Cases in Gastroenterology and Liver disease

16-1-2019 Revision Course

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Introduction

- Questions about various GI symptoms/conditions
- Some important facts and how to approach such problems

How to approach the clinical problem…

- Form a differential diagnosis (DD)
- Your first DD should either be the *commonest* or the *most serious* cause
- Try to think of at least 3 possible causes
- Aim to eliminate each DD from the information given

Importance of patient history

The purpose of the history is for:

1) To determine aetiology and formulate a differential diagnosis
2) To assess severity and look for complications
3) To plan further management

Your investigations are based on these same reasons

Universal management

- If given the option then ABC is **ALWAYS** the first step
- Then DEFG*…
- Resuscitate and do so in a safe place: resus, ITU, etc…
- Stabilise patient before doing anything invasive like endoscopy or surgery
- Decide what needs to be done now and what can wait till later.

- DEFG = don't ever forget glucose

GI anatomy

The following are all part of the GIT. Please choose the most appropriate organ from the following list. The items may be used once, more than once or not at all:

A) Biliary tree B) Colon C) Duodenum D) Ileum E) Liver F) Oesophagus G) Pancreas H) Stomach

a) Where vitamin B12 is absorbed.

b) Surgery here can lead to iron deficiency.

c) Has exocrine and endocrine functions.

d) Where the Ligament of Trietz and Ampulla of Vater are found.

e) Typically cancers originating from here are squamous cell.

f) Cholangiocarcinomas stem from here

g) Gets its arterial blood supply from branches of the superior and inferior mesenteric arteries

h) Site of albumin synthesis

Emergency Investigations

The following are all investigations. Please choose the ***first*** investigation from the list that should be done in the A&E department for each scenario. The items may be used once, more than once or not at all:

A) Abdominal x-ray B) Blood cultures C) Chest x-ray D) Colonoscopy E) CT abdomen F) Diagnostic Ascitic tap G) Ultrasound abdomen H) Upper GI endoscopy

a) A 47-year-old man presented with acute haematemesis. He was taking Diclofenac for a arthritis for the past week. He drank 5 units per day for the past 2 years. O/E there was generalised abdominal guarding. He was apyrexial, HR was 110 regular and BP was 84/52. Rectal examination revealed melaena.

b) A 26-year-old woman presented with 3/7 history of bloody diarrhoea. She was passing pure blood PR >10 times day & night. She had no history of trauma or previous medical or family history. She smoked 10 cigarettes per day and was on the oral contraceptive pill. O/E she had some diffuse abdominal tenderness. Temperature was 37.0, HR100 regular and BP122/78. PR examination revealed fresh blood.

c) A 74-year-old woman presented with jaundice and abdominal pain for 5/7. Today she had also developed rigors. She had also lost 5 kg over the past 2/12. O/E she was jaundiced and had a temperature of 38.3, HR104 regular and BP 80/48. There was right upper quadrant tenderness but no guarding, signs of chronic liver disease or organomegaly.

d) A 53-year old man presented with 10kg weight loss, poor appetite and distended abdomen that was affecting his breathing. He drank 1 bottle of wine per week and smoked 20 cigarettes per day. Hb, platelets and clotting studies are normal.

Case 1

A 68-year old woman was admitted with 1x episode of haematemesis. She had a PMH of rheumatoid arthritis. What is the most likely cause for her symptoms?

a) Arteriovenous malformation
b) Gastric cancer
c) Mallory-Weiss tear
d) Oesophageal varices
e) Peptic ulcer disease

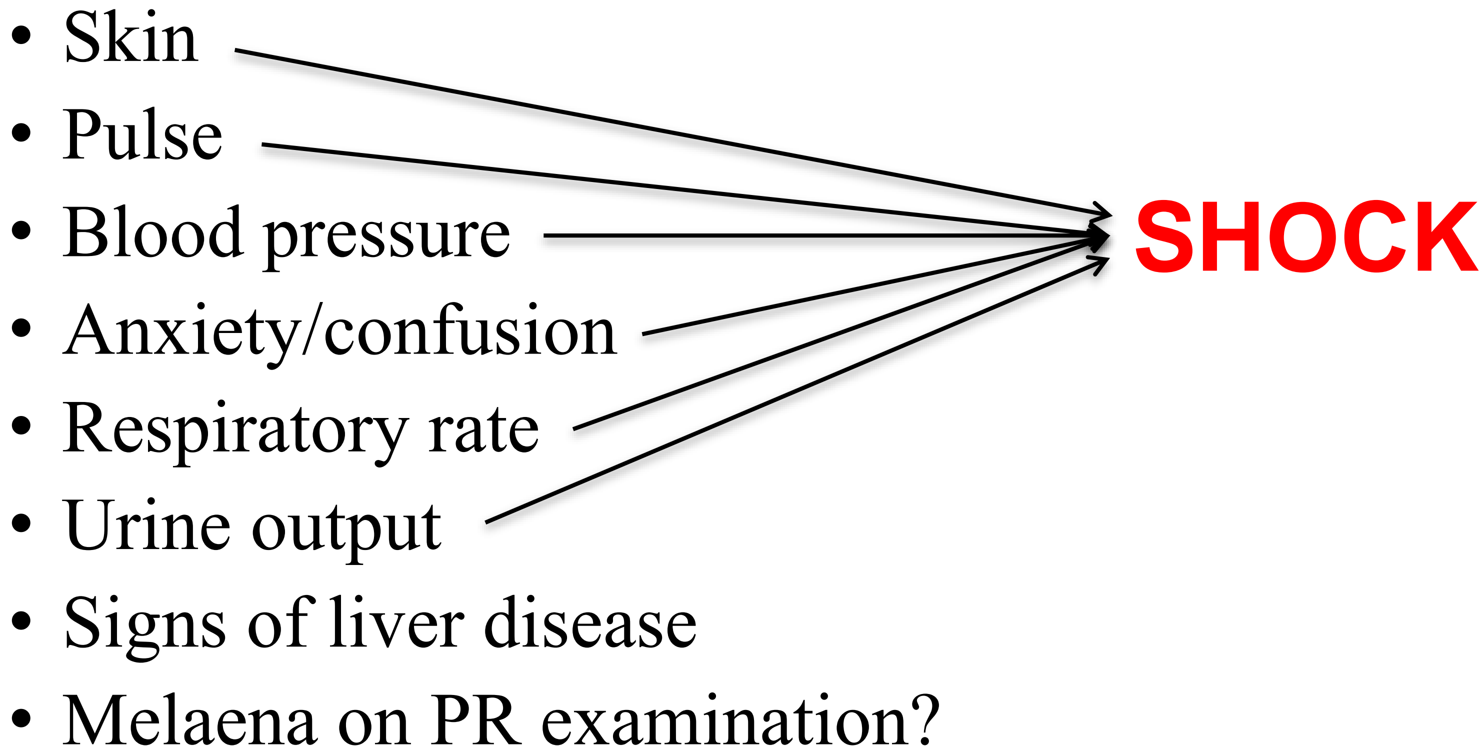
Causes of upper GI bleeding

- Peptic ulcer disease — 45-55%
- Oesophagogastric varices — 15-20%
- Arteriovenous malformations — 5-10%
- Mallory-Weiss tears — 5-10%
- Tumors — 5-10%
- Dieulafoy's lesion — 1-3%
- Other — 10-15%

Useful questions to ask:

a) Alcohol?
b) NSAIDs?
c) Bleeding disorders/anticoagulants?
d) PMH of peptic ulcer disease?
e) PMH of liver disease?

