

FCEM SAQs Autumn 2011

Q1. Femoral Nerve Block (Median Score 6)

An 84 year old lady is brought to the ED after sustaining a fall in her nursing home. You plan to apply a Thomas splint under a femoral nerve block to reduce her fracture.

Her radiograph is shown:



1. Describe the anatomical landmarks for femoral nerve block? (2 marks)

2. Write down the local anaesthetic(s) you would use, giving the amount of LA, time of onset and duration of anaesthetic. (2 marks)

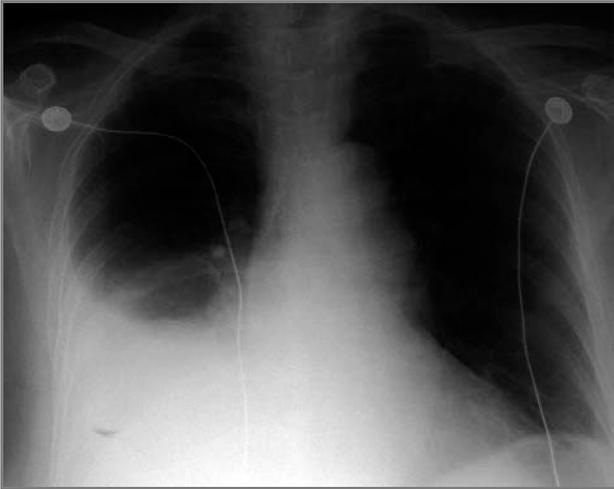
3. Outline the four steps you would take too prepare this patient for a femoral nerve block (2 marks)

4. How will you determine whether you have infiltrated the femoral nerve? (2 marks)

5. What other adjuncts can be used to perform a femoral nerve block? (2 marks)

Q2. Penetrating Trauma Abdomen (Median Score)

A 30 year old female presents to the ED following a stab injury to her right abdomen.



1. Describe the X-ray findings? (2 marks)
2. Describe two anatomical sites where a chest drain may safely be sited? (2 marks)
3. What are the indications for laparotomy in penetrating trauma? (4 marks)
4. What are your next management steps? (2 marks)

Q3. Sickle Cell Anaemia (Median Score 7)

A 25 year old male presents to the ED with a painful penile erection. He is of Afro-Caribbean descent .He is known to have sickle cell anaemia.

1. What is the medical term for a painful erection? (1 mark)

2. In this patient what is the acute haematological diagnosis leading to the presentation? Describe the background pathophysiology leading to this presentation? (2 marks)

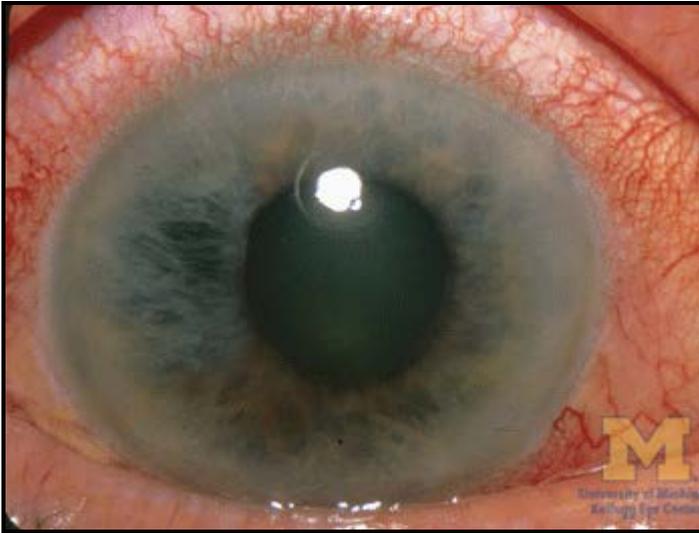
3. What are the immediate management steps in the management of this penile condition? (2 marks)

4. List four management steps in the ED to manage this presentation: (2 marks)

5. List the three nontraumatic causes of this condition: (3 marks)

Q4. Acute Glaucoma (Median Score)

57 years old male presented to ED with sudden onset red painful eye. You have made a diagnosis of acute glaucoma.



