

Case 4 - change in bowel habit

Information

Notes

Presenting Complaint

A 19-year old geography student presents to his GP with a **change in bowel habit**.

Case History

He has been passing loose stool with occasional blood up to 7x per day for the last 2 weeks.

- PMHx: nil, no surgery
- FHx: nil
- Drugs: nil, NKDA
- Social: independent, lives student halls, drinks alcohol 'occasionally'

Examination findings

- Alert, well, sat up.
- Thin, not cachectic.
- Mildly tender abdomen. No masses.
- No focal bowel sounds.

Differential Diagnosis

1. Inflammatory bowel disease
2. Irritable bowel syndrome
3. Infective colitis
4. Diverticular disease

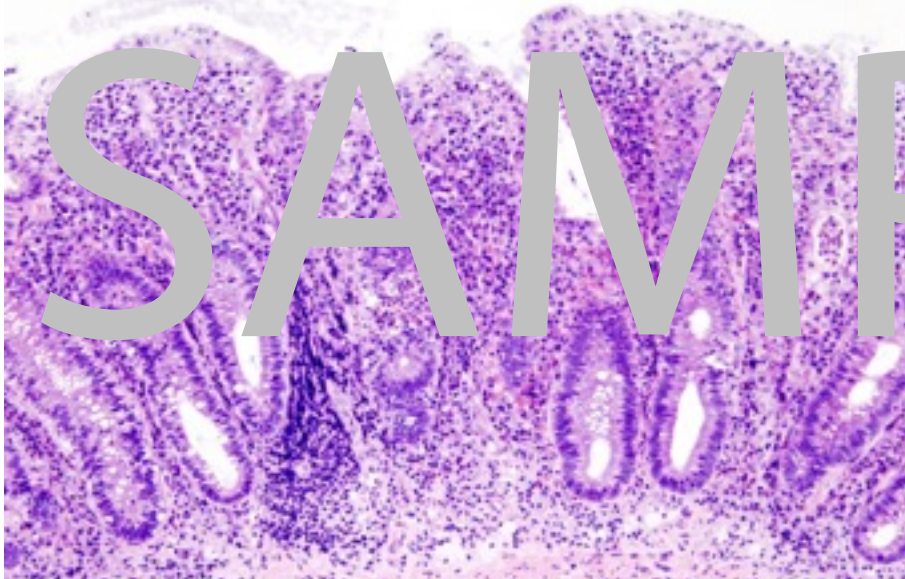
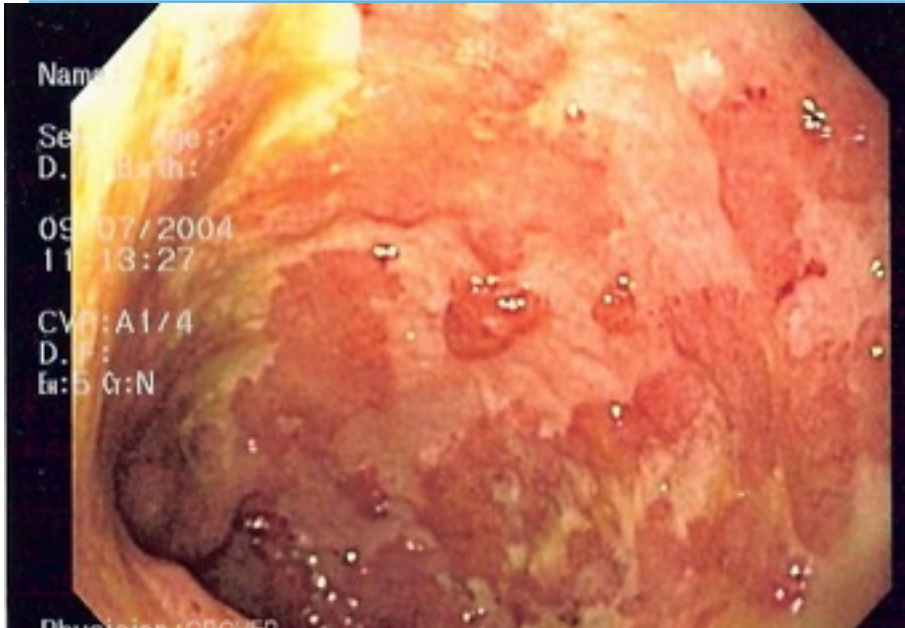
Investigations

