

MFAEM SHORT ANSWER QUESTIONS (Two hours) December 2004

Question 1 A 35 year old man has been stung by a bee. He arrives in the A and E dept wheezy, dizzy and with an erythematous rash. He had a similar episode last week. He has been put on oxygen.

Give five pharmacological treatments with doses and route.

What two prescriptions would you discharge him from the A and E department with?

Give two common causes of this condition?

(anaphylaxis)

Question 2 A 60 year old man is suffering from pneumonia. Observations show [mixed list including those below – others not relevant also listed].

Increased/high respiratory rate

Low oxygen saturation on air

Confused

Raised urea

Raised glucose

Using the British Thoracic Society guidelines for community acquired pneumonia, which parameters indicate that this man has a severe pneumonia.

Interpret the patient's arterial blood gases.

Metabolic acidosis

Hypercapnic (pCO₂ 6.7)

Decreased oxygen for FiO₂

What antibiotics would you prescribe according to the BTS guidelines for severe CAP.

(community acquired pneumonia)

Question 3

A 70 year old man has collapsed in the street. He had no chest pain. He is not on any medication. He suffered a syncopal episode with dizziness. His heart rate is 38. He is independent and previously fit and well.

ECG shows regular p-waves unrelated to the qrs complexes (complete heart block), wide qrs complexes, inverted t-waves. Rate about 50 a minute.

Describe two abnormalities in ECG (Do not comment on the rhythm).

What is the rhythm?

Describe the management plan in the first ten minutes with doses if appropriate.

What is the definitive treatment?

(complete heart block)

Question 4

A 17 year old girl is suffering from abdominal pain. She is vomiting, agitated and restless.

Results of investigations are show below.

FBC

U and E (high potassium)

LFT

Amylase

Coagulation screen

High glucose

Arterial blood gas – decreased bicarbonate, increased base excess, decreased pH and decreased pCO₂ – raised anion gap.

Give four treatments which are specific management for the condition involved.

Describe the acid-base disturbance. Be as specific as you can.

What four other conditions would present to the emergency department with this acid-base disturbance?

(DKA)

Question 5

A 9 year old has fallen on his out stretched hand.

X-ray shows a fractured distal radius. ?Salter Harris Type II

Describe the fracture.

Describe or draw the classification for these types of fractures.

What analgesia would you use first line, with doses?

What is the treatment for this fracture?

What is the clinical significance of the classification for this type of injury?
(distal radius fracture)

Question 6

A cyclist has been knocked off his bicycle at a busy junction. He is fully conscious. He has open bilateral mandibular fractures.

Picture of face shown

Give three immediate management priorities.

What surgical procedure must you be prepared to perform?

What are the landmarks for this procedure?

What analgesia would you give in this conscious patient for this procedure?
(mandibular fracture)

Question 7

This is a picture of a 13 year old boy referred from his GP.
He is hypotensive and pyrexial.

Picture of abdomen covered in purpuric rash.

What is the diagnosis?

Outline the first management steps in the emergency department. (4 marks/points)

What two things would you need to do after the patient has left the ED?
(meningococcal rash)

Question 8

A 1 year old Caucasian male has not been walking for two days. He is only crawling. His mother thinks that his ankle is warm to touch and tender. The child is afebrile at 36.6 degrees centigrade. Examination of the ankle is normal. All other joints are normal.

Picture shown of lateral ankle x-ray.

What does the x-ray show?

What two diagnoses must you consider?

What four investigations would you initiate from the A and E department?

What treatment would you give in the A and E department? (2marks)
(osteomyelitis)

Question 9

A 50 year old has severe epigastric pain and vomiting. He is tender and guarding his whole abdomen especially in the epigastrium.

LFTs	Amylase 1458	Calcium 2.01
	Bilirubin 87	Glucose 13
	AlkPhos increased	Increased WCC
	ALT increased	Urea 12

Other investigation results also given.

What is the diagnosis?

Give four parameters which are guide of severity giving figures of highest or lowest levels.

Outline your management plan in A and E. (4 marks).