1. What are the features of acute Glaucoma? (2 marks)

2. Four causes of painful red eye? (4 marks)

3. List the mechanism of action of following medication: (4 marks)

Q5. Ludwig's angina (Median Score 6)

A 32 year-old male presents with a two day history of painful facial swelling. He is homeless and unable to get to a dentist. His temperature is 38.9 °C. He is diagnosed with a dental abscess.

1. What is Ludwig's angina? (2 marks)

2. Name 2 tissue planes involved in Ludwig's angina. (2 marks)

3. Name the antibiotics normally used to treat dental abscess and state rationale behind it. (2 marks)

4. Explain how Ludwig's angina can cause airway obstruction. (4 marks)

Q6. Obstetrics (Median Score 6.5)

A 32 year old lady who is 36 weeks into her first pregnancy attends the ED. She gives a history of headache and drowsiness. Her observations and bloods results are below:

Pulse 110 bpm	BP180/110mmhg	RR24/min	Sats 96%air
Hb 9gm/dl	WCC 8 x10 ⁹ /L	PLT 34 x10 ⁹ /L	
AST 120	ALT 135		

1. What's the diagnosis? Give full name and no abbreviation (2 marks)

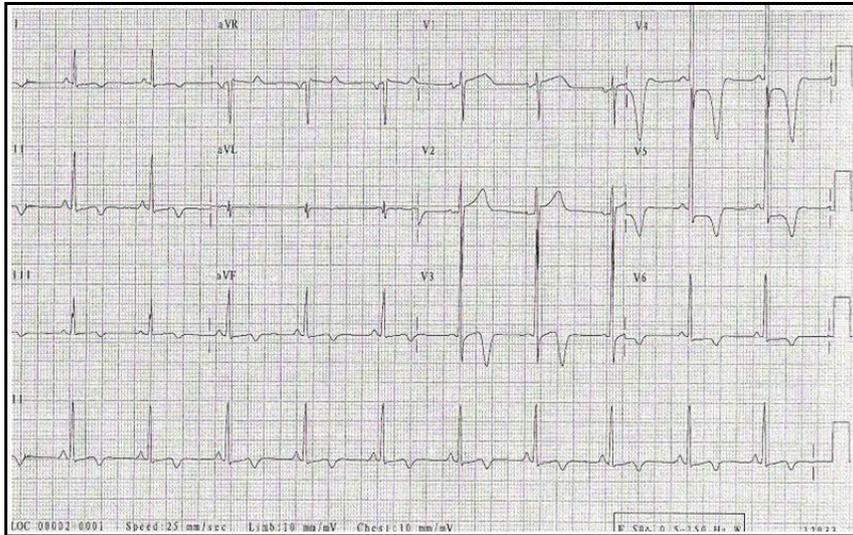
2. Explain the pathophysiology of blood results? (2 marks)

3. How will you treat the blood pressure? (2 marks)

4. You have urgently bleeped the PICU and obstetric teams to Resus. What four immediate steps in management may be instigated in the ED? (4 marks)

Q7. Cardiac (Median Score)

A 68 year old male presents with ongoing central chest pain which started four hours earlier. He has known IHD, hypertension and type II diabetes. His current medications are aspirin, simvastatin, metformin and lisinopril. His ECG as below:



1. Describe two changes on the ECG? (2 marks)
2. What was the diagnosis? (1 mark)
3. Given the above history, what five things would account for calculating TIMI score in this patient? (5 marks)
4. What management steps would you take to manage his persistent pain .He has had morphine and sublingual nitrates. (2 marks)

Q8. Paediatric (Median Score)

A 3 ½ year old presents to the ED with wheeze.

