- Arthritis
- Perianal disease
- Weight loss or reduced linear growth velocity
- Fever

# INVESTIGATIONS

Only urinalysis is essential, other tests as appropriate for differentials above:

- Urine testing and analysis
- FBC, ESR
- Blood and stool culture
- CRP, U&E, amylase, glucose, LFT
- tTG and IgA if chronic history
- Consider group and save if at high risk of blood loss
- Consider pregnancy test in adolescent females (inform patient)
- Normal WBC and CRP do not rule out appendicitis

**Imaging**

- Abdominal X-ray
  - only if bowel obstruction or perforation suspected
- Abdominal ultrasound scan
  - if child stable and appendicitis is suspected
  - intussusception
  - torsion of ovary or testis
  - renal problems
  - pancreatitis
  - cholecystitis
- MRI abdomen and pelvis or CT
- If ultrasound normal and there is persisting pain discuss MRI with paediatric radiologist during working hours only. Out-of-hours if skilled operator not available CT abdomen can be useful for same conditions, but involves radiation
  - useful to rule out appendicitis and avoid hospital admission
  - imaging should be considered with the surgical team and in light of other investigations
- If respiratory symptoms, **CXR**
- Do not delay surgical review whilst awaiting scans if acute surgical problem suspected (e.g. torsion of testis, intussusception)

# MANAGEMENT

- Treat hypotension and shock if present
- If surgical problem suspected stop feeding
- If appendicitis suspected, clear fluids whilst awaiting surgical review
- If clinically peritonitic: keep nil-by-mouth
- IV access if surgical cause likely
- Nasogastric tube free drainage if bowel obstruction
- If suspected bowel perforation, IV antibiotics (e.g. cefuroxime and metronidazole)

**Indications for surgical review**

- Localised RIF pain
- Rebound tenderness/pain on percussion
- Migration of pain
- Redcurrant jelly stools and bleeding *per rectum* (in the absence of constipation)
- Bile-stained vomiting
- Marked abdominal distension
- Inguino-scrotal pain or swelling
- Increasing abdominal pain with progressive signs of deterioration
- If in doubt, discuss with senior colleague

**Recurrent abdominal pain**

- If due to constipation prescribe laxatives/increased fibre in diet
- Probiotics may be of benefit (parents can purchase)
- Little evidence for benefit of any medications
- Hypnotherapy and psychological therapies are interventions most likely to provide benefit
- Little evidence dietary modification is helpful

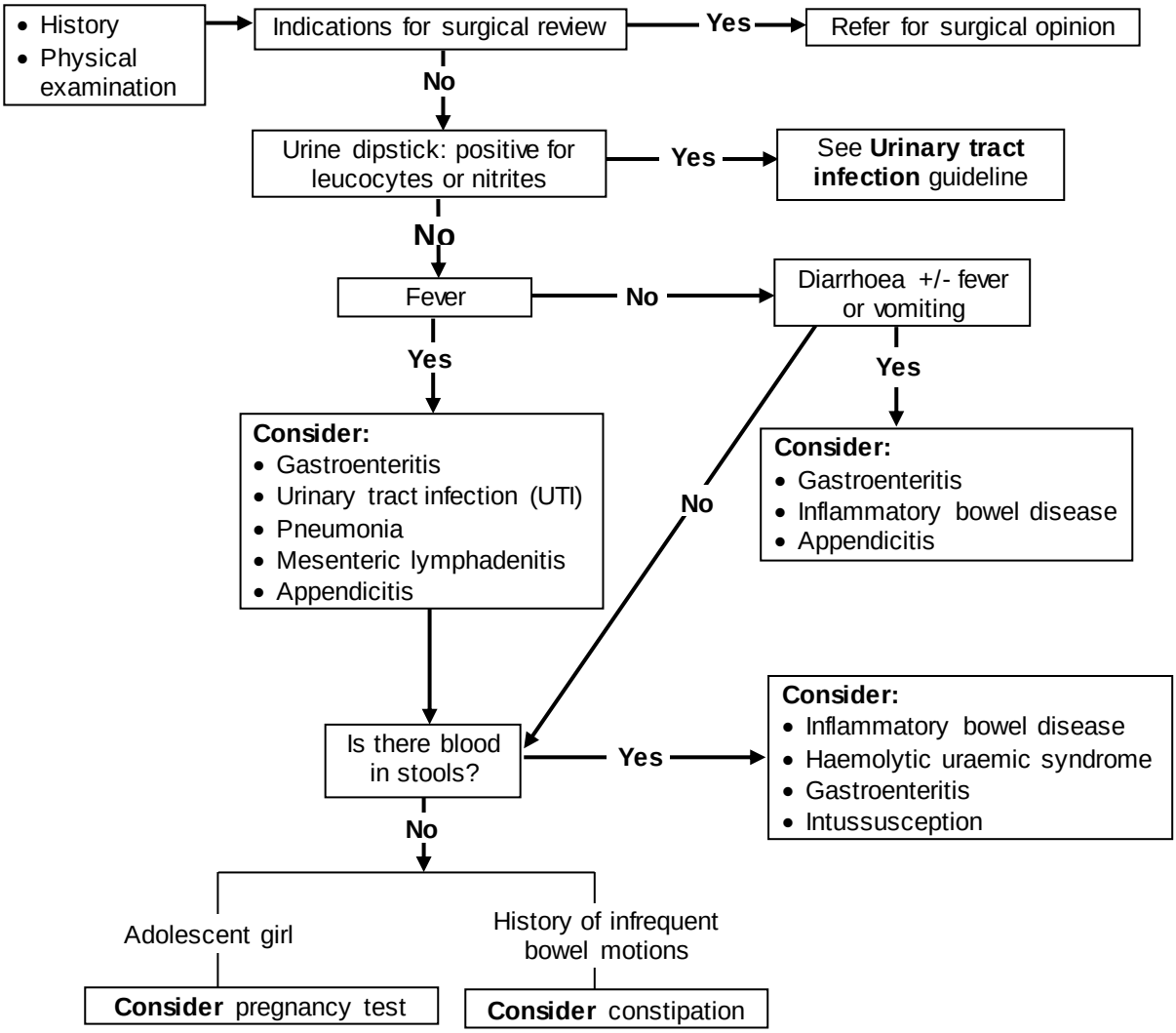
**Observation**

- If stable, period of observation may be useful to make diagnosis

**Analgesia**

- Do not withhold analgesia pending surgical review: opioids may be necessary (see **Analgesia** guideline)

**Management of acute abdominal pain**




## DISCHARGE AND FOLLOW-UP

- Discharge usually within 24 hr of symptoms improving (e.g. fever, abdominal pain)
- Follow-up usually appropriate in primary care/GP