

FFAEM OSCE May 1998

Question 1

A 68 year old man with a PMH of MI presents with chest pain and a BP of 86/53. ECG shows broad complex tachycardia.

a. What is the diagnosis?

Ventricular Tachycardia

b. How would you confirm this on the monitor?

Print rhythm strip and identify presence of capture beats/ fusion beats

c. How would you treat the patient?

ABC with high concentration Oxygen facemask

Aspirin 300mg

Sedation (etomidate)

Synchronised cardioversion 100/200/360J

d. If the patient was asymptomatic how would you treat him?

ABC with high concentration Oxygen facemask

Amiodarone 150mg over 10 minutes. If this fails:-

Correct serum potassium/magnesium and synchronised cardioversion 100/200/360J

e. When would you use Magnesium and in what dosage?

Torsades de Pointes

5mls 50% Magnesium Sulphate over 30 mins.

Question 2

Photograph of foot with redness around 1st MTPJ. The patient is a hypertensive 46 year old female who has recently been to a dinner/dance. She has dyspepsia.

a. What is the diagnosis?

Acute gout

b. Give three possible precipitants in this patient.

Drugs (Thiazide diuretics or aspirin)

High purine content of meal (fish/meat/cheese)

Alcohol

Trauma (?someone stood on toe dancing)

c. What is the best method of confirming the diagnosis?

Arthrocentesis and polarised light microscopy for urate crystals

(strongly negatively birefringent needle shaped crystals)

d. How would you treat the patient?

Colchicine 1mg initially then 0.5mg every 3 hours until stools become loose or 6mg total taken
(NSAID'S relatively contraindicated in setting of dyspepsia and concurrent use of aspirin)

Advise rest/ increased fluid intake/ avoid purine rich foods

Advise GP follow up re: allopurinol when acute episode resolved

Question 3

An 18 year old female is brought to A&E by her parents. She was well until the previous evening and has no past medical history. She has a GCS of 10. Blood results are as follows:-

Glucose 6

Urea 5

P0₂ 10

PH 7.3

PCO₂ 3.5

Bicarb 10

a. What is the diagnosis?

Metabolic Acidosis with partial respiratory compensation

Meningitis/Encephalitis

Salicylate overdose

Tricyclic Overdose

b. What other test would you do to confirm this?

Salicylate levels

ECG

CT head

c. How would this latter test affect your management?

May give sodium bicarbonate

May perform haemodialysis

Exclude intracranial haemorrhage

d. What is the prognosis?

Question 4

A young man in his 20's has been shot in the right upper chest.

a. What does the chest X-ray show?

Fractured right 1st and 2nd ribs

Wide mediastinum

Pleural caps

Surgical emphysema

Right pulmonary contusion

MORE LIKELY HAEMOTHORAX!

b. Give 4 reasons for cardiothoracic referral

Traversing penetrating chest injury - Need to explore wound in theatre

Haemothorax draining >1500mls initially or >200mls per hour for 2 consecutive hours

Mediastinal vessel injury requiring repair

Open pneumothorax

c. What other radiographs should be performed and why?

Spinal series (exclude obvious bony spinal injury)

X-ray neck and abdomen/pelvis (always perform radiographs at least one body segment above below body segment entered)

Spiral CT with contrast to identify aortic injury

Question 5

An 18 year old male presents with headache and fever. His GCS is 12. The casualty SHO orders skull X-rays. There are the following abnormalities:-

Air in frontal lobe outside sinuses

a. What is the diagnosis?

Kippel Feil Syndrome

Short neck, decreased cervical ROM, and a low hairline (in 40-50% of patients)

Decreased ROM is the most frequent clinical finding. Rotational loss usually is more pronounced than is the loss of flexion and extension.

Other patients present because of facial asymmetry. Neurological problems may develop in 20%

Mandibular dysplasia

Associated with Still's Disease (hepatosplenomegaly)

Question 6

A photo shows a young male with his head on a pillow. The patient has a right periorbital haematoma and fluid dripping out of his right ear which is forming two rings on the pillow.

a. What is this sign called?