Lab bloods

	Result	Range
Hb	91	115 - 160 g/L
MCV	77	80 - 96 fL
WCC	17.6	4.0 - 11.0 cells x10 ⁹ /L
Neut	9.4	2.0 - 7.5 cells x10 ⁹ /L
Platelets	578	150 - 400 cells x10 ⁹ /L
Na⁺	146	135 - 146 mmol/L
K⁺	5.0	3.5 - 5.5 mmol/L
Urea	9.3	2.5 - 6.7 mmol/L
ALT	41	3 - 40 IU/L
ALP	130	39 - 117 IU/L
Bili	16	1 - 17 µmol/L
ESR	79	0 - 29 mm/hr

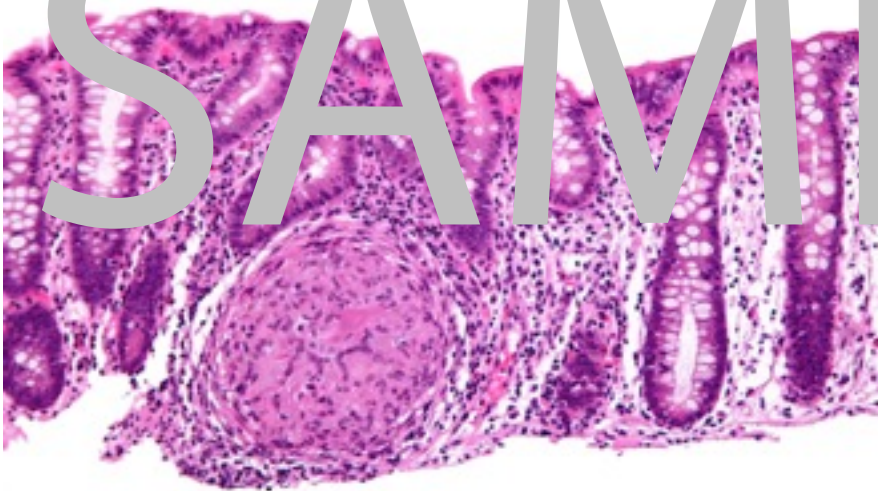
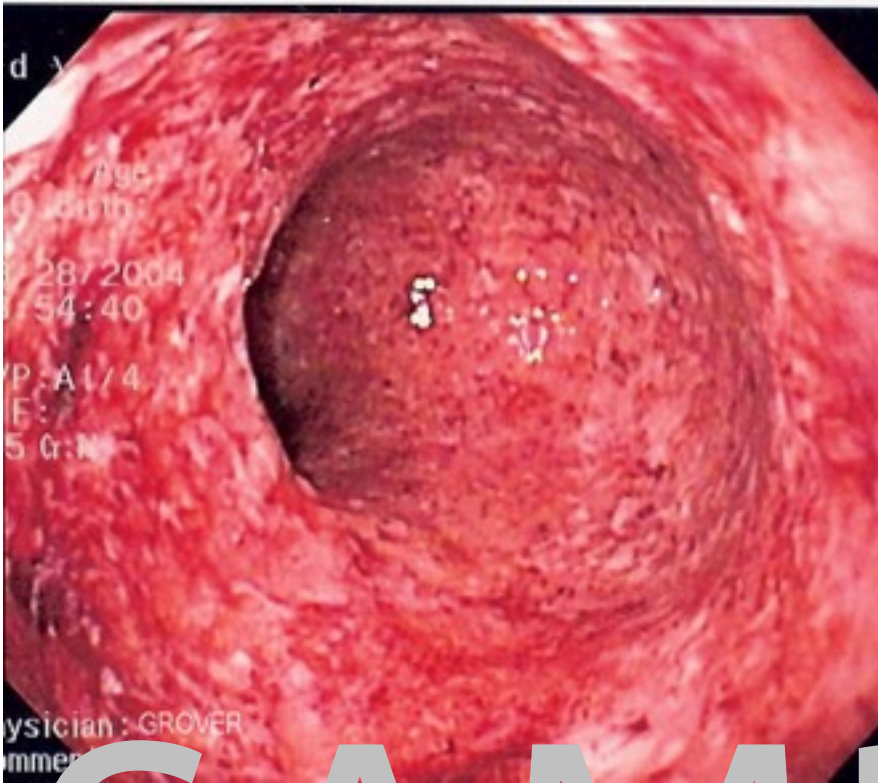
Case developments

Treated with IV hydrocortisone and antibiotics. Begins to make a recovery and undergoes colonoscopy.



