# Acute Abdominal Pain

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| Generalised peritonitis | Serious condition resulting from either:  
- Infection – e.g. perforated appendix/diverticula  
- Chemical irritation from leaking bowel contents e.g. perforated ulcer  
- Acute inflammation with production of inflammatory exudate | - Peptic/duodenal ulcer  
- Undiagnosed/ delayed treatment for appendicitis  
- Diverticulitis  
- Gall stone disease  
- Crohn’s / IUC  
- Local peritonitis | - Generalised severe abdominal pain  
- Worse on movement  
- Nausea  
- Vomiting  
- Anorexia | - Generalized tenderness  
- Rebound tenderness  
- Guarding  
- Distended abdomen  
- Board-like rigidity  
- Absent bowel sounds | Look for hypovolaemic shock:  
- Hypotension  
- Weak thready pulse  
- Tachycardia  
- Low urine output  
- Clammy cold peripheries  
- Hypothermia  
- Confusion  
- Weakness  
- Thirst | - Erect CXR – look for pneumatopertoneum  
- Serum amylase (rule out pancreatitis)  
- CT/ultrasound for diagnosis | - Resuscitation (IV fluids, NG tube and ABX)  
- Then surgery: peritoneal lavage, and specific treatment of underlying condition | - Superadded infection due to E. coli or bacteroides  
- Any delay can lead to toxemia, septicemia and multi-organ failure  
- Local abscess formation (swinging fever, high WCC and continuing pain) |
| Perforated Peptic/duodenal ulcer | Ulcer = Disruption to mucosal lining of stomach  
Perforation leaks acidic gastric contents into the peritoneum, causing generalised peritonitis | - Alcohol  
- NSAIDS  
- H Pylori.  
- Steroids  
- Smoking  
- Blood group O | | - Longstanding meal related dyspepsia  
- Sudden onset severe acute epigastric pain  
- Vomiting  
- Collapse and shock  
- Temporary relief in symptoms, before general pain and distension from peritonitis develops. | Alarm symptoms:  
- Anaemia  
- Loss of weight  
- Anorexia  
- Recent onset progressive symptoms  
- Malena or heamatemesis  
- Swallowing difficulty | - Erect CXR (pneumoperitoneum)  
- FBC (CRP, U&E, LFT, HB)  
- H. Pylori breath test  
- OGD with biopsy after peritonitis settles | - Surgery to repair perforation, and wash out peritonum  
- PPI (Omeprazole) or H$_2$ receptor antagonist (ranitidine)  
- Stop NSAID use  
- Lifestyle – ↓ alcohol, stop smoking  
- Triple therapy if H pylori +ve: (PPI, amoxicillin/ metronidazole & clarithromycin) | - Likely to recur, so manage risk factors aggressively |
| Acute Pancreatitis | Inflammation of the pancreas on background of normal healthy pancreas  
Proteolytic Autodigestion due to raised intracellular levels causes pancreatic necrosis  
Or: Stone occlusion of ampulla causing pancreatic ducal hypertension, increasing free cytosolic ionised calcium, initiating auto-digestion and necrosis. | - I GET SMASHED:  
- Idiopathic  
- Gall stones  
- Ethanol  
- Trauma  
- Steroids  
- Mumps  
- Autoimmune disease  
- Scorpion venom  
- Hypercalcaemia  
- Hypolipidaemia  
- Hyperamylasemia  
- ERCP & Emboli  
- Drugs  
Alcohol and gall stones are the 2 most common | - Severe epigastric pain that radiates to the back  
- Pain slightly relieved when sitting forward  
- Nausea, vomiting, anorexia  
- Tachycardia, fever & jaundice are possible  
- Diarrhoea (steatorrhea)  
- Peripheral oedema/ascites  
- Hypovolaemia/shock | Examination shows little at first until peritonitis develops  
- Tender upper abdomen  
- Fever  
- Ascites + huge peripheral oedema  
- Brusing at flanks (Grey-Turner’s signs)  
