OSCE November 2003

Question 1.

24 yr old gentleman. Binge drinking at weekend. Vomiting since.

Presented with fever. Had grand mal seizure for 2 mins in ambulance.

Na 124

K 3

Ur & Cr essentially ok

Chloride 80 ish.

ABG's

pH 7.2 ish

pCO2 3.4

pO2 26

HCO 10

BE -6

HCT 55

CXR

a. List 2 radiological abnormalities:

Pneumomediastinum

Subcut emphysema

Right middle lobe consol?

b. Causes of radiological abnormalities:

Oesophageal rupture (Boerhaave's syndrome) – air has tracked into mediastinum and patient has probably aspirated.

c. State the pathophysiological processes leading to the blood results.

Vomiting (loss of HCl)

Alcoholic Ketoacidosis

Sepsis

d. Why did he fit?

Possible secondary to hyponatraemia

Possible hypoglycaemia

Possibly alcohol withdrawal

Question 2

7 year old with several week history of pain in both knees. Now stopped playing football. Seen GP on multiple occasions – no diagnosis found. Also history of intermittent fever over last week. Early in the week he had a rash on his chest. He has also been complaining of increasing tummy pains.

a. 6 things important to ask in history

Recent URTI

Haematuria

Abdominal pain/ diarrhoea/PR bleed

Eye pain

Other joint involvement

Recent travel

b. 4 differential diagnoses

HSP

Still's disease

Acute Viral Illness

Inflammatory bowel disease

c. 2 tests in A&E

Urinalysis

U&E

Question 3

Trauma question. Young person. ? fall or RTA.

Blood from both ears. Decreased GCS

a. Comment on C spine XR

Inadequate

C7 spinous process fracture (Clay-shoveller's)

b. List Chest X-ray abnormalities

Left upper rib fractures

Large contusion

Haemothorax

c. Comment on pelvis XR

?SI joint disruption

Rotation of left hemipelvis

d. Assuming primary and secondary surveys are fully completed and catheter in, 2 further management priorities:

Assuming airway protected:-

Pelvic stabilization (tie in sling) – before formal ortho. stabilisation

Chest drain on left

Question 4

Picture of fractured penis with history of sudden pain during intercourse.

a. Diagnosis

Fractured penis

b. 3 symptoms or signs of this

Discolouration

Swollen and deformed

Tender

c. 2 management options

Conservative therapy - cold compresses, penile splinting

Operative repair – haematoma evacuation and repair of tunica albuginea

d. 3 complications

Urethral stricture

Permanent penile curvature

Arterio-venous fistula +/- impotence

Question 5

Foot XR. History of crush between vehicle and post.

a. List the radiological abnormalities

Fracture dislocation tarso-metatarsal junction

Fractured base of 2nd metatarsal

b. Name of injury

Lisfrancs

c. Usual Associated radiological features

Soft tissue swelling

Fracture base of 2nd metatarsal

d. 2 complications

Acute neurovascular injury e.g. Acute ischaemic (non-viable) foot

Later - Compartment syndrome

Question 6

Unwell infant. Fitting pyrexial. Purpuric rash. Fitting stopped with lorazepam. Aiway, breathing & oxygen and iv access sorted. Fluid bolus started. Very tachycardic and hypotensive. Decreased cap refill.

a. Give the (one) next further immediate management:

Intravenous antibiotics (Cefotaxime 80mg/kg)

Treated with oxygen and fluid bolus. Still tachy and hypo with raised refill time

Blood results : Low glucose. High CO2 on gases.

b. Give 2 next management steps.

Protect airway and assist ventilation (and call PICU anaesthetist)

5mls/kg 10% glucose iv

Now stabilized. Paeds Reg is very busy and asks you to do LP in A&E.

c. What is your answer and why.

No. Contraindicated in patient with decreased GCS and in presence of sepsis and purpuric rash..

Question 7

8 yr old girl with asthma brought in by teacher from school. Increasingly SOB. Unable to talk in sentences. Pulse =140, RR >50/min. Sats 93% on high flow oxygen. Slt end exp. wheeze on examination. Uses only inhalers.

a. List your first 2 treatments with doses.