Halo sign (Double ring sign)

b. Describe the physiological basis of it.

Blood and CSF have different densities and therefore they separate (CSF travels further)

c. What is the diagnosis?

Base of skull fracture (+/- right zygomatico-maxillary frontal complex fracture) with CSF leak

d. What investigation should be performed?

C-spine series X-rays

CT head and facial bones if facial views suggest a fracture

Examination of his right ear/ ? glucose stix on fluid or beta-transferrin

e. How should the patient be treated?

C-spine immobilisation/ Analgesia/ Neuro-Observation

Ophthalmic/ ENT /neurosurgical review

Question 7

A 42 year old female with alcohol dependence has a three day history of abdominal pain and a three month history of amenorrhoea. A photograph of her abdomen shows that it is swollen with some flank and peri-umbilical discolouration and some red spots.

a. What is the differential diagnosis?

Ruptured ectopic pregnancy (likely fundal)

Haemorrhage from ruptured ovarian cyst

Haemorrhagic pancreatitis

b. What does the photograph show?

Abdominal distension

Cullen's sign

Spider naevi

c. What two tests should be performed?

Pregnancy Test

Ultrasound or CT Abdomen depending on if ectopic or pancreatitis more likely

d. Describe the initial management

ABC with high concentration oxygen by facemask

2 large iv cannula antecubital fossae

Fluids as necessary to maintain BP 90-100mm Hg systolic

Analgesia

X-match 6 units

(FBC/COAG/U&E/AMYLASE/LFT's)

Inform O&G registrar urgently and inform anaesthetist/theatre

500 IU of Anti-D Immunoglobulin if indicated

Question 8

A 88 year old lady has fallen. What does the Pelvic X-ray show?

Displaced subcapital NOF

Fractured inferior pubic ramus

Lucent areas in the pelvis

Constipation

Differential Diagnosis of Solitary Lucent Bone Lesions

Solitary Bone Cyst

Aneurysmal Bone Cyst

Fibrous Dysplasia

Enchondroma / Ecchondroma

Osteoid osteoma

Eosinophilic Granuloma

Metastasis / Myeloma

Haemangioma

Osteomyelitis

Hyperparathyroidism (brown tumors)

Differential Diagnosis of Multiple Lucent Bone Lesions

Metastasis / Myeloma

Renal Osteodystrophy (Looser' lines)/ Hyperparathyroidism (brown tumors)

Haemangioma

Fibrous Dysplasia

Osteomyelitis

Eosinophilic Granuloma

Differential Diagnosis of Focal or Multifocal Sclerotic Bone Lesions

Vascular

Haemangiomas, Infarct

Infection

Chronic osteomyelitis

Endocrine/Metabolic

Paget's disease

Primary

Osteoma, Osteosarcoma

Metastatic

Prostate, Breast

Question 9

A young male adult claims that he was punched by a policeman a week ago. He presents with left cheek pain and swelling. (Facial X-rays show a teardrop sign).

a. Describe the X-ray appearances

Step in orbital floor

Opacification left maxillary sinus (blood)

Teardrop sign (herniation of soft tissues through orbital floor)

b. What points are of greatest importance in the physical examination?

Examine visual acuity and for diplopia

Examine range of eye movements (restricted upward gaze – inferior rectus trapping)

Palpate orbital floor for step/ zygoma/maxilla

Check sensation of cheek/side of nose (infra-orbital nerve)

Look for enophthalmus/ proptosis (retrobulbar haematoma)

Fundoscopy for retinal detachment

c. How should the patient be treated?

Prophylactic antibiotics on max-fax advice (e.g. Augmentin orally)

Warned not to blow nose until max-fax review

Analgesia

May need surgical repair of orbital floor when swelling subsides

Check tetanus status