What to look for on examination:



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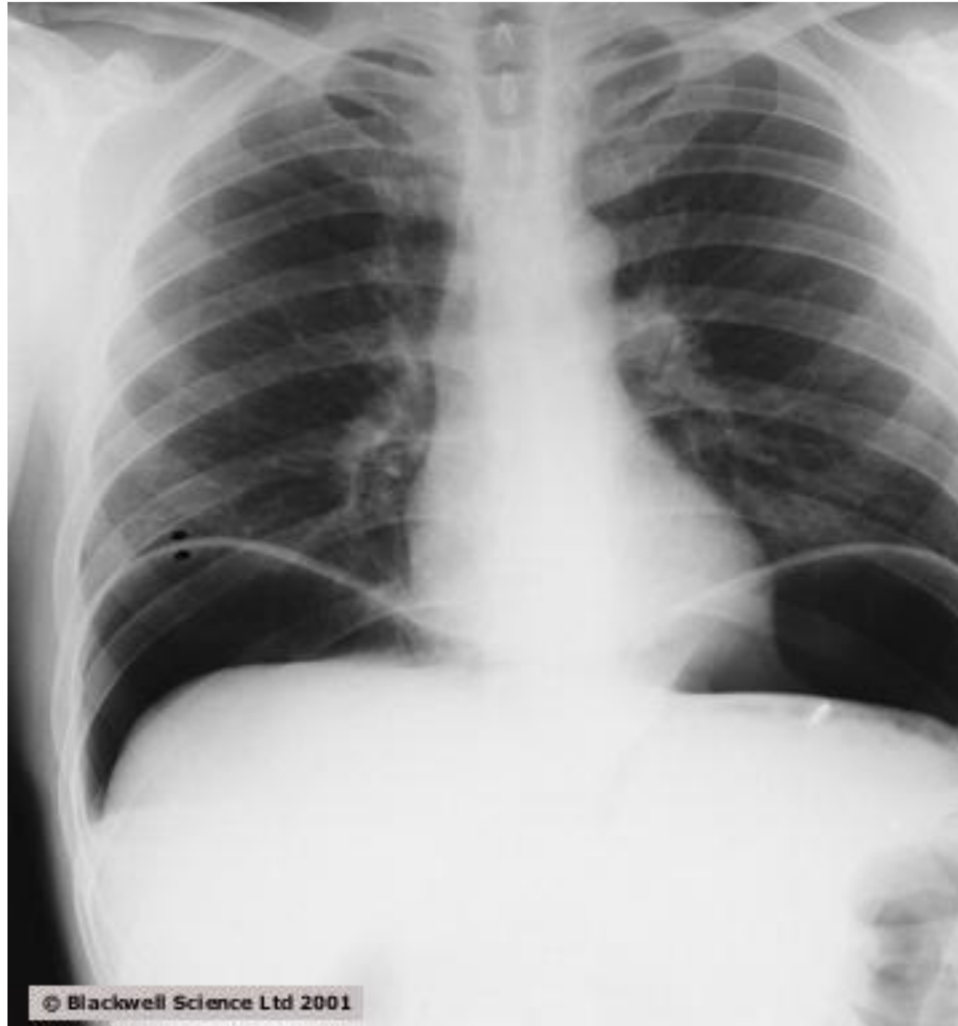
Investigations

- Blood tests: FBC, U&E, LFTs, Glucose, Amylase, Clotting, G&S/X-match
- ECG
- CXR
- Arterial Blood Gases (ABG)
- Urinary catheter

Why a CXR is important…



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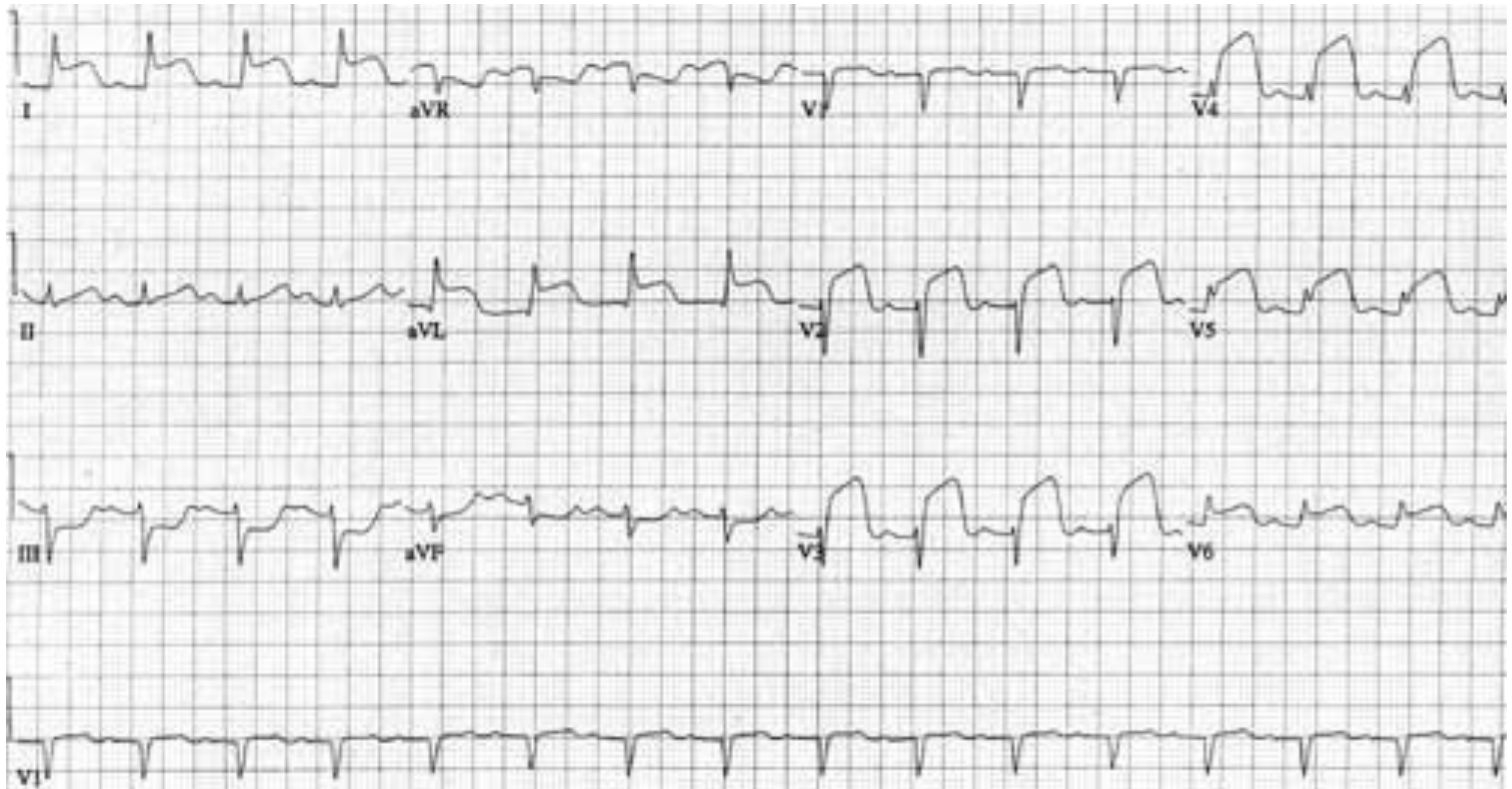
Why an ECG is important…



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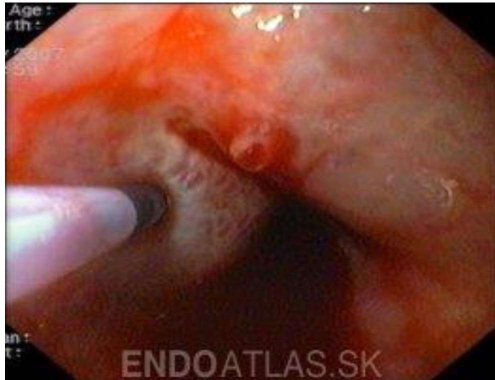
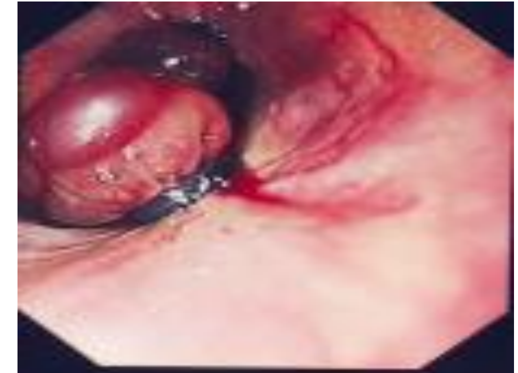
Immediate management

