Abdominal Pain

The most urgent problems to identify are:

- *Shock:* Haemorrhage or septicaemia from any cause
- *Surgical:* Ruptured AAA, generalised peritonitis, perforated viscus, acute bowel obstruction, intussusception, mesenteric infarction, acute pancreatitis, torsion of testis
- *Gynae/obstetric:* Ectopic pregnancy, incomplete miscarriage, pre-eclampsia, ovarian hyperstimulation syndrome, labour, placental abruption, placenta praevia, uterine rupture
- *Medical:* MI, pneumonia, PE, DKA
- *Other:* Acute problems that can become life-threatening if neglected, e.g. appendicitis,

Causes of abdominal pain by region

Right subcostal	Epigastrium	Left subcostal
Lung lower lobe, liver, GB, biliary tract, duodenum • Pneumonia, pleurisy or PE • Pre-eclampsia, HELLP syndrome • Duodenal ulcer • Cholecystitis, gallstones, biliary colic • Hepatomegaly, hepatitis	**Heart, oesophagus, stomach, pancreas** • MI • Pre-eclampsia • Gastritis, oesophagitis, PUD • Pancreatitis, pancreatic tumours • Oesophageal or gastric cancer	**Lung lower lobe, spleen, stomach** • Pneumonia, pleurisy or PE • Spenomegaly, splenic rupture • Gastritis, PUD
Right flank, left loin	**Central abdomen/Umbilical**	**Left flank, left loin**
Kidney and upper ureter, aorta • Aortic aneurysm • Pyelonephritis, renal stones, renal or adrenal tumours	**Small bowel, LNs, pancreas** • Appendicitis (early) • Mesenteric adenitis • SBO, mesenteric infarction, Crohn's, TB, Meckel's • Pancreatitis • Lymphoma, metastatic nodes	**Kidney and upper ureter, aorta** • AAA • Pyelonephritis, renal stones, renal or adrenal tumours
Right iliac fossa	**Lower abdomen/Suprapubic**	**Left iliac fossa**
Appendix, caecum, ureter, ovary, fallopian tube • Gynae: ectopic pregnancy, PID (usually bilateral), ovarian cysts and tumours, ovulation pain • Appendicitis • Mesenteric adenitis • Renal stones, UTI • Hernia (inguinal/femoral) • Caecal tumours	**Bladder, colon, rectum, uterus** • Colon/rectum: diverticular disease, UC, tumours • Urinary retention, UTI • Obstetric: miscarriage, labour, placental abruption, uterine rupture • Gynae: PID, endometritis, dysmenorrhea, ovulation pain	**Colon, ureter, ovary, fallopian tube** • Gynae: ectopic pregnancy, PID (usually bilateral), ovarian cysts and tumours, ovulation pain • Colon: diverticular disease, UC, tumours • Renal stones, UTI • Hernia (inguinal/femoral)

Diffuse pain or variable locations
• Medical causes: septicaemia, DKA, sickle-cell crisis, hyperCa, HSP, porphyria, hereditary angio-edema • Generalised peritonitis ± perforation • Testicular torsion • Acute intestinal obstruction • Gastro-enteritis • Constipation • Irritable bowel syndrome • Abdominal wall or dermatomal - shingles, hernias, muscle strain, referred pain from spine/spinal nerves • Psychogenic - somatisation, Munchausen's syndrome, fictitious (including opiate addiction)

Assessment

History

- Pain: onset, nature, time course, radiation, ggravating/relieving factors.
- Women: is pregnancy possible? LMP date, was this a normal period?
- Related symptoms: dysphagia, vomiting, anorexia, micturition and bowels, bleeding, systemic symptoms, weight loss, jaundice.
- Past medical history, recent injury or surgery, medication, allergies, last meal.

Examination

- Note if well or ill, vital signs; chest exam if appropriate.
- Abdominal examination including:
    - Inspection: Jaundice, pallor, LN, stigmata of liver disease, scars, contours (masses, herniae, distension).
    - Palpation: All regions - rigidity, tenderness, rebound, guarding, Rovsing's, Murphy's, organomegaly (L, S, K) & other masses, AAA pulse, hernial orifices
    - Percussion: Liver span, enlarged bladder, shifting dullness in ascites
    - Auscultation: Bowel sounds – present, increased, absent, tinkling
    - Rectal exam: for ?prostate, faecal loading, PR bleeding, ?mass
    - Coughing/jumping test for peritonism
- Urinalysis +/- bedside urine pregnancy test.

Pitfalls

Ectopic pregnancy: Can present with syncope, urinary or bowel symptoms; adnexal tenderness may be absent. Hx of 'missed period' may be absent if PV bleeding mistaken for period.
Appendicitis/Ectopic: misleading positive dipstick results - due to the pelvic irritation.
Ruptured AAA: Can mimic renal colic including back pain & haematuria
Pre-eclampsia: Can present with hepatic or epigastric pain.
Testicular torsion: May present with abdominal rather than scrotal pain.
Mesenteric infarction: Easily missed - has few signs until shock develops.
Acute pancreatitis: If sev, mimics other serious conditions, e.g. ruptured AAA, MI.
Children, DD & elderly: Harder to assess.
Steroids: Can mask signs of peritonism.
Medical problems: Can present with AP too e.g. MI, lower lobe pneumonia, DKA, sickle cell, porphyria, hereditary angio-oedema, familial Mediterranean fever, thyrotoxicosis, OD (e.g. iron)

Investigations – Tailor to clinical situation.

Urine: U/A, M,C&S if UTI possible, casts & sediment if haematuria, βhCG
Bloods: βhCG in all F patients 12-60. Baseline FBC & UEC, BSL. If indicated: G&H, LFT, lipase, CRP/ESR, ABG, CM, etc.
ECG: for cardiac ischaemia or preoperative.
Imaging: CXR if ?pneumonia/perforation, erect/supine AXR if ?obstruction, faecal loading (?), otherwise of limited use. USS for biliary tree, fluid collections, renal tract, appendicitis, gynae. CT commonly used in diagnosis of acute abdominal pain.
Special: Endoscopy. Diagnostic laparoscopy (followed by laparoscopic surgery if appropriate).

Initial Management

Resuscitation: ABCD, O2, IVC, fluids if hypovolaemic. Pregnant woman>20w in L lat position.
Supportive: NBM, ±NGT, IVF, analgesia, ±ABx
Specific: Depends on presentation/diagnosis