1. What are the four features of acute severe asthma in a child this age? (2 marks)

2. Which features should trigger ICU involvement? (2 marks)

3. What two respiratory drugs you give this child? (1 marks)

4. The patient improves clinically in the department and you plan to discharge them home. What four aspects of treatment / management would you ensure prior to discharge?

Q 9. VP Shunt (Median Score 7.5)

A 22 year old man with known cerebral palsy and VP shunt presents to the ED following a seizure. He is not on regular anti-epilepsy medication. His GCS recovers to 15 and he reports a worsening headache. His observations are stable.

1. What are the possible causes of worsening headache? (1 mark)

2. What are the complications of a long term VP shunt? (2 marks)

3. What investigations could you conduct in the ED and why? (2 marks)

4. Which clinical signs suggest a cavernous sinus thrombosis? (2 marks)

5. How will you treat this patient if he suffers a further seizure? (3 marks)

Q10. Jaundice (Median Score)

A 46 year-old female presents to the ED. She gives a one week history of feeling generally unwell, weak and lethargic.



Her bloods are as follows:

FBC	Hb 11.6mg/dl	Platelet 276 x10 ⁹ /L	WCC10 x10 ⁹ /L	
LFTs:	Bilirubin 67	ALT200	AST340	GGT 900

1. What's your diagnosis? (1 mark)
2. What questions would you ask in history to complement diagnosis? (4 marks)
3. List three further investigations you would consider in ED? (3 marks)
4. What other imaging modalities she may need for further management?

Q11. Overdose (Median Score)

A 25 year old male presented to the ED after taking an overdose of 50 tablets of Aspirin approximately 1 hour earlier.

His initial ABG result was pH 7.18 pO₂ 14.2 pCO₂ 3.2 BE -15.8

1. List three specific features of salicylate toxicity? (3 marks)
2. Comment on the blood gas result. (1 mark)
3. What decontamination method would you use? (2 marks)
4. Salicylates level have come back as >800mg. List four specific management for this patient. (4 marks)

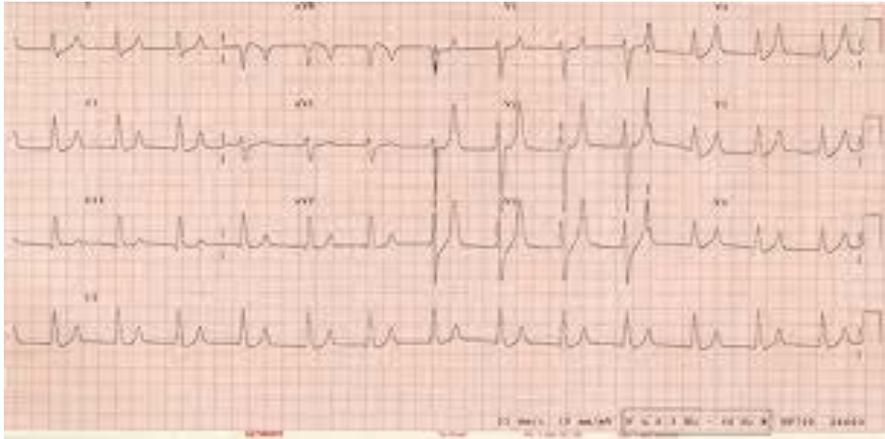
Q12. Hyperkalaemia (Median Score 8)

A 25 year old female was recently diagnosed with SLE. She takes ibuprofen for pain control. She has presented to the ED with 1 week history of vomiting and is complaining of weakness and lethargy

Her blood tests are as under:

Na 132mmol/L K 6.9 132mmol/L Urea 45.6 Creatinine 341

Her ABG shows: pH 7.21 pO₂ =13.5 pCO₂ =3.1 sats 96% air,



1. Name three abnormalities on the ECG associated with hyperkalaemia. (3 marks)
2. After ABC what cardio protective drug would you give .Mention name, route and dose (1 mark)
3. Give two further immediate management steps for this condition in ED. (2marks)
- 4.List four indications when you would consider haemodialysis in hyperkalaemic patients (4 marks)

