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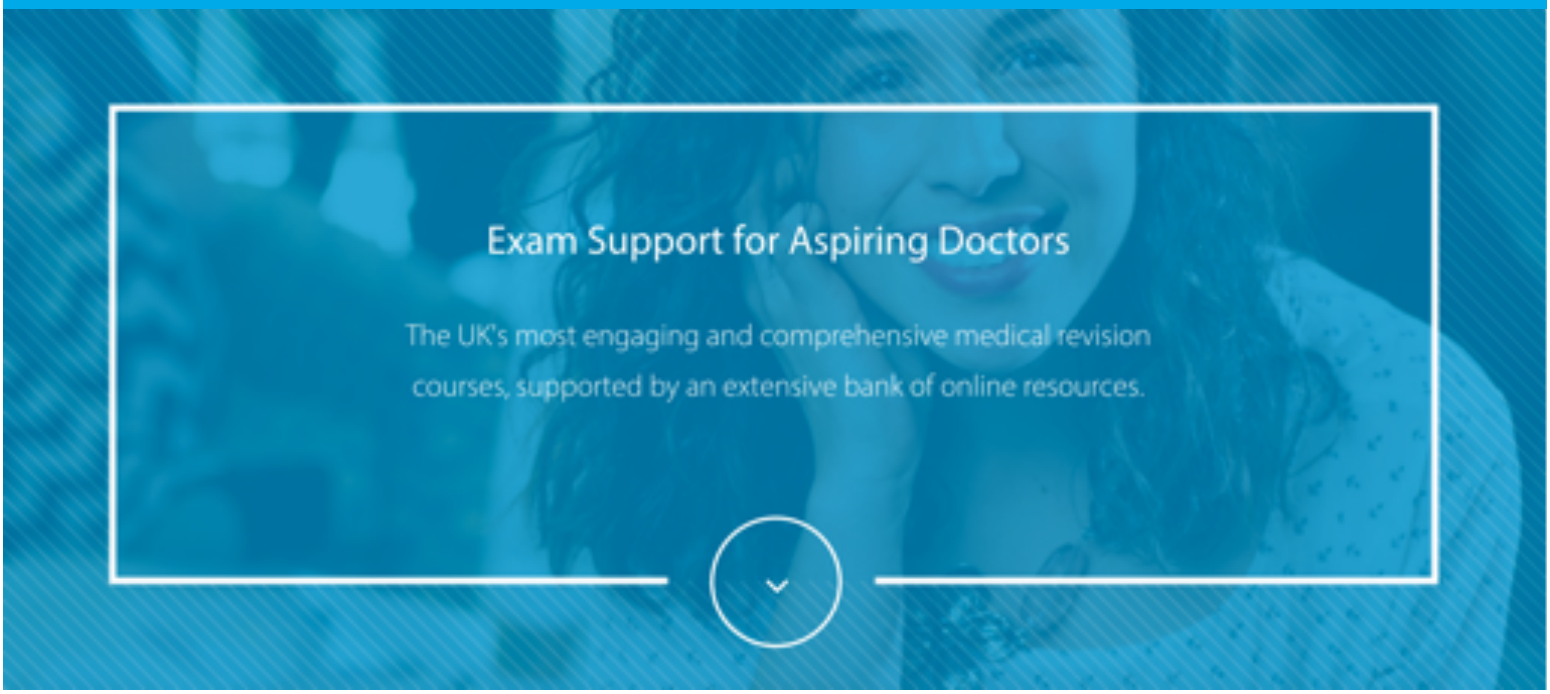