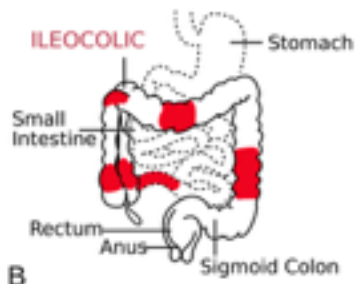
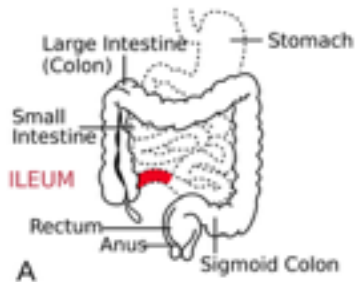
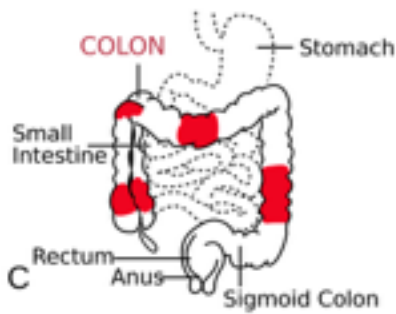
Ulcerative colitis vs. Crohn's disease

Ulcerative colitis	Crohn's disease
Continuous segment	'Skip' lesions
Mucosal inflammation	Transmural inflammation
Colon only	Anywhere in GIT
No granulomas	Granulomatous
No fistulae	Fistulae



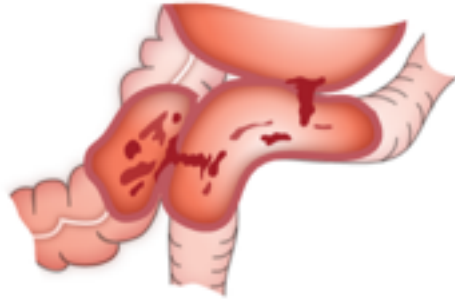
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Crohn's disease



Crohn's disease - fistulae

- Treat infection
- Remove distal obstruction
- Reduce flow
- (Rehydrate)





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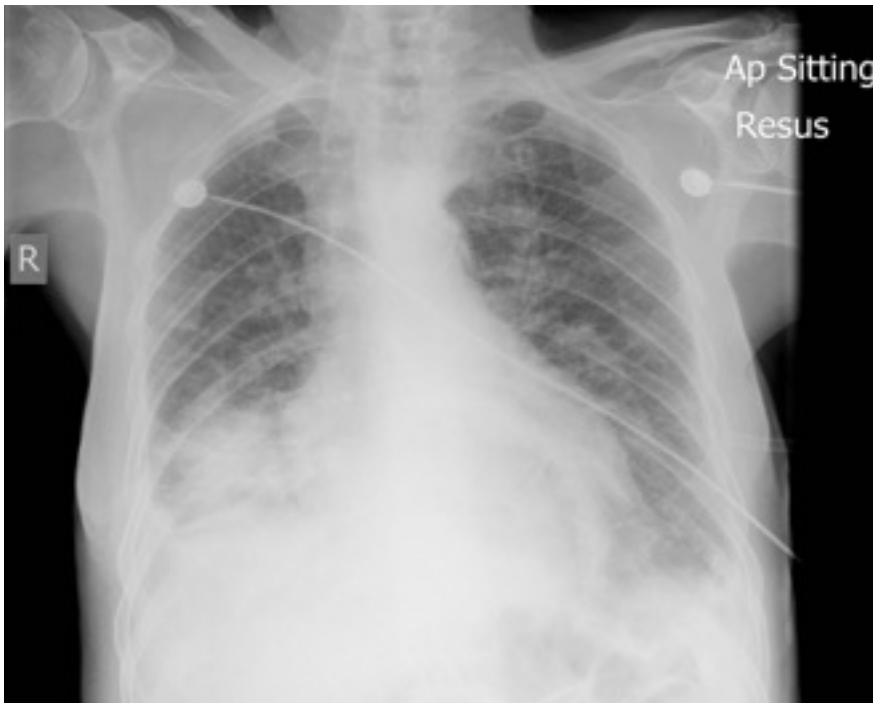
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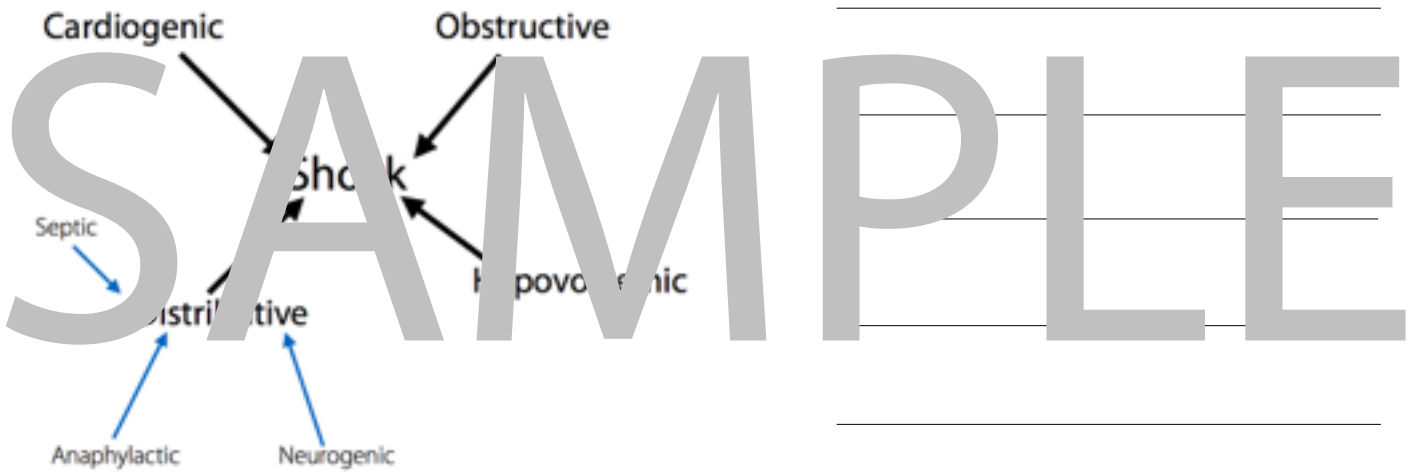
Case developments Long-term remission achieved with azathioprine (after failure of a trial of sulfasalazine)