Q13. Biochem (Median Score 8.5)

A 52 year-old female presented to the ED with a 3 day history of feeling generally unwell with nausea and abdominal pain. Observations: (T 36.7°C), HR 78 and BP 85/50mmHg

Blood results are as follows:

K5.7 mmol/L

Na126mmol/L

Glucose 2.3mmol/ L

Calcium 2.6mmol/L



1. What's does the picture show? (1 mark)
2. Explain the blood results. Explain the pathophysiology (2 marks)
3. What's the diagnosis? (1 mark)
4. What other investigations will you do in ED? (2 marks)
5. List four management steps and rationale behind it.(4 marks)

Q14. Haematology (Median Score7)

A 32 yr-old presented to the ED with a one week history of general malaise and weakness. On examination, he appears pale with occasional petechial spots. You request blood tests with the following results:

Hb 6gm/dL Platelet 40x10⁹/L WCC 340x10⁹/L

Blast cells 18%

1. Comment on the bloods and give the diagnosis. (2 marks)

2. Name three clinical features of this condition. (3 marks)

3. You have decided that he now requires blood transfusion. What are non-immunological complications of blood transfusion? (5 marks)

Q15. HIV (Median Score)

A 24 year old male presents to the ED with a h/o a dry cough, feeling unwell and fever. He returned to the UK from a holiday in Thailand with his partner, who is known to be HIV positive and suffering from pulmonary TB. He is pyrexial (T 38.3°C) and blood gas on RA shows P_aO_2 10.2. You decide to do a CXR.



1. Describe the radiologic features of the X-ray (1 mark)
2. List three causes of the XR findings (3 marks)
3. What three investigations will you do in the ED to guide your management? (3marks)
4. List 3 respiratory pathogens in HIV patients other than TB (3marks)

Q16. Dermatology (Median Score 6)

A 25 year old male with known psoriasis presents to the ED with a rash.



1. What is the diagnosis? (1 mark)

2. What other conditions can cause similar rash? (5 marks)

3. What are the other complications of this condition? (3 marks)

4. Give two other complications of psoriasis: (1 mark)
 - *Psoriatic Arthritis*
 - *Increased cardiovascular risk incl IHD / CVA*

Q17. Rheumatology (Median Score)

A 64 year old lady presented to the ED with ongoing pain affecting her right hand for 3 weeks. She first noticed it after an episode of gardening. An XR was done:



1. Describe the changes on the Xray (3 marks)

2. What is the diagnosis (1 mark)

3. What clinical signs may be evident during examination of the hands? (3 marks)

4. Complication of this condition? (3 marks)

Q18. Paediatric Hip (Median Score 9)

A 3 ½ year old boy is accompanied by his mother on presentation to the ED with a painful right leg. There is a four day history of a right sided limp. According to mum there has been no known fall or trauma. On examination, he is holding right leg in slight flexion and unable to weight bear. You decided to do a pelvic X-ray.

Observations are also done: Pulse 95bpm BP 90/60mmHg RR 22/min Sats 97%air Temp 37.1C



1. Describe the abnormality on the above X-ray and give your diagnosis? (2 marks)
2. List four causes of atraumatic limp in this child? (4 marks)
3. Name four criteria (including clinical features and blood tests) in a child with a painful hip where you suspect septic arthritis. (2 marks)
4. Name two analgesic drugs that you would provide to this child including drugs, dose and route? He weighs 14 Kg. (2 marks)

Q19. Neutropenia (Median score 8)

A 38 year-old male is brought in to the ED feeling generally unwell with a decreased GCS and pyrexia.

1. Define neutropenia: (1 mark)

2. Define septic shock: (1 mark)

3. What parameters would you consider in treating septic patient in first four hours? (4 marks)

4. What investigations would you do? (2 marks)

5. What antibiotics would you use and describe your rationale behind it? (2 marks)

