

Question 1

What is the likely diagnosis? [1 mark]

Addisonian Crisis

What is the immediate treatment? [4 marks]

Fluid resuscitation
Head down
Treat hypoglycaemia
Hydrocortisone
Consider antibiotics

You decide to perform a short synacthen test. How is this done? [1 mark]

Initial sample before synacthen
Take another sample after 30 mins
Then another at 60 mins

She starts to vomit blood and passes a large amount of melaena. She is still shocked and you suspect moderate to severe haemorrhage. Outline your immediate management. [4 marks]

Protect airway
Iv access
Fluids
PPI iv
Organise endoscopy
Xmatch 6 units
Correct clotting

Question 5

How do you calculate the osmolar gap? [1 mark]

[Measured osmolality] – [calculated osmolarity]

Calculated osmolarity = 2 Na + Glucose + Urea (all in mmol/L) [several formulae available]

Give 2 clinical manifestations of Stage 1 ethylene glycol poisoning. [2 marks]

Apparent intoxication but no ethanol in breath

nystagmus

slurred speech

coma

convulsions

Give 2 drugs that can be used to treat ethylene glycol poisoning and what is their mechanism of action? [3 marks]

Absolute alcohol iv or 40% alcoholic spirits orally

Fomepizole

Both act by inhibiting alcohol dehydrogenase

Calculate this patient's anion gap. [1 mark]

[Na+K] - [HCO₃+Cl]

[140+4.6] – [3+96]

144.6- 99

45.6 (raised)

Give 6 other causes of metabolic acidosis with an elevated anion gap. [3 marks]

-MUDPILES CAT

Methanol / Metformin, Uraemia, DKA AKA

Paraldehyde / Phenformin, Iron / isoniazid, Lactic Acid, Ethylene Glycol, Salicylate

Cyanide / carbon monoxide, Arsenic, Toluene

Question 7

What are the features of Kawasaki disease? [4 marks]

Fever, >5 days
Erythema polymorphic
Desquamation of hand and feet
Uveitis, Acute Cervical lymphadenopathy, Strawberry Tongue, Fissured Lips, Arthritis
Diarrhoea

What potential condition results from the long term treatment of Kawasaki disease and the viral illness described? [1 mark]

Reye's Syndrome
(Associated with children taking aspirin when suffering from viral illnesses like Chicken Pox)

There are 5 stages of this syndrome

What are the features of stage one? [2 marks]

Vomiting, Lethargy, Confusion, Nightmares

The last stages include seizures, multi organ failure, flaccidity, high blood ammonia and death. What is the pathophysiology of this condition? [2 marks]

Fatty liver leads to Encephalopathy

Aspirin causes mitochondrial damage in liver -> Liver failure leads to increase in Ammonium -> crosses Blood Brain Barrier -> Glutamine formation -> Cerebral Oedema -> encephalopathy -> seizures

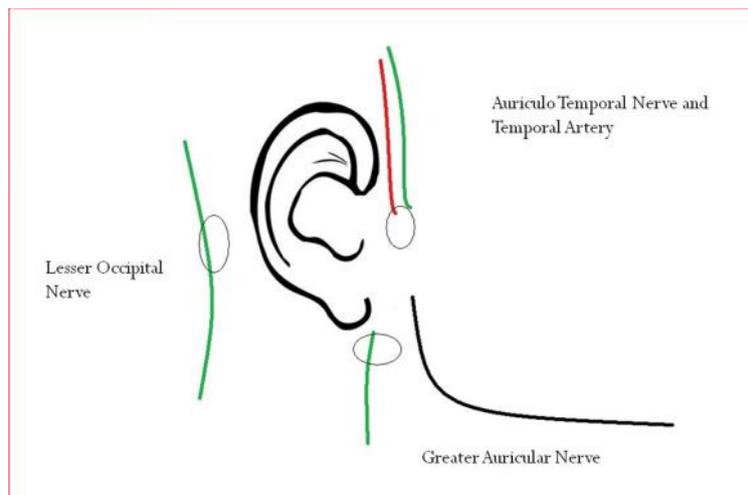
What is the risk of death in children with brain damage? [1 mark]

30%

Question 11

Draw and name the sensory nerve supply to the ear. [3 marks]

Indicate where you would infiltrate local anaesthetic to block sensation to the ear. [2 marks]



What does 0.05% mean when describing local anaesthetic drug concentration? [1 mark]

0.05 gm in 100mls volume of solution

Give four early signs and symptoms of local anaesthetic toxicity. [2 marks]

Neurological – Numbness of mouth and tongue

Slurring of speech

Light headedness

Tinnitus

Confusion and drowsiness

(Muscle twitching, Convulsion and coma can occur)

Cardiovascular – tachycardia with hypertension

(Later – bradycardia and hypotension and heart block, ventricular arrhythmia cardiac arrest can occur)

What is the antidote to local anaesthetic poisoning? Give drug and dose. [2 marks]

Intralipid 20% 1.5mls/kg over 1 minute. Give a bolus of 100mls.