Admitted to A&E with GCS 11/15, temp 38.7, crackles at right lung base.
HR 142 bpm, BP 70/48 mmhg, central capillary refill = 4s.

Investigations

	Result	Range
Hb	91	115 - 160 g/L
MCV	77	80 - 96 fL
WCC	1.5	4.0 - 11.0 cells x10 ⁹ /L
Neut	0.1	2.0 - 7.5 cells x10 ⁹ /L
Platelets	621	150 - 400 cells x10 ⁹ /L
CRP	278	<5 mg/L





Septic shock

1. Blood cultures
2. Lactate & Hb
3. Urine output
4. Oxygen
5. Antibiotics
6. Fluid challenge



Neutropenic sepsis

- Gram positive or negative bacteria
- Culture everything
- **Broad spectrum antibiotics**
- E.g. Tazobactam-piperacillin + vancomycin
- ± Anti-fungals

Case developments

Makes a full recovery with appropriate treatment. Maintained on steroids ciclosporin & infliximab. Good disease control is achieved. Attends clinical review. Now feeling generally well but slightly tired. Abdomen soft.

Investigation

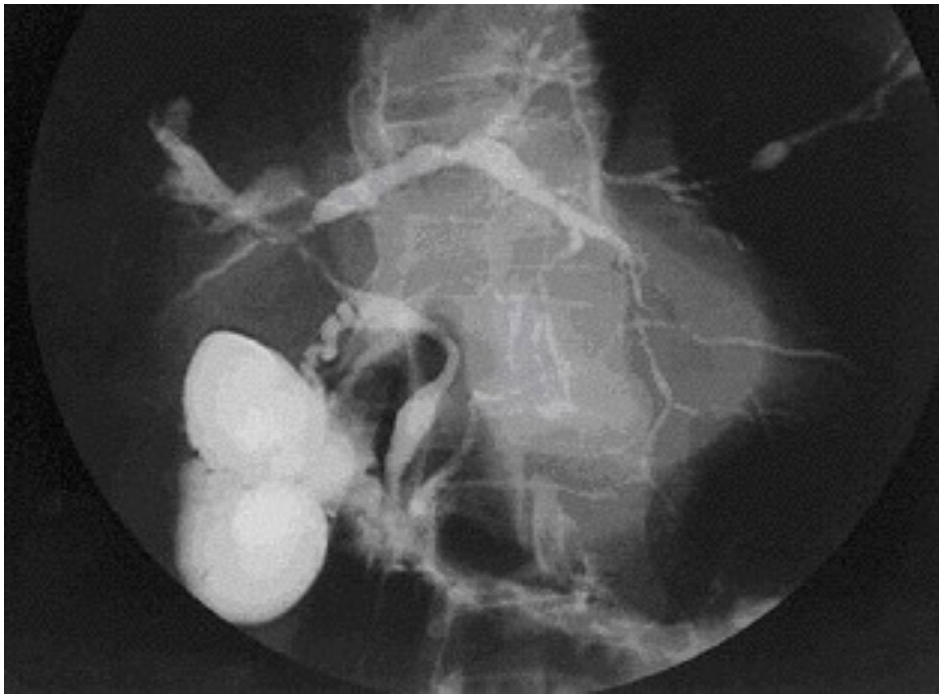
Laboratory bloods

	Result	Range
Hb	120	115 - 160 g/L
WCC	10.1	4.0 - 11.0 cells x10 ⁹ /L
Neut	6.4	2.0 - 7.5 cells x10 ⁹ /L
Platelets	132	150 - 400 cells x10 ⁹ /L
Na⁺	135	135 - 146 mmol/L
K⁺	5.2	3.5 - 5.5 mmol/L
Urea	6.1	2.5 - 6.7 mmol/L
ALT	82	3 - 40 IU/L
ALP	856	39 - 117 IU/L
Bili	78	1 - 17 µmol/L
ESR	41	0 - 29 mm/hr

Anti-mitochondrial antibody: negative

USS abdomen

Dilated intrahepatic ducts, multiple strictures in extrahepatic ducts. No masses seen. Coarse liver edge.



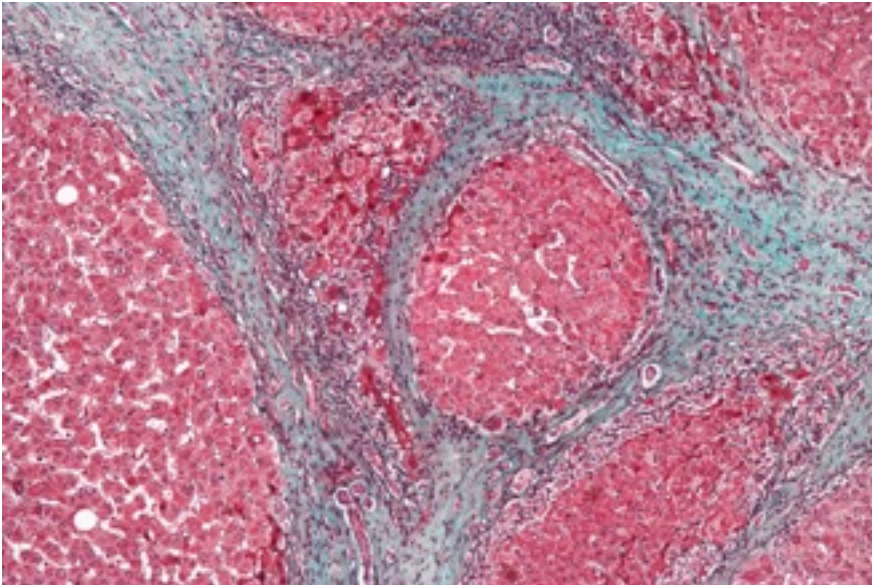
Liver function test - 'pictures'

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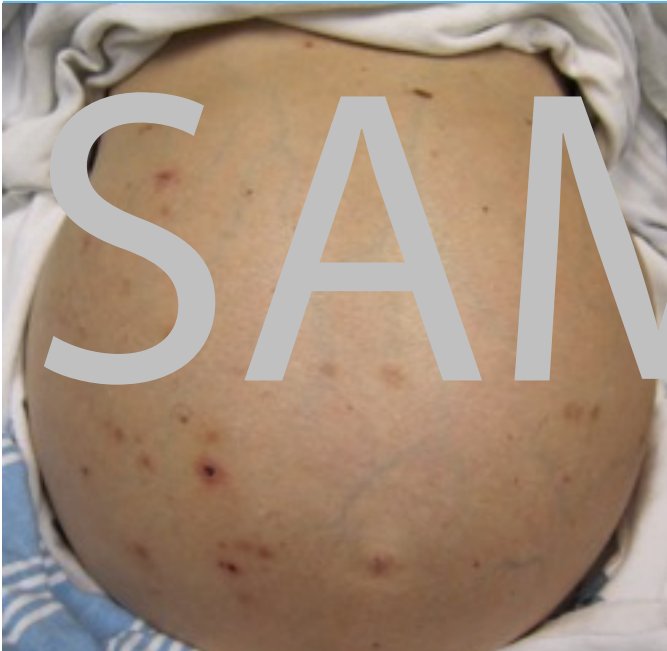
- **Hepatic:** very high ALT, AST, slight high ALP/bili/GGT
- **Cholestatic:** very high ALP/bili/GGT, slight high ALT/AST