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Clinical Cases Masterclass

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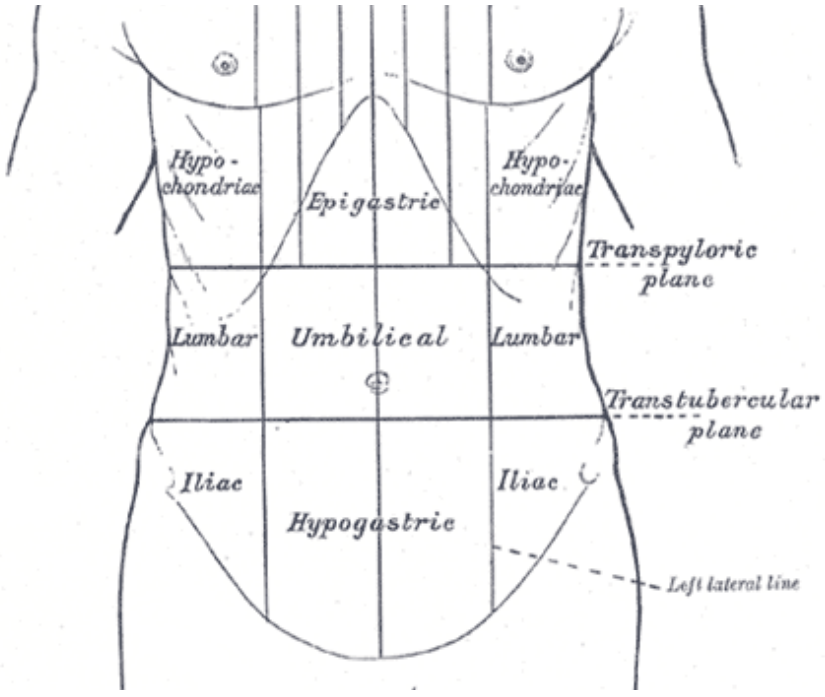
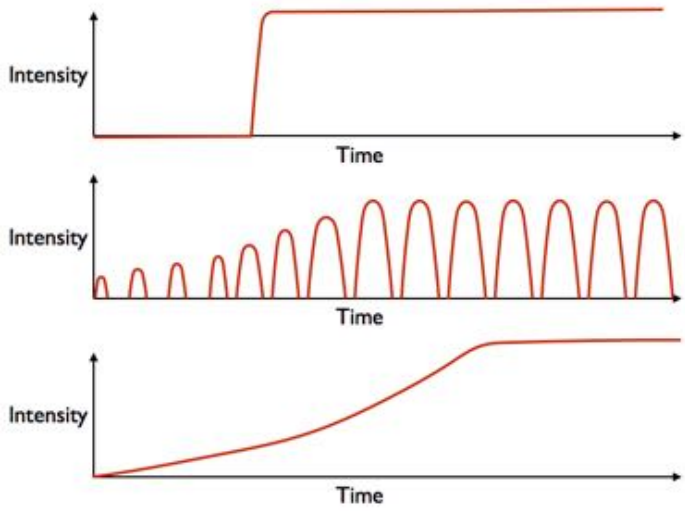
Case 1 - abdominal pain

	Information	Notes
Presenting Complaint	A 37-year old female lawyer presents to A&E with **acute abdominal pain**	
Case History	She has been unwell with a 'flu-like illness for a few days before the pain started. The pain is generalised but predominantly central and has gradually worsened over the last 24-hours. - PMHx: hypothyroidism, no surgery - FHx: nil - Drugs: levothyroxine, NKDA - Social: independent, lives family	
Examination findings	- Lying in bed, moving with pain, pale, thin - HR 126/min, RR 32/min, BP 98/55mmHg - Generalised abdominal tenderness, not peritonitic, not distended, normal bowel sounds.	
Differential Diagnosis	Abdominal pain 1. 2. 3.	



Differential diagnosis



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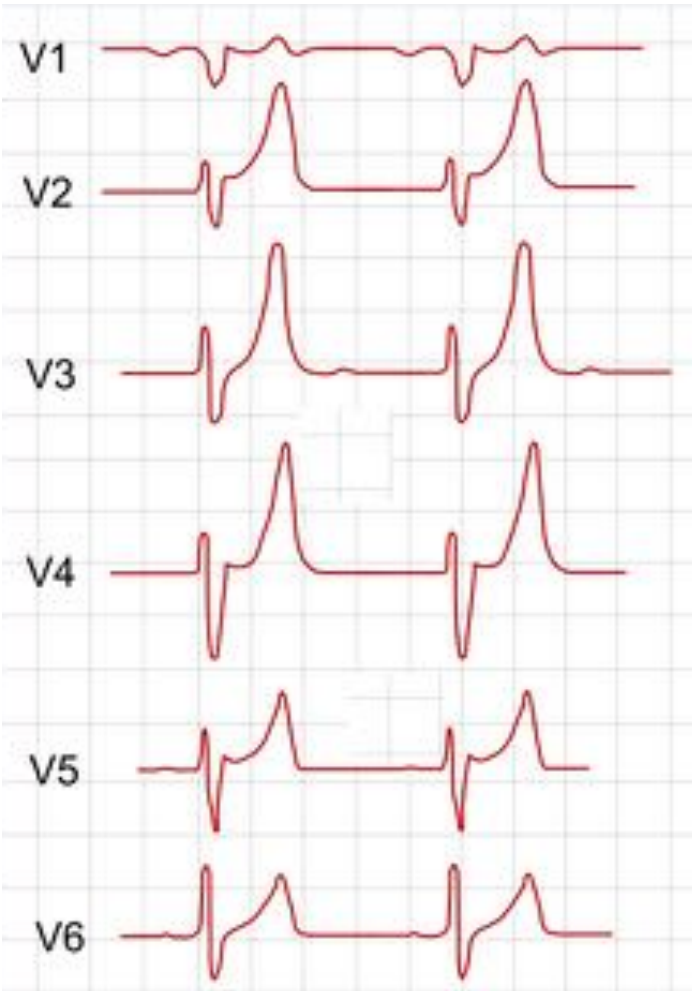
	Information	Significance
ECG		