- ABC
- IV access
- IV fluids + keep nil by mouth (NBM)
- Transfuse if necessary: packed cells +/- platelets +/- FFP
- PPI
- Endoscopy **ONLY** once stabilised
- If suspect variceal bleed then give (broad spectrum) antibiotics +/- terlipressin

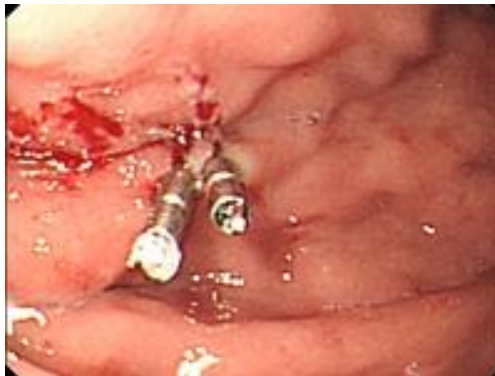
Endoscopic treatment



Adrenaline injection

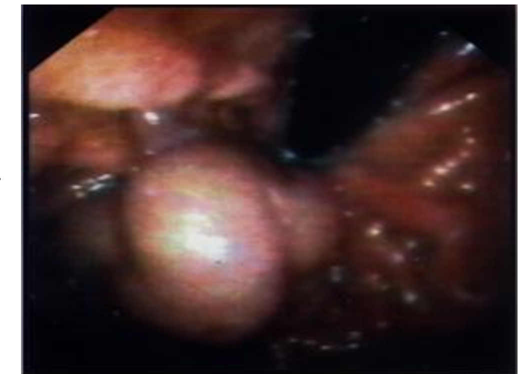


Banding of oesophageal varices



Endoclips

Ulcer bleeds



Glue for gastric varices

Argon plasma coagulation

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Bowel problems

The following patients all have bowel problems. Please choose the ***most appropriate cause*** from the following list. The items may be used once, more than once or not at all:

A. Carcinoid syndrome B. Chronic pancreatitis C. Coeliac disease D. Colorectal carcinoma E. Diverticular disease F. Inflammatory bowel disease G. Giardiasis H. Mesenteric ischaemia

a) A 66-year-old woman was admitted to A&E with a 2/7 history of severe lower abdominal pain and passing more than 1500 mls of fresh red blood PR. She had a history of atrial fibrillation and was taking Digoxin. O/E she was distressed and in pain. HR 110 irregular and BP 90/50. There was left sided abdominal tenderness.

b) A 58-year-old woman was referred to the gastroenterology clinic because of 5/12 history of watery diarrhoea. Bowels open >10 times per day with no blood PR. She also had crampy abdominal pain and 7 kg weight loss and recently had experienced facial and neck flushing lasting several minutes. No alcohol or DH. No foreign travel. O/E he had mild abdominal tenderness and 2 cm hepatomegaly but no signs of chronic liver disease.

c) A 44-year-old man was admitted to A&E with a 3/7 history of central abdominal pain radiating to the back. This was his third admission with the same problem. He had 8 kg weight loss over 6 months and was passing pale, offensive motions that were hard to flush. He was a type 2 diabetic and drank 40 unit of alcohol per week. O/E he looked thin but was haemodynamically stable. There was generalised abdominal tenderness but no guarding.

d) A 33-year old woman was referred by her GP because of a 8/12 history of abdominal pain, loose stools (without blood), bloating and 5 kg weight loss. No foreign travel. Her mother suffered with bowel problems also. Examination was normal. She had a normal colonoscopy and tissue transglutaminase antibodies were positive.

Case 2

A 32-year old man was admitted with 8/52 hx of PR bleeding. BO x 10 with blood & mucus. 6 kg weight loss. No PMH/FH/DH. ° alcohol °smoker. Arrived from India 6/12 ago. Married with children but family well. O/E in pain. Pulse 100, BP 95/60, RR 15, Temp 38.2 °C. Abdo soft but generalised tenderness °organomegaly or masses. BS present. PR: fresh blood.

What is the most likely cause?

a) Colorectal cancer

b) Crohn's disease

c) Salmonella gastroenteritis

d) Tuberculosis

e) Ulcerative colitis

Causes of diarrhoea

- **Infective**
  - Bacterial
  - Viral
  - Protozoal
- **Inflammatory Bowel Disease**
  - Crohn's
  - Ulcerative Colitis
- Malignancy
- Drugs
- Hyperthyroidism
- Ischaemic
- Radiation Colitis
- Malabsorptive States
- Bacterial Overgrowth
- Neuroendocrine tumours
- Irritable Bowel Syndrome
- Diverticular Disease
- Constipation (with overflow)
- Alcohol excess
- Fictitious

What questions to ask

- How long? <2/52 vs ≤ 4/52 vs >4/52
- How frequent? Does it occur at night?
- What is the consistency? 1 (rock hard pellets) → 4 (soft sausage) → 7 (like water)
- If there is blood is it on stool vs in pan vs on paper?
- PMH? Drug Hx? FH? Ethnicity?
- Foreign travel? Anyone else ill? Trauma?
- N+V? ↓appetite? Loss of weight? Night sweats?
- Any eye vs skin vs joint vs liver problems?

What to look for on examination

- General appearance: JA~~C~~COL
  Dehydrated?
- Abdomen: soft vs tender?
  masses/organomegaly/ascites
  operation scars
  fistula/haemorrhoids/skin tags
- Eyes
- Skin

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Case 3

Which ONE of the following is not a recognised extraintestinal manifestation of inflammatory bowel disease?

a) Episcleritis
b) Primary sclerosing cholangitis
c) Pyoderma gangrenosum
d) Rheumatoid arthritis
e) Vitamin B12 deficiency

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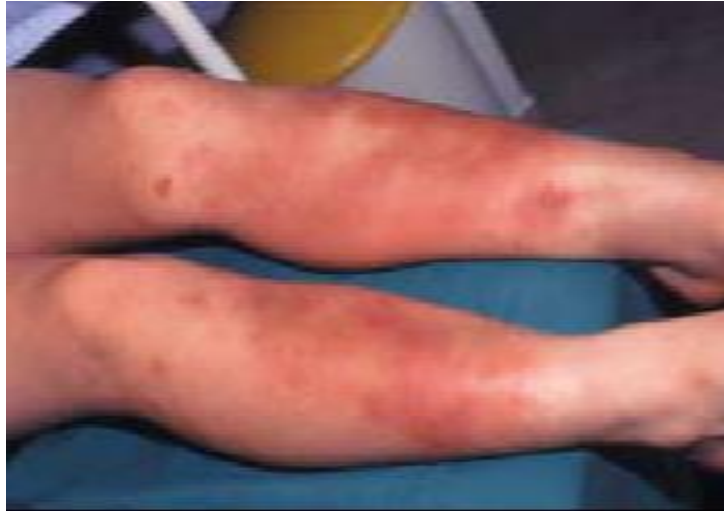
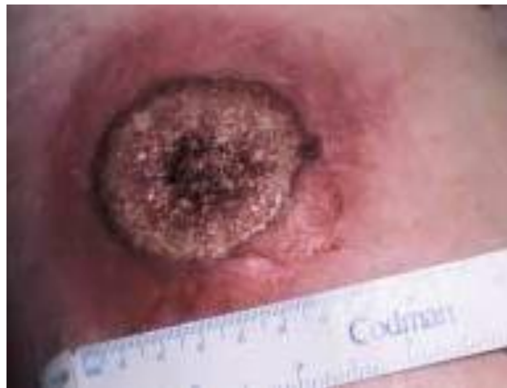
Extra intestinal manifestations