Salbutamol 5mg neb

Hydrocortisone 4mg/kg iv or Prednisilone 2mg/kg po

After ?10 mins there is no improvement:

b. 4 further management steps:

Repeat nebuliser with ipratropium

Salbutamol/Aminophylline/ Magnesium according to drug history and local policy

CXR

Contact paed. / paed. anaesthetist

c. List 4 behavioural/ social factors that make severe asthma more likely.

Poor compliance with steroids/inhalers

Allergens in house eg dust mite/pets

Patient/parent smoke

Low socio-economic class

Question 8

20 ish gentleman. No foreign travel. No meds. No PMH. Suddenly unwell. Confused.

Liver flap. Spider naevi. Large palpable spleen

Abdo Ultrasound:

Small liver, big spleen

Bloods:

Low Hb

Low WCC

Low Platelets Retics 6%

Low Na

Normal Renal function.

Slightly raised ALT.

Alk Phos and Gamma GT normal

Massively raised Conj. and Unconj. Bilirubin

Albumin low

Ammonia rasied+++

a. State the pathophysiological processes seen above.

Portal Hypertension secondary to Cirrhosis

Hepatic encephalopathy as liver unable to clear ammonia produced from protein load e.g. diet or GI bleed

Haemolytic anaemia/ Bone marrow suppression

b. Diagnosis

Wilson's Disease (Hepatic encephalopathy secondary to cirrhosis)

c. 1 Clinical finding that could look for to confirm diagnosis.

Kayser-Fleischer rings

Question 9

Male brought in from house fire by paramedics and have filled in the burns chart for you. ABC done.IV access in. Analgesia given. Soot in mouth and voice change.

a. Using the chart calculate the % burn

b. Stating which formula you are using calculate the fluid requirement for the first 4 hours.

Parklands 4mls/kg/% burn in 24 hours

Half in first 8 hours (half of this in first 4 hours)

Patient going to be transferred to burns unit:

c. 6 tests you would request

CXR

ABG

Carboxyhaemoglobin

FBC (haematocrit)

U&E (baseline)

G&S

d. 3 managements prior to transfer

Burn dressings (clingfilm)

Secure airway (RSI intubation by experienced anaesthetist)

Check Tetanus status

Question 10

Picture of trench foot/ chronic severe athletes foot.

a. Give 4 differential diagnoses

Trench Foot, Severe athletes foot, ?PVD

b. 2 tests

Doppler foot/ Ankle/brachial pressure index

c. 2 treatment steps.

Analgesia

Question 11

RTA. Young male. Diabetic alert bracelet. GCS decreased. Airway fine. Decreased air entry on left and dull to percussion. Tachy and hypotensive .Given 100% Oxygen Iv access and fluids running

Chest drain inserted 300 mls blood only. Chest X-ray to review.

a. 4 radiological abnormalities excluding cardiac monitoring wires.

b. 6 reasons for his depressed conscious level.

Hypotension (decreased cerebral perfusion)

Hypo/ hyperglycaemia

Hypoxia

Cerebral bleed

Cerebral contusion

Alcohol/drugs

Initially stablised but suddenly despite crystalloid resuscitation and blood: Pulsed 140/min and BP 80 systolic.

c. What is likely cause of his destablisation?

Continued occult bleeding ilikely abdomen (spleen)

SpR surgery busy, asks you to send him for a CT of head and abdomen.

d. What is your answer and what do you want him to do instead?

Too unstable for scanner –dangerous

Laparotomy

Question 12

ECG – (Left Bundle Brach Block)

46 year old man with 2 hours crushing central chest pain, sweaty, vomiting. No previous history. Otherwise well. On oxygen, ongoing pain

a. What does ECG show?

LBBB

b. Why is it that?

Acute anterior MI (involving ischaemia of left sided conduction pathways)

c. 4 management steps:

Morphine with anti-emetic (metoclopramide)

Buccal nitrate 3mg

Aspirin 300mg po

Thrombolyis or angioplasty (PCI)

Same ECG but patient 76 yr old, MI 3 months ago. Half hour of pain which now resolved. Normal obs.

d. 4 Management steps.

Aspirin 300mg po

Enoxaparin 1mg/kg S/C injection

Request old ECG

Admit CCU +/- angioplasty