Information

Significance

Arterial blood gas (in air)

	Result	Range
pH	7.27	7.35 - 7.45
CO_2	3.2	4.8 - 6.1 kPa
O_2	16.1	10.6 - 13.3 kPa
Hb	104	115 - 177 g/L
Na^+	128	135 - 146 mmol/L
K^+	6.8	3.5 - 5.5 mmol/L
Gluc	3.4	4.5 - 5.6 mmol/L
Lact	2.6	0.6 - 2.4 mmol/L
HCO_3^-	11.0	22 - 26 mmol/L
BE	-8	±2

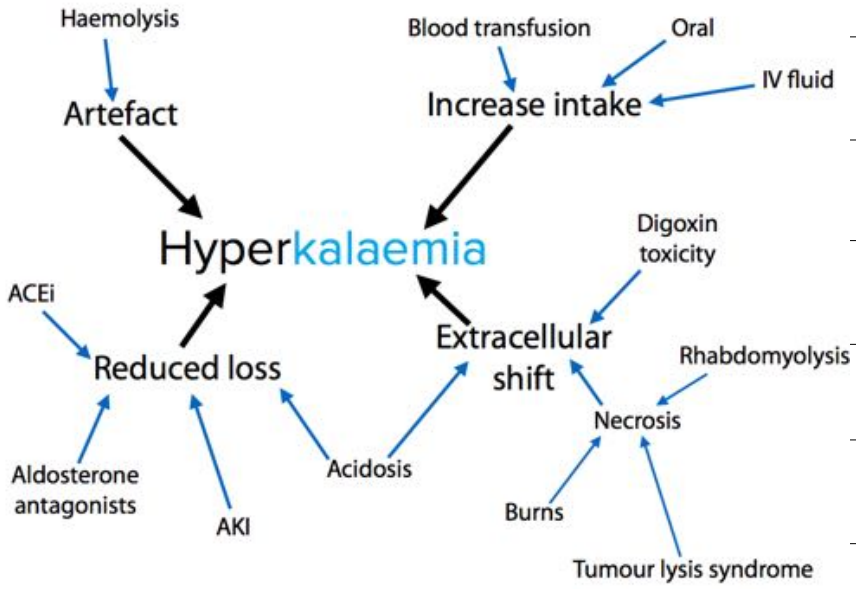
Lab bloods

	Result	Range
Hb	103	115 - 160 g/L
MCV	105	80 - 96 fL
WCC	6.1	4.0 - 11.0 cells x10^9/L
Neut	1.9	2.0 - 7.5 cells x10^9/L
Platelets	378	150 - 400 cells x10^9/L
Na^+	128	135 - 146 mmol/L
K^+	6.9	3.5 - 5.5 mmol/L
Urea	22.2	2.5 - 6.7 mmol/L
Creat	172	79 - 118 µmol/L
ALT	36	3 - 40 IU/L
ALP	112	39 - 117 IU/L
Bili	15	1 - 17 µmol/L
Amylase	63	23 - 85 IU/L
CRP	21	<5 mg/L
Glucose	3.3	4.5 - 5.6 mmol/L
TSH	3.8	0.2 - 4.5 mU/L