Ankylosing spondylitis

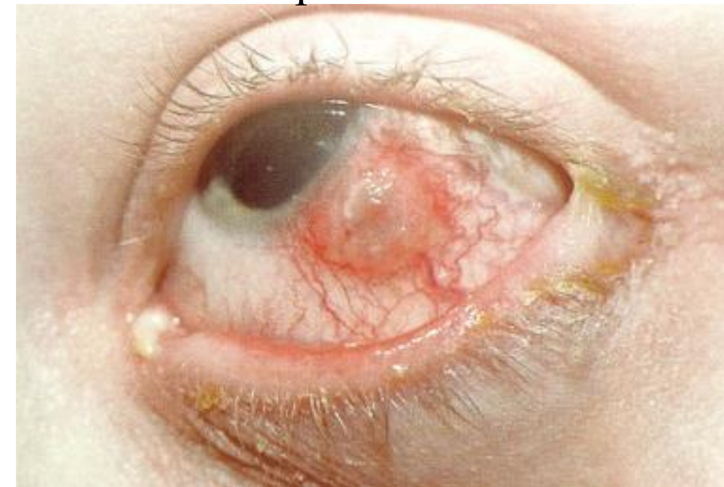
Erythema nodosum



Pyoderma gangrenosum



Episcleritis



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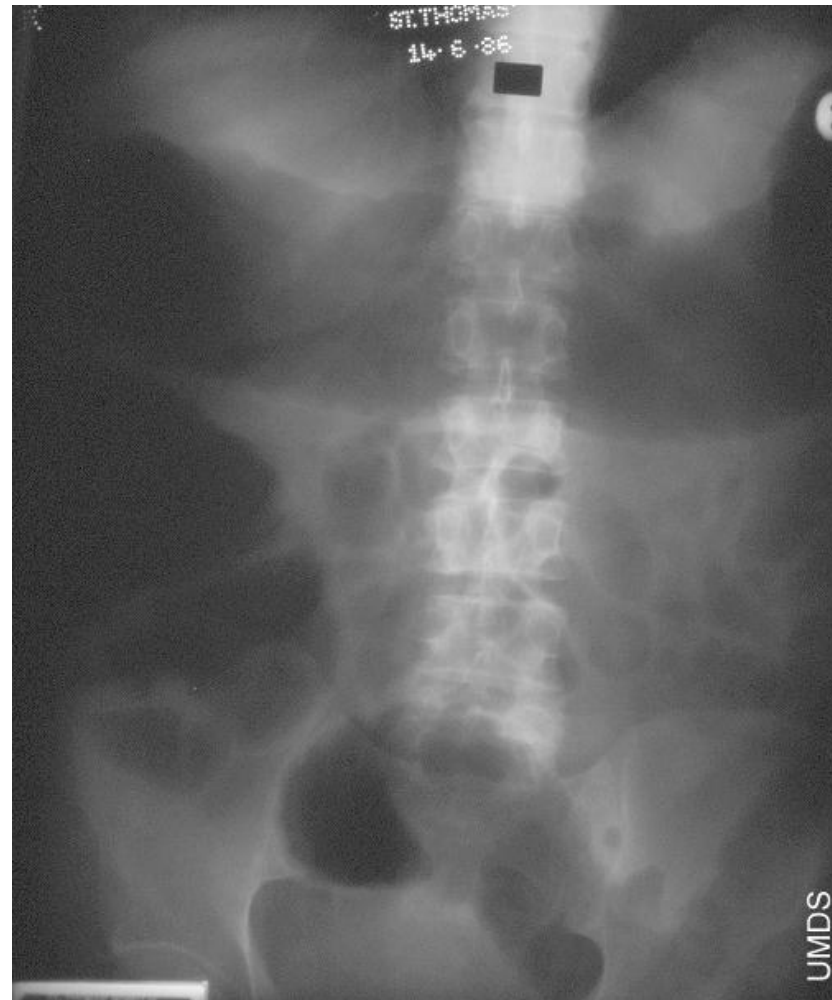
Investigations

- Blood tests: FBC, U+E, LFT, Mg, ESR, CRP, INR, G+S, HIV
- Xrays: AXR, CXR
- Stool: M, C + S, *C.difficile* toxin

Why an abdominal xray is important



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Immediate management

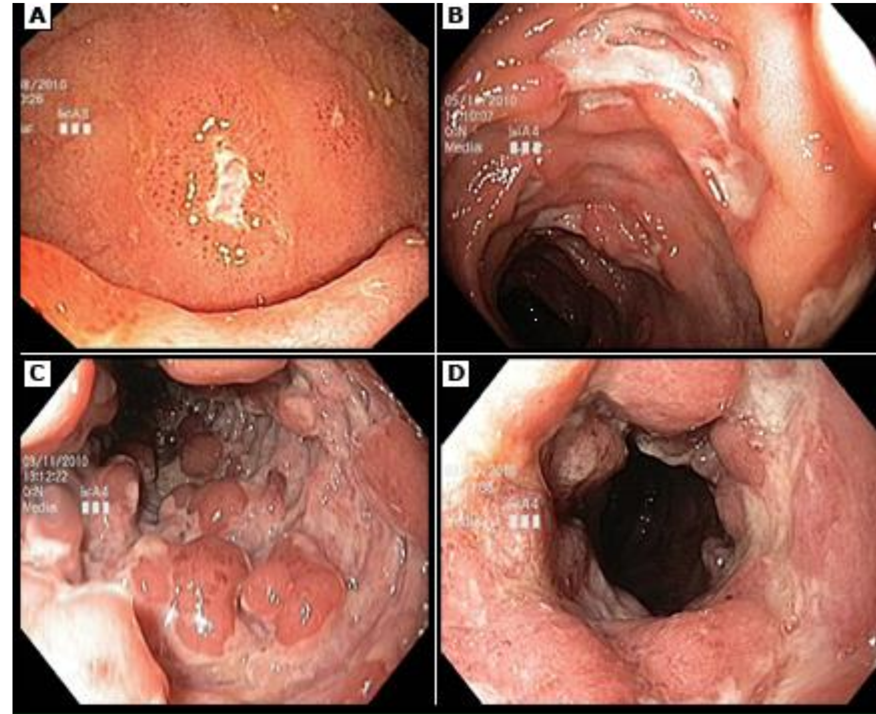
- ABC
- Stop precipitating medications: anti-cholinergics, loperamide, iron, NSAIDs, opiods
- Keep patient in side room
- Correct any electrolyte imbalances
- Rehydrate iv/po
- Consider antibiotics if evidence of infection
- Do not give iv steroids unless sure that this is IBD and that this is a flare up
- If not settling then consider flexible sigmoidoscopy **NOT** colonoscopy

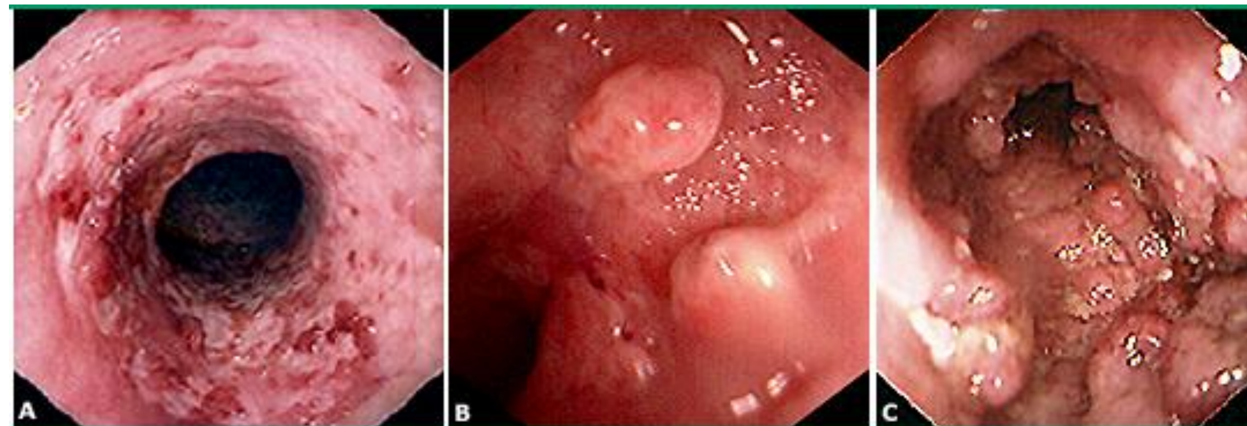
Case 4

Which ONE of the following is more characteristic of ulcerative colitis rather than Crohn's disease?