Differential diagnosis of abnormal LFT

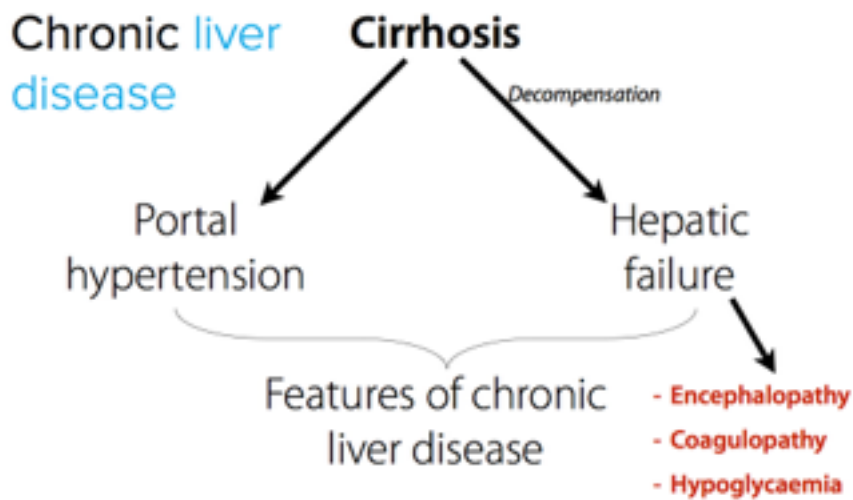
Hepatic	Cholestatic
Alcoholic liver disease	Gallstones
Non-alcoholic fatty liver disease	Drugs
Viral hepatitis	Primary sclerosing cholangitis
Paracetamol overdose	Primary biliary cirrhosis
Other	Cancer



Liver biopsy Gross architectural disruption with regenerative nodules and bands of fibrosis. 'Onion skin' fibrosis around porta tracts.



SAMPLE



Case 4 - summary

History	Significance
19-years old	Increased risk of IBD (vs. cancer or diverticular disease)
2 weeks	Less likely to be infective
Examination	
Thin, not cachectic	Less likely to be Crohn's with ileitis and malabsorption
Mildly tender abdomen	Not acute (life-threatening) colitis
Investigations	
Microcytic anaemia	Due to blood loss. DDx: thalassaemia, dietary iron deficiency, lead poisoning
Raised WCC, platelets, ESR	Inflammatory response ± secondary bacterial colonic infection
Mildly raised urea	Dehydration due to diarrhoea/bleeding. DDx: upper GI bleeding
Developments	
H ₁ 42, BP 70/48, CRT=5s	Septic shock due to pneumonia with neutropenia. DDx: anaphylaxis, hypovolaemia, cardiogenic obstructive
Neutrophils = 0.1	Agranulocytosis due to side-effect of azathioprine
ALP 856, bilirubin 8, ALT 120	PSC associated with IUC. DDx: drug side-effect, PBC
Dilated intrahepatic ducts	Biliary drainage obstruction DDx: gallstones, pancreatic cancer, cholangiocarcinoma
Anti-mitochondrial negative	Not primary biliary cirrhosis
'Onion skin' fibrosis	Cirrhosis due to PSC

Exam tips

Tender bruises on skin	Erythema nudism
Skip lesions' on colonoscopy	Crohn's disease
Transmural inflammation with granulomas	Crohn's disease
Positive antimitochondrial antibody	Primary biliary cirrhosis
'Beads on a string' appearance on ERCP	Primary sclerosing cholangitis

Additional points

- Acute colitis: do abdominal XR to look for **toxic megacolon** (dilated transverse colon)
- Low TPMP** predisposes patients to neutropenia with azathioprine
- Surveillance colonoscopy** needed for all IBD with colitis and PSC patients
- Ursodeoxycholic acid** used to help biliary drainage in patients with PSC and PBC