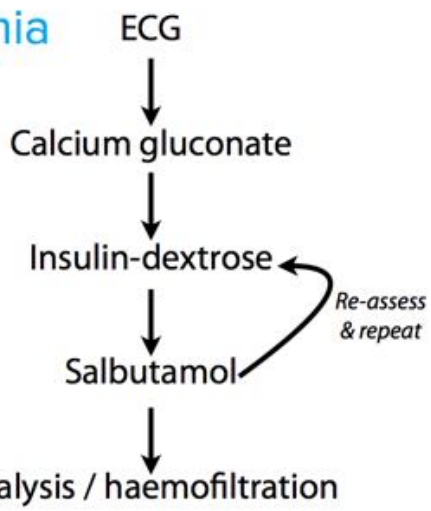
Urinary β-HCG: negative

Problem List

1. Abdominal pain
2. Shock
3. Hypoglycaemia
4. Hyperkalaemia
5. Acute renal failure
6. Anaemia



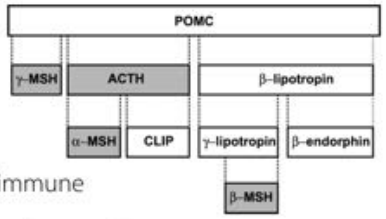
Hyperkalaemia



Case developments

Abdominal USS: normal
Abdominal CT: normal

Addison disease



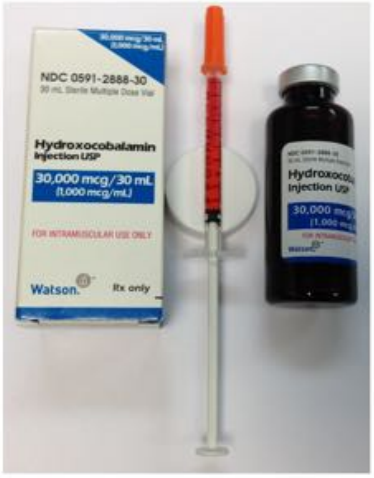
- Autoimmune
- Hyperpigmentation
- Abdominal pain by unknown mechanism
- Serum cortisol
- Synacthen test
- **Primary**: hydrocortisone + fludrocortisone

Macrocytic anaemia

Haematinic	Systemic disease	Haematogenous	Toxic
Folate deficiency	Cirrhosis	Reticulocytosis	Anti-folate drugs
B_{12} deficiency	Hypothyroidism	Myelodysplasia	Cytotoxics
		Haemolysis	

Pernicious anaemia

- Parietal cells
- **Intrinsic factor** antibodies
- **Subacute combined degeneration of spinal cord**
- Give intramuscular B_{12}



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Case 1 - summary

History	Significance
Abdominal pain	Pain from Addisonian crisis
Gradually worsening pain	Inflammatory pain due to Addison's (i.e. not colic or ischaemic)
Intercurrent illness	Precipitated Addisonian crisis
Hypothyroidism	Predisposed to autoimmune disease (e.g. HLA-DR3)
No surgery	Unlikely to be obstruction due to adhesions
Independent	Normally fit & well
Examination	
Moving with pain	Not peritonitic ?not surgical pathology
Pale & thin	Anaemic & cachectic - possibly due to a chronic disease
HR 102, RR 32, BP 98/55	Shocked, due to Addisonian crisis

Investigations

pH 7.27, CO_2 3.2, HCO_3^- 11, BE -8	Metabolic acidosis due to Addisonian crisis
K^+ 6.8, Na^+ 128	Hyperkalaemia & hyponatraemia due to Addison disease
Tall, peaked T-waves, no p-waves	Hyperkalaemia ECG changes
Hb 103, MCV 105	Megaloblastic anaemia due to pernicious anaemia (B12 deficiency)
Urea 22.2	Acute kidney injury, due to Addisonian crisis
Glucose 3.4	Hypoglycaemia due to Addisonian Crisis

Exam tips	
Hyperpigmented mucosa	Addisonian disease
Hyperkalaemia & hyponatraemia	
Loss of proprioception, vibration & weakness	B12 deficiency
Tall ('tented') T-waves	Hyperkalaemia

Additional points
'Sick day rules' for Addison disease: **double steroids**
Secondary Addison disease: **prednisolone** replacement only
Schilling test: oral intrinsic factor increases B_{12} absorption
B_{12}-deficiency: **absent ankle jerks with up-going plantars**
B_{12}-deficiency + **folate treatment**: worsening subacute combined degeneration of spinal cord

Case 2 - blackout

	Information	**Notes**
Presenting Complaint	A 52-year old retired butcher presents to A&E with **a blackout**	
Case History	He had just stood up from his armchair at home when he gradually became light-headed, then 'fainted'. He regained consciousness quickly and was fully oriented as soon as he woke. He has recently been feeling more tired and short of breath than normal. - PMHx: congestive cardiac failure, no surgery - Drugs: ramipril, bisoprolol, furosemide, NKDA - Social: needs help with shopping, lives family	