a) Cobblestone lesions
b) Crypt abscesses
c) Granulomas
d) Fistula formation
e) Transmural inflammation

UC versus CD





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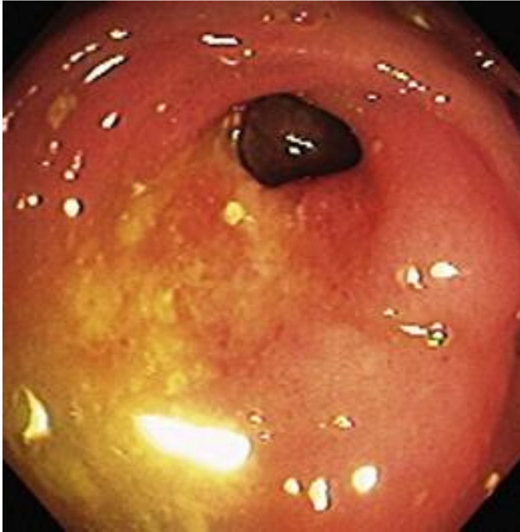
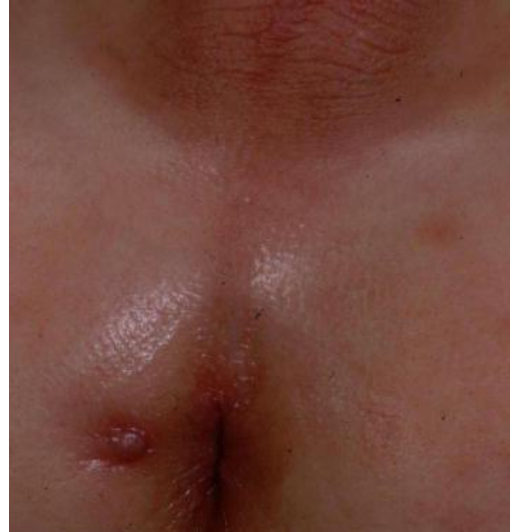
Management of acute colitis

- Exclude infection – if cannot do so then will need antibiotic cover
- AXR to exclude toxic megacolon – possibly daily
- Rehydrate
- IV hydrocortisone 100mg QDS until responding
- LMW heparin
- 5-ASA po/topically
- Flexible sigmoidoscopy to assess disease activity
- If not responding consider ciclosporin or biologics

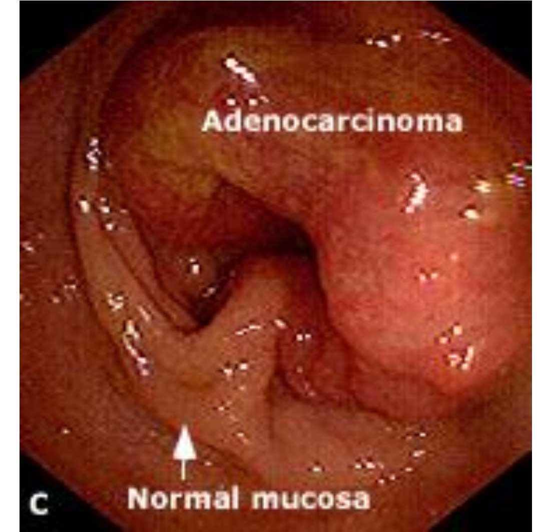
Complications of IBD



Stricture



Fistula



Bowel cancer

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Case 5

Which ONE of the following is more suggestive of colorectal cancer?

a) Change in bowel habit towards diarrhoea in 45-year old woman
b) Hb 100 g/L (130-180 g/L) MCV 100 (80-96 dL) in 60-year old man
c) Painful PR bleeding in 55-year old man
d) Palpable pelvic mass in 59-year old woman
e) Previous medical history of diverticular disease in 63-year old man

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“Red Flag” bowel symptoms

- Rectal bleeding with an associated change in bowel habit to looser stools or persistent increased bowel frequency for over six weeks
- Rectal bleeding without anal symptoms in an individual aged over 60
- Persistent change in bowel habit for over six weeks with increased bowel frequency or looser stools in an individual aged over 60
- Iron deficiency anaemia without an obvious cause (Hb <11 g/dl in men or <10 g/dl in postmenopausal women).
- Palpable right sided abdominal mass
- Palpable rectal (not pelvic) mass

Case 6

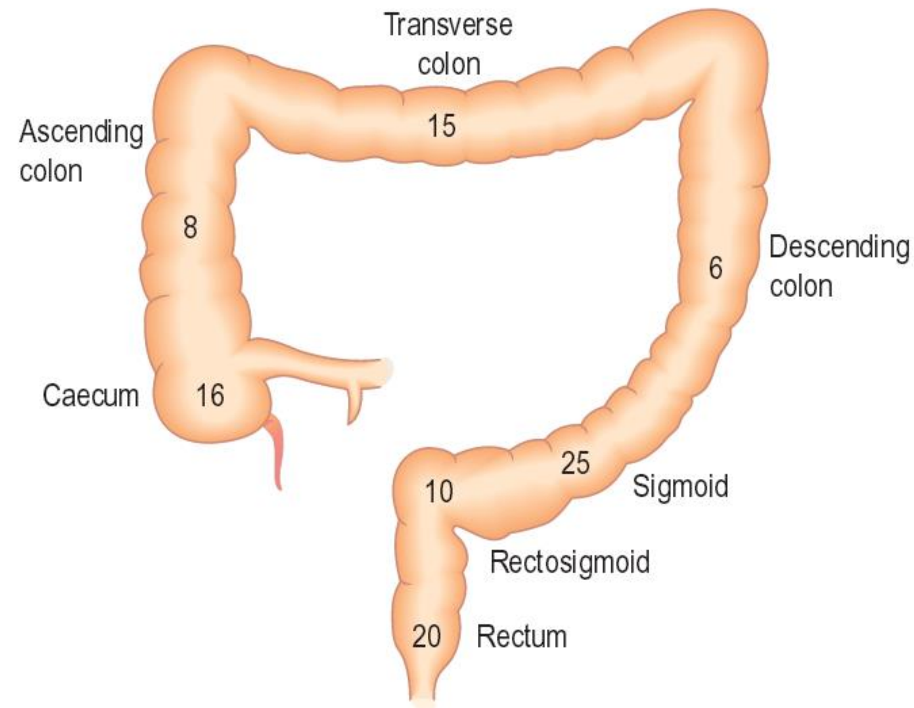
Which ONE of the following is **NOT** associated with an increased risk of colorectal cancer?

a) Aspirin
b) Colorectal polyps
c) Obesity
d) Smoking
e) Ureterosigmoidostomy

Risk Factors and Distribution (%) of Colorectal Ca.

Increased risk
- Increasing age
- Animal fat (saturated) and red meat consumption
- Sugar consumption
- Colorectal polyps
- Family history of colon cancer or colonic polyps
- Chronic inflammatory bowel disease
- Obesity (body and abdominal)
- Smoking
- Acromegaly
- Abdominal radiotherapy
- Ureterosigmoidostomy

Decreased risk
- Vegetable, garlic, milk, calcium consumption
- Exercise (colon only)
- Aspirin (including low dose) and other NSAIDs



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Investigations for bowel cancer

- **Colonoscopy (or CT pneumocolon/colonography)**

- **Blood tests:** FBC, LFTs, CEA

- **If bowel cancer found then also do:**

❑ CT scan of the chest, abdomen and pelvis to stage disease and look for local spread and metastatic disease.