- Cullen’s sign: periumbilical or loin bruise due to bleeding into falciform ligament  
- Severe necrotizing pancreatitis.  
- Guarding reduced or absent bowel sounds  
- May be tachycardic, hypotensive or oliguric | - Elevation of CRP>200mg/L in first day predicts severe attack.  
- Ranson and Glasgow scoring system have 80% sensitivity for predicting severe attack when done 48hrs after initial presentation.  
- BMI>25 causes worse outcome as adipose tissue is substrate for activated proteolytic activity and inflammation | - FBC (amylase, lipase + CRP, WCC, LFT etc.)  
- Urinary amylase  
- Ultrasound pancreas  
- Erect CXR to exclude perforated ulcer  
- CT abdo enhanced to look at pancreatic necrosis extent.  
- Abdominal X-Ray – look for paralytic ileus  
- MRCP to assess damage | - ITU if severe case predicted – test after 24hrs & 48hrs.  
- IV fluids & electrolyte balance  
- NG tube and suction to prevent abdo distension and aspiration  
- Oxygen (monitor ABG)  
- Catheterization to monitor fluid balance  
- Furosemide  
- Analgesia  
- Pancreatic enzymes (Creon, pancrex)  
- Anti-coagulate for DVT prophylaxis  
- Surgery if required | - Diabetes  
- Renal failure from volume depletion  
- 25% cases are severe, leading to haemolytic instability, multiple organ failure and mortality of 40–70%: need to predict severe cases early. |
| Cholecystitis | Results after stone impaction at the neck of the gallbladder  
Increase in glandular secretions,  
Progressive distension and | - Hypercalcaemia  
- Hypercholesterolaemia  
- Fatty diet  
- Known history of biliary colic  
- Initial biliary "colic"  
- Progression with severe RUQ pain (parietal peritonitis)  
- Fever,  
- Nausea and Vomiting  
- Anorexia  
- Referred pain to the | - Local Peritonism (Tenderness and guarding in RUQ)  
- Pyrexia  
- Murphy’s sign (+)  
- Bloods: ↑ WCC, ↑ CRP  
- ↑ bilirubin and alk phos indicates CBD obstruction  
- Ultrasound: thick wall, stones in gall bladder neck or | | - NBM  
- Opiate Analgesia &IV fluids  
- Cefuroxime (IV ABX)  
- Cholecystectomy after a few days when symptoms settle  
- Urgent surgery if symptom’s don’t settle e.g.  
- Chronic cholecystitis: abdo distension, discomfort, nausea, flatulence, fat intolerance= elective cholecystectomy  
- Emphyema  
- Abscess formation  
- Acute gangrenous }
### Appendicitis

**Acute inflammation of the appendix after obstruction with a fecolith**

- Idiopathic
- Sudden onset colicky umbilical pain (inflamed midgut viscus)
- Migration to persistent pain and tenderness in RIF (localized peritoneal inflammation)
- Nausea
- Vomiting
- Anorexia
- Occasional diarrhea

**Bowel Obstruction**

- Mechanical obstruction of the bowel
- Non-functioning e.g. after abdominal surgery or peritonits

- Hernia
- Previous abdo surgery (adhesions)
- Crohn’s
- Intussusception
- Volvulus
- Tumour
- Gall stones
- Diverticulitis
- Constipation

- Vomiting (prolonged)
- Colicky pain central abdo
- Absolute Constipation (no passage of wind)
- Nausea and vomiting
- Distension above block

**Acute diverticulitis**

- High intraluminal pressures cause pouches of mucosa to extrude through weakened muscle wall near blood vessels, forming diverticulae
- Fecal obstruction of neck of diverticula causing stagnation, bacterial accumulation and inflammation.

- Low fibre diet
- Age >50
- Constipation

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<td>7. Acute vertebral collapse, spinal cord compression</td>
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Hermione Leach