What two investigations would assist in diagnosis or further management?
(Pancreatitis)

Question 10

A 56 year old has taken 30 tablets of co-codamol (30/500) over 24 hours and mirtazapine. He has not eaten for 2 days. He feels dizzy. He is vomiting and dehydrated.

INR 3.5

Increased ALT

Increased AlkPhos

Bilirubin 78

Glucose 2

Normal FBC

Mild increase in urea and creatinine

Normal Na and K⁺

Paracetamol and salicylates normal

What is the diagnosis as a result of the paracetamol overdose?

Give two risk factors used when treating paracetamol overdose. If general issues give specific examples.

Give four immediate management points in A and E.
(paracetamol overdose)

Question 11

A 25 year old long distance runner collapses unconscious in a half marathon. He has now been resuscitated and is haemodynamically stable. He has been catheterised and the picture shows his catheter collection box.

Picture shown of catheter collection box. Urine red-brown tinge.

What is responsible for the abnormality seen in the urine?

What is the management plan in A and E? (4 points)

From the history what other problems would you suspect?
(renal failure myoglobinuria)

Question 12

A 25 year old woman, who is 27 weeks pregnant, has been a passenger in a high speed RTA. She was wearing a lap belt. She has abdominal bruising and cramps. She has not had any PV bleed. She is known to be rhesus negative.

Lots of observations given including Pulse 100, BP 100/70

Outline your management priorities in the ED and in which order would you do them. (4 points)

What treatment or investigation are necessary during a sensitising incident in known rhesus-D negative women? Over what timeframe should they be given or performed?

Radiological investigation – how would pregnancy change your threshold or interpretation for radiological investigation? (2 points)

Question 13

A 76 year old has been found collapsed by his daughter. He has developed expressive dysphasia, a dense right hemiparesis and right-sided facial weakness.

Na increased	BP 170/100
Urea mild increase	Irregular pulse 98 bpm
Creatinine increased	98% sat Os
Glucose 12	

Picture of CT brain showing left sided stroke in middle cerebral artery territory.

What vascular territory is affected?

What other clinical signs may you see? (2 points)

What are the management priorities? (4 points)

Question 14

A 25 year old has been hit on the head with a baseball bat. He lost consciousness for ten minutes at scene. He woke up and vomited. He was agitated and combative. His GCS is now 10/15. He has vomited again and had a seizure. He has a wound on the right side of his head inside, of which, the skull feels flat.

Picture of CT head

Burr hole right side.

Left frontal extradural bleed

Right parietal soft tissue swelling

No midline shift or ventricular abnormality

Apart from the burr hole, name two abnormalities on the CT scan. (2 marks)

What is your immediate priority and why? [*small are to write in*]

What four features in this patient, according to NICE Head Injury guidelines, warrant a CT scan?

What is your next step in management?

Question 15 (Twelve / double marks)

You are the registrar in a DGH A and E dept. You receive a call from the ambulance service that there has been a coach crash on a nearby motorway. There has been an explosion and fire. A major incident is declared.

Triage the following patients into categories T1 (highest), T2, T3 (lowest), T4 (expectant) and DEAD. In each case, give the first management priority (only one).

1. Adult male. GCS 9/15. Superficially cleaned head injury. Compound right tibial fracture. RR 20 Pulse 110.
2. Infant. Not breathing. On opening of airway not breathing. No pulse. Suspected smoke inhalation.
3. Adult. Age in 70s. 100% burns. GCS 14/15. RR 30 Pulse 110
4. Adult females in 30s. RR30 C/o SOB. Pulse 140. Suspected chest injury.
5. Adult male. Closed right lower leg fracture. C/o pain. RR 20. Pulse 90.

6. Adult male aged 50. Not involved in accident. Chest pain. Pulse 40. RR15. Suspected MI.

List of topics by question given by Faculty in Results

1. Anaphylaxis
2. Community acquired pneumonia
3. Complete heart block
4. Diabetic ketoacidosis
5. Distal radial fracture
6. Mandibular fracture
7. Meningococcal rash
8. Osteomyelitis
9. Pancreatitis
10. Paracetamol overdose
11. Renal failure – Myoglobinuria
12. Rhesus disease
13. Stroke
14. Traumatic brain injury
15. Multiple Trauma Triage Exercise