❑ MRI +/- endoanal ultrasound but **ONLY** with rectal cancer.

- Faecal occult blood (FOB) stool test is only used for screening asymptomatic patients and **NOT** for diagnosing bowel cancer

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Oesophageal disease

The following questions all concern oesophageal disease. Please choose the most appropriate cause from the following list. The items may be used once, more than once or not at all:

A) Achalasia B) Barrett's oesophagus C) Boerhaave syndrome D) Candidiasis E) Carcinoma of the oesophagus F) Mallory-Weiss syndrome G) Oesophageal varices H) Reflux disease (GORD)

(a) A 55-year old woman was referred with progressive dysphagia for solids and liquids for 18 months. There was regurgitation soon after eating but no haematemesis. She had lost 5kg in weight but no anorexia.

(b) A 19-year-old woman was admitted to A&E after vomiting 500 mls of fresh blood. She had been drinking alcohol heavily throughout the preceding 2 days. She had no chest pain or shortness of breath. Examination was normal.

(c) A condition that is a risk factor for adenocarcinoma of the oesophagus.

(d) A 34-year-old man complained of pain on swallowing for the past 4 weeks. He had been diagnosed with HIV 4 years ago but had not been taking anti-retroviral medication. His CD4 count was 150 cells/microL

Causes of Dysphagia

Disorders of the mouth and tongue	Extrinsic pressure
E.g. tonsillitis	Mediastinal glands
Neuromuscular disorders	Goitre
Pharyngeal disorders	Enlarged left atrium
Bulbar palsy	
Myasthenia gravis	**Intrinsic lesion**
	Benign stricture
Oesophageal motility disorders	Malignant stricture
Primary oesophageal disease Achalasia Other oesophageal dysmotility Eosinophilic oesophagitis*	Oesophageal web or ring Foreign body Pharyngeal pouch
Systemic disease Diabetes mellitus Chagas' disease Scleroderma	

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What questions to ask

- How long have symptoms have been going on?
- Progressive vs sudden
- Dysphagia for solids +/- liquids
- Is there N+V? Haematemesis? Odynophagia?
- Is there anorexia? Loss of weight?
- Is there PMH of reflux? Regurgitation? Night cough?
- PMH? DH? Smoker? Alcohol? Immunosuppressed?

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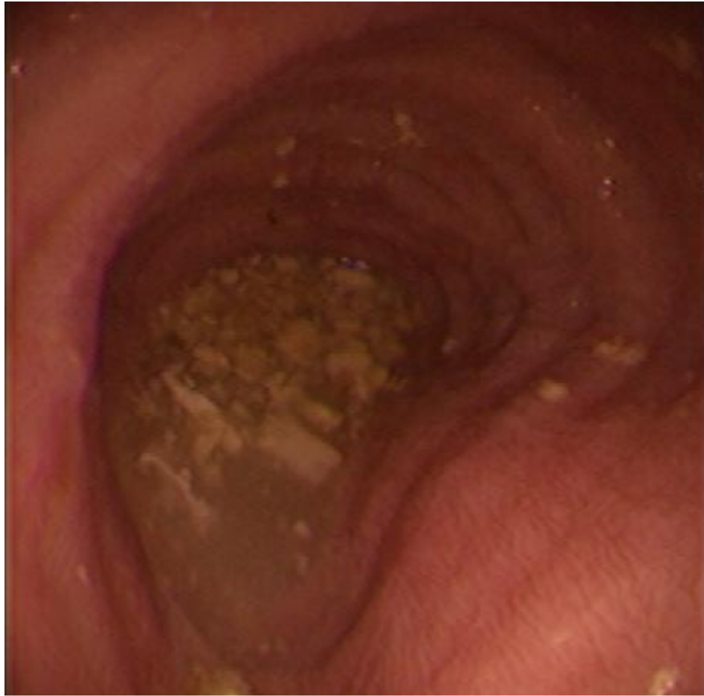
Case 7

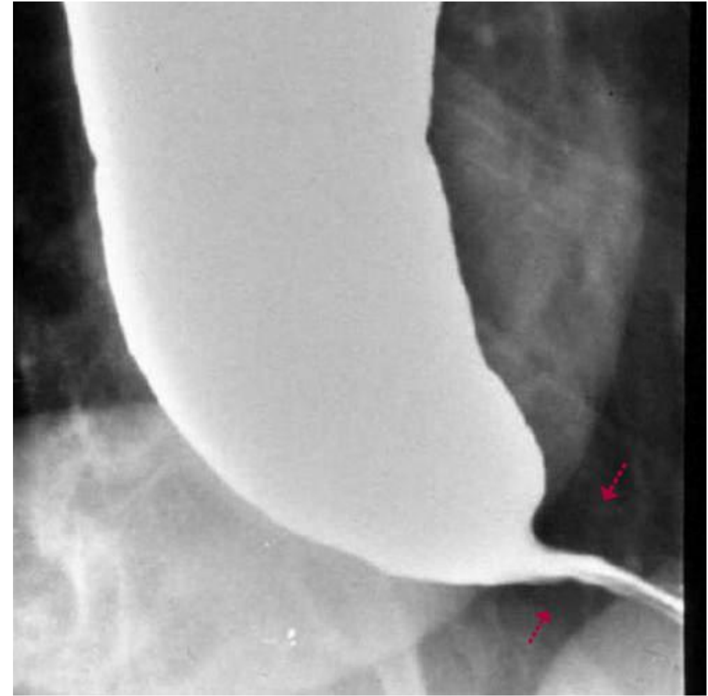
A 67-year woman was referred by the GP with progressive dysphagia for solids for 3 months. She has lost 5kg in weight. O/E No abnormal findings.
What is the NEXT most appropriate investigation?

a) Barium swallow
b) CT chest and abdomen
c) FBC, INR, U&E and LFT
d) pH and upper GI manometry studies
e) Upper GI endoscopy

Investigations



OGD



Barium swallow

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Case 8

Which ONE of the following is **NOT** an indication for insertion of Nasogastric tube?

A) Administration of medication in a patient with a reduced GCS
B) Feeding a patient with gastric outflow obstruction
C) Provision of nutrition and hydration in a ventilated patient
D) Provision of specific nutrition therapy in children with small bowel Crohn's disease
E) Relief of symptoms in patient with small bowel obstruction

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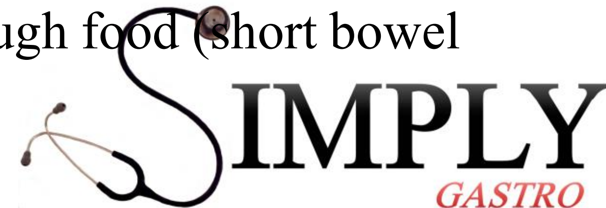
Enteral vs Parenteral Nutrition

- Simpler, more physiological, cheaper and less complicated.
- Given via tube
- Problems with using mouth but gut is working:

A. Impaired swallowing
B. Reduced GCS
C. Ventilated
D. Oesophageal or gastric obstruction
E. Severe pancreatitis
F. Supplement oral feeding in certain conditions

- Nutrients delivered directly into the blood bypassing the gut
- Requires intensive monitoring and associated with complications to do with placement, infection and electrolyte imbalance
- Use when gut is not working:

A. Blockage of the gut (mechanical obstruction)
B. Gut failing to work (ileus)
C. Gut perforations where feeding will result in worsening infections
D. Where a large part of the gut has been removed and the patient cannot absorb enough food (short bowel syndrome)



Liver Disease

The following patients all have secondary causes of deranged liver function tests. Please choose the most appropriate cause from the following list. The items may be used once, more than once or not at all:

A. Alcoholic liver disease B. Autoimmune hepatitis C. Gilbert's disease D. Haemochormatosis E. Hepatocellular carcinoma F. Paracetamol overdose G. Primary Biliary Cirrhosis/Cholangitis H. Wilson's disease

(a) An 18-year old man was admitted with abdominal pain & jaundice. Previously he had 2 days of diarrhoea & vomiting but until now had never been ill. O/E he had abdominal tenderness but no organomegaly. Bilirubin 70 (N=1-22), Albumin 40 (N= 37-49), ALT 20 (N= 15-35), ALP 100 (N= 45-105) , GGT 20 (4-35), INR 1.0 (N= <1.4)

(b) A 61-year old woman was referred with, abdominal distension and itching. Drinks 1 glass of wine per day. No history of operations, transfusions or injected drugs. O/E had scratch marks and shifting dullness. Bilirubin 50, Albumin 29, ALT 28, ALP 180, GGT 130, INR 1.6, anti mitochondrial antibodies positive.

