

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (EMERGENCY MEDICINE) EXAMINATION – OCTOBER 2018

Date :- 29th October 2018

Time :- 1.00 p.m. – 4.00 p.m.

STRUCTURED ESSAY QUESTION PAPER

Answer all ten (10) questions.

Answer each question in a separate book.

1. A 30-year-old primigravida at 30 weeks of gestation is admitted to the ETU with severe headache and vomiting. She had a generalised convulsion on admission. She is conscious and has secretions in her mouth. Her pulse rate was 88 per minute and blood pressure was 180/110 mmHg.
 - 1.1. Briefly describe the following:
 - 1.1.1. General management of the patient. (30 marks)
 - 1.1.2. Pharmacological management. (30 marks)
 - 1.2. If further seizures continue, briefly describe your management at this stage. (20 marks)
 - 1.3. What special monitoring is needed in relation to your pharmacological management? (20 marks)

2. A 1-month-old baby is admitted to the ETU at 4.00 a.m. with irregular pattern of breathing and deep blue discoloration. Baby has been crying excessively, refusing feeds since the previous night. The baby has been born at term and diagnosed to have Tetralogy of Fallot. He is awaiting cardiology review at 6weeks.
 - 2.1. What is your immediate management? (35 marks)
 - 2.2. What is your differential diagnosis? (15 marks)
 - 2.3. If the child is not responding to the initial management
 - 2.3.1. Describe your pharmacological management giving reasons. (25 marks)
 - 2.3.2. How would you prepare and intubate this child? (25 marks)

3. A 67-year-old lady with hypertension type 2 diabetes and ischaemic heart disease presents to the ETU with faintishness and blurring of vision for 1 hour. She had intermittent brief episodes of palpitations for one month. 2D Echo done 2 weeks back was normal.

Her medications were enalapril 5mg bid metformin sustained release 500 mg bid and aspirin 75mg nocte.

Her heart rate was 154 beats/minute, blood pressure 124/78 mmHg, cardiac auscultation was