Question 16

What are the four common features of pelvic inflammatory disease? [4 marks]

Vaginal discharge
Dyspareunia
Spiking temperatures
Right upper quadrant pain
(Fitz Hugh Curtis syndrome)
Dysmenorrhoea
Adnexal tenderness
Irregular Bleeding
Cervical Excitation

Give 2 of the common pathogens? [2 marks]

N Gonorrhoea
C trachomatis
Gardnerella vaginalis
Mycoplasma genitalium

What combination of drugs would you use to treat this condition? [2 marks]

Ofloxacin 400 mg bd 14 days
Metronidazole 400mg bd 14 days

In what circumstances do you consider admission? [2 marks]

Symptomatically unwell
Haemodynamic Shock
Vomiting
Equivocal Diagnosis
Pelvic (tubulo-ovarian) abscess

Question 6

45y old male known to have psoriasis comes in with bilateral red legs

What is the diagnosis (1 mark)

Erythroderma

Name 3 complications (3 mark)

Fluid loss
Superinfection
Skin loss/scarring

What 3 other conditions can present like this (3 mark)

TEN
Sunburn
Allergic reaction/drug reaction

Give 3 other non-dermatological features of psoriasis (3 marks)

Nail pitting
Psoriatic arthritis
Inflammatory bowel disease i.e. Crohn's

Question 7

3 year old with asthma sats 91%, having difficulty talking

4 features of severe asthma (2marks)

PEF 33-50%

Pulse >140

RR >40

Others already given in history

4 features that would suggest treatment not working (2 marks)

Exhaustion, PEF <33-50%, cyanosis/poor respiratory effort, coma, confusion, silent chest, sats <92% is already given

2 respiratory drugs and doses (2 marks)

Salbutamol 5mg nebs

Atrovent 500mcg nebs

2 Indications for CXR (1 mark)

Pneumothorax/pneumomediastinum

Suspected consolidation

(also life threatening asthma, failure to respond, requirement for ventilation)

Patient gets better and happy to discharge. 4 points to discharge patient (2 marks)

Check inhaler technique

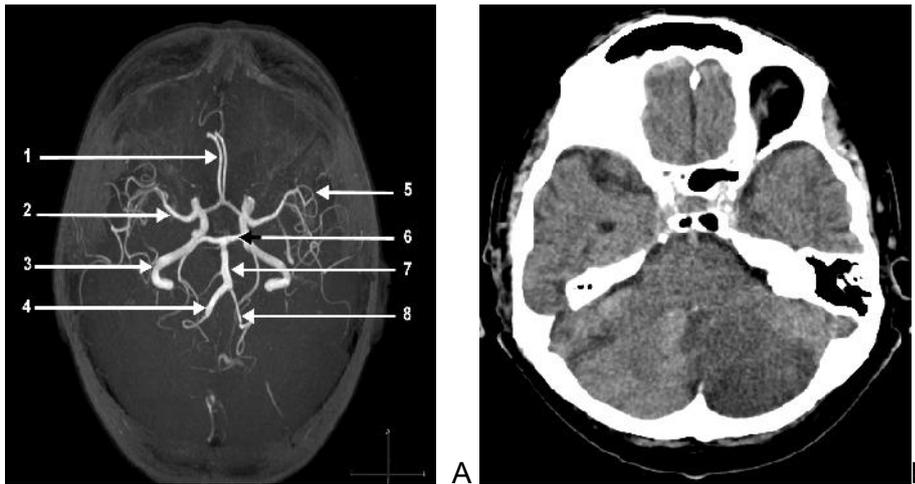
Review in 24 hours

Check parents are happy with discharge plan

Question 8

A patient presents with ataxia and vertical nystagmus.

Following assessment a CT brain is performed.



1. Describe the abnormality on the CT image (b) and name structures labelled 2 and 7 (image a). (3 marks)

left cerebellar infarct/ area of low attenuation within the left cerebellum. 2 – right MCA
7 – basilar artery.

2. List 4 characteristics of peripheral vertigo used to differentiate from central vertigo. (2 marks)

any 4 from unilateral hearing loss, tinnitus, symptoms fatigable, positional in nature, latency after Dix-Hallpike manoeuvre, intense symptoms(nausea).

3. List 2 classes of drugs with examples used in the symptomatic control of peripheral vertigo (2 marks – ½ mark for class, ½ for drug)

anticholinergics, antihistamines, benzodiazepines.

4. List the 3 components of the ROSIER score used in stroke assessment (3 marks).

loss of consciousness or syncope / seizure activity / NEW ACUTE onset (or on awakening from sleep) in the following - Asymmetrical facial weakness, Asymmetrical arm weakness, Asymmetrical leg weakness, Speech disturbance, Visual field defect/ophthalmoplegia