(c) A 44-year old man was referred with gynaecomastia and deranged LFTs. He had recently developed diabetes and had impotence. He drank 10 units of alcohol per week. He had gynaecomastia, 4 cm hepatomegaly and small testes but rest of examination normal. Bilirubin 18, Albumin 35, ALT 55, ALP 100, GGT 50, INR 1.0, Glucose 11.1mmol/l (N= 3-6), Ferritin 1150 (N= 15-300)

(d) A 59-year old woman from Pakistan admitted with haematemesis. PMH of tonsilectomy as child. O/E there was jaundice, spider naevi, and moderate ascites. OGD revealed oesophageal varices. Ultrasound shows irregular liver with 2 focal lesions and ascites. Bilirubin 80, Albumin 25, ALT 30, ALP 120, GGT 80, INR 1.8, alpha feto protein 450 (N= 1-7) HCV antibody positive.

Causes of jaundice

Prehaptic	Hepatic	Extrahepatic
Haemolysis	Viral hepatitis	Gallstones
	Cirrhosis	Intra & extrahepatic cancer
	Alcoholic liver disease	PSC
	NAFLD	Biliary strictures
	Drugs (inc TPN)	Pancreatitis
	PBC	
	Pregnancy	
	Infiltrations	
	Congenital conditions	
	Heart failure	
	Sepsis & hypoperfusion	
	Intrahepatic cholestasis	

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What questions to ask

- How long and was it sudden or progressive?
- Any new medications/OTC remedies/illicit drugs/etoh?
- Any risk factors for viral hepatitis: a) foreign travel b) sex c) injections/tattoos d) operations/transfusions e) FH
- Has it happened before? PMH?
- Feel unwell? Anorexia? Loss of weight? Abdo pain? Fevers?
- Sx of liver disease: a) pruritis b) bleeding c) bruising d) abdo distension e) confusion
- Pregnant?

What to look for on examination

- General appearance: in pain? Alert? Confused? Tremor? Rigors?
- JACCOL
- Hands
- Face
- Neck
- Chest
- Abdomen: tenderness? Organomegaly? Scratch marks? Ascites? PR for stool/melaena
- CNS especially MTS

Causes of Hepatomegaly		Causes of Splenomegaly	
Infective	Viral Hepatitis EBV Malaria Leishmaniasis	**Infective**	EBV Malaria Leishmaniasis
Malignant	Hepatocellular Ca. Leukaemia Lymphoma Secondary Ca.	**Malignant**	Leukaemia Lymphoma
Metabolic/ Infiltration/ Inflammatory	Fatty Amyloid Haemochromatosis Storage Diseases Sarcoid	**Metabolic/ Infiltration/ Inflammatory**	Amyloid Sarcoid Storage Diseases Haemolytic Anaemia Haemoglobinopathies SLE
Cardiovascular	Right Heart Failure Budd-Chiari	**Cardiovascular**	Portal Hypertension
Other	Reidel's Lobe Low Diaphragm		

Case 9

A 42-year old woman was referred by GP with painless jaundice for past 4/7. She had lost 5 kg weight loss over past 4/52. No PMH or DH. Smokes10/day and drinks alcohol socially. No foreign travel. O/E very jaundiced. Pulse 98, BP 105/75, RR 18 and temperature 38.0°C. Abdomen soft with RUQ tenderness but no organomegaly. No ascites. PR normal. Orientated in TPP.

Which ONE of the following is the next most appropriate investigation?

a) CT abdomen
b) ERCP (Endoscopic retrograde cholangiopancreatogram)
c) Liver biopsy
d) MRCP (magnetic resonance cholangiopancreatography)
e) Ultrasound of the abdomen

Investigations

Immediate:

- Blood tests: FBC, U+E, LFTs, INR, Blood cultures, glucose, amylase, paracetamol, salicylate
- Non-blood tests: CXR, MSU, ABG

Specialised/liver screen:

- HAV IgM, HBsAg, HCV IgG, HIV
- Autoimmune screen, Immunoglobulins, ANCA
- AFP
- Ferritin
- (Caeruloplasmin, alpha-1-antitrypsin)
- Abdominal ultrasound

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Immediate management

- ABC
- Intravenous broad spectrum antibiotics (if pyrexial)
- Rehydrate (iv/po) and monitor urine output (30ml/hr)
- Correct any electrolyte imbalance (Na/K)
- Urgent abdo ultrasound (US) for:1) ?Biliary dilatation 2) ?Focal liver lesion 3) ?PV thrombosis 4) ?Ascites
- If cholestatic LFTs + bile duct dilatation → ERCP
- If cholestatic LFTs + °bile duct dilatation → CT abdo
- If hepatitic LFTs + normal US → await liver screen +/- liver biopsy

SIMPLY
GASTRO

Case 10

A 37-yr-old man had some blood tests done by his GP and was referred with the following blood results:

HAV IgM-, HAV IgG+, HBsAg-, HBcAb+, HCV IgG+

Which ONE of the following is the correct diagnosis?

a) Acute HAV infection
b) Chronic HAV
c) Chronic HBV carrier
d) Chronic HCV carrier
e) Previous HBV infection but no longer infected

SIMPLY GASTRO

Viral Hepatitis I

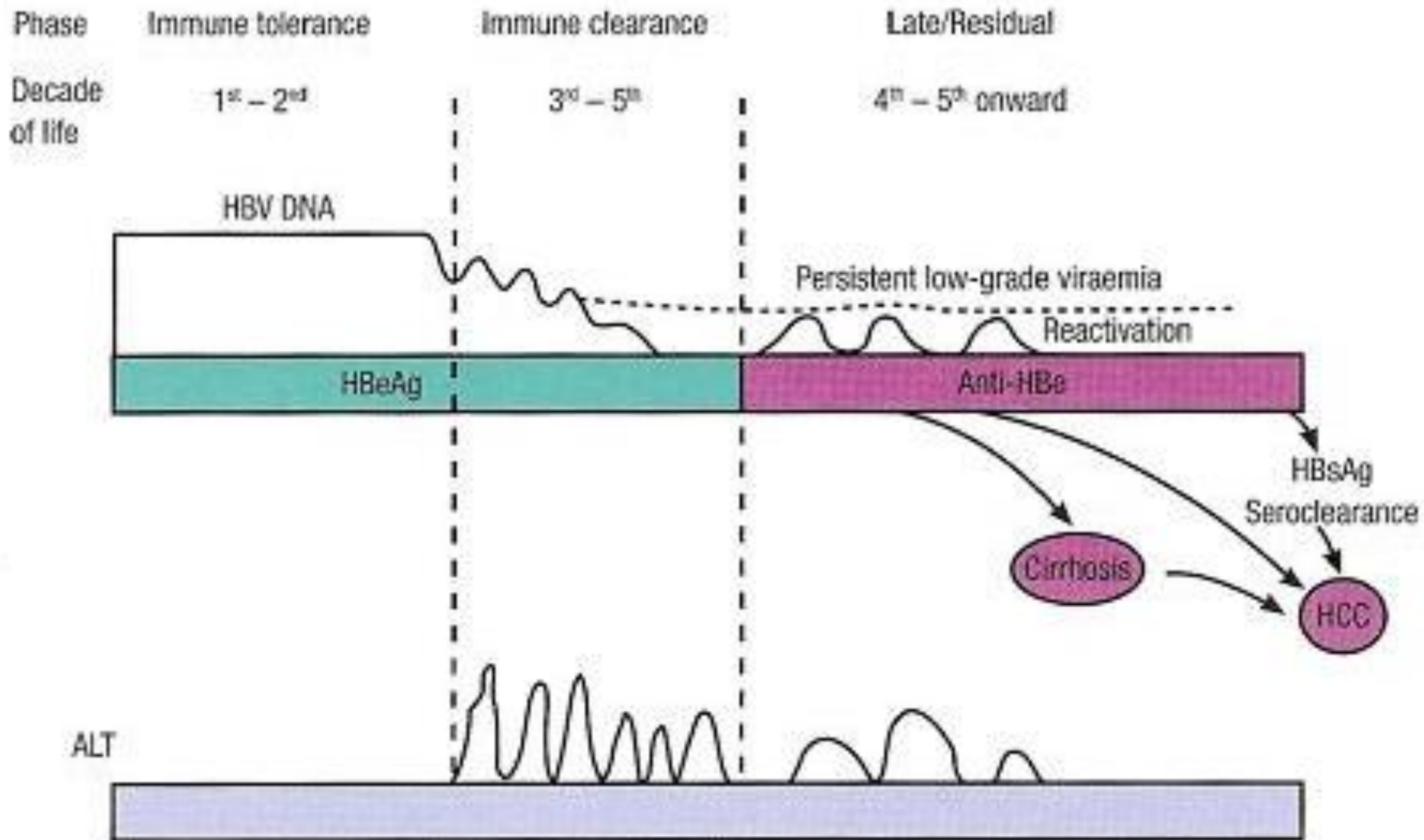
Hepatitis A (HAV)

- Only test for HAV IgM in jaundiced patients to see if acute HAV infection

Hepatitis C (HCV)

- Test for HCV IgG
- If negative then patient doesn't have HCV
- If positive then patient has had HCV in past or still has it then need to check HCV RNA: if 0 IU/mL then patient no longer has HCV but will **<u>ALWAYS</u>** be HCV IgG+

Viral Hepatitis II



SIMPLY GASTRO

Viral Hepatitis III

Hepatitis B (HBV)

- If suspect HBV infection then test for HBsAg – if +ve then patient has HBV infection
- Only if positive then need to check HBV DNA (aka viral load) to quantify amount of HBV in patient
- HBcAb + will identify if patient has had HBV in the past – if you have been vaccinated then you will be HBcAb-
- HBeAg gives an indication of infectivity but nothing else
- HBsAb **ONLY** gives an indication of immunity
- If patient is HBV+ then possibility of also having HIV, HCV and delta virus

Liver screen results

- **Autoimmune hepatitis**: ANA or Anti-smooth muscle pos + elevated IgG
- **PBC**: Anti-mitochondrial pos + elevated IgM
- **PSC**: ANCA pos + elevated IgG/M
- **Haemochromatosis**: ↑↑ Ferritin + Transferrin saturation ≥ 45% + HFE gene
- **Wilson's disease**: ↓ caeruloplasmin + ↑ 24 hr urinary Cu excretion + Kayser-Fleischer rings
- **Alpha-1-antitrypsin deficiency**: ↓ AAT + genotype
- **Hepatocellular carcinoma**: alphafeto protein (AFP)

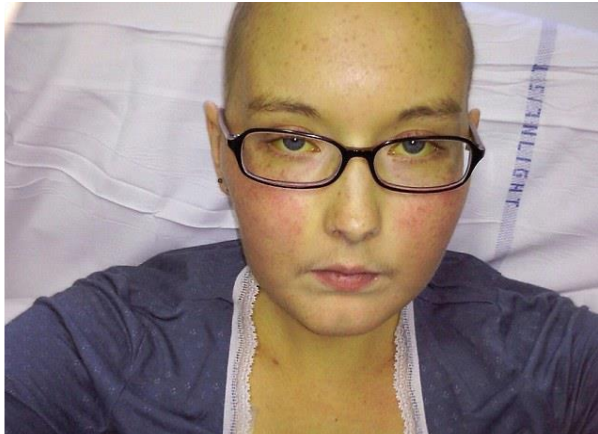
Case 11

A 48-year old man admitted to A&E with confusion. Found outside pub smelling of alcohol with blood around mouth and nose. No other history is available. O/E GCS 13/15. Jaundiced with spider naevi on face and chest. Pulse 100, BP 85/60, RR 18, temperature 37.8°C. Abdomen soft, not tender, °organomegaly, distended abdomen with shifting dullness. PR: melaena.

Which ONE of the following is next most appropriate investigation?

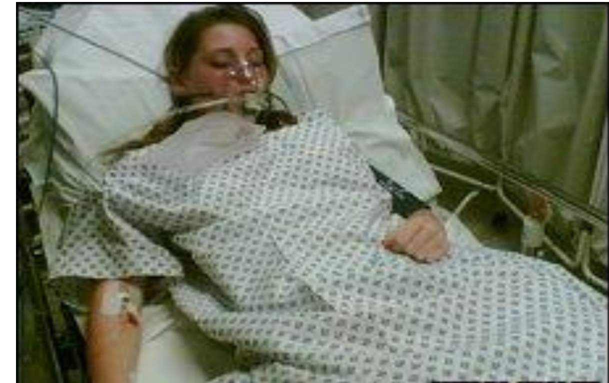
a) Blood glucose
b) Chest x-ray
c) CT head
d) Paracetamol level
e) Ultrasound of the abdomen

Liver disease presentations

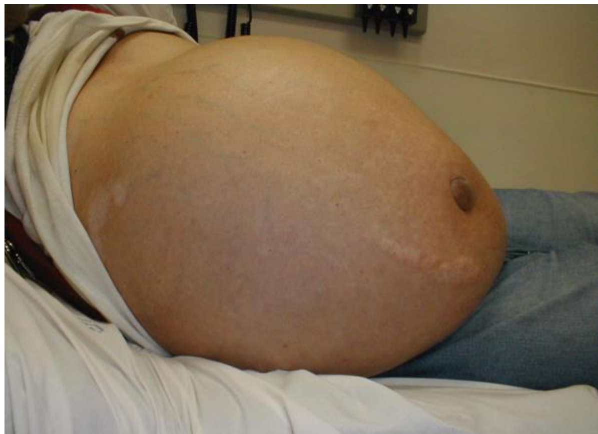


Jaundice/decompensation

Haematemesis/variceal bleed



Drug overdose



Ascites

Hepatic encephalopathy

SIMPLY GASTRO

Encephalopathy

- Can mimic alcohol withdrawal/agitation/↓GCS/fits
- **ALWAYS** need to exclude hypoglycaemia
- Rx possible causes:

  low Na/K
  sepsis
  blood transfusions
  constipation
- CT head if no improvement after 24 hours of Rx
- Stop potentially offending drugs:

  diuretics
  BDZs

Investigations

- FBC
- U+E
- LFTs including GGT
- Clotting/INR
- Calcium/Phosphate/Magnesium
- Glucose/BM
- Paracetamol/salicylate levels
- CXR
- Urine dipstick/MSU
- ABG
- Diagnostic ascitic tap if suspect ascites

Immediate management

- IV Pabrinex (Vitamins B & C) 2 pair TDS for 3/7
- Correct electrolytes: K, Mg, Ca, and PO4
- Stop diuretics if ↓Na, ↑Cr or if encephalopathy present
- Exclude sepsis: urine, blood, CXR +/- ascites tap
- Monitor urine output
- Use benzodiazepines with extreme caution
- Antibiotics if evidence of GI bleed
- Do **NOT** give dextrose unless hypoglycaemic
- Vit K 10 mg OD for 3/7 if jaundiced
- CT head if confusion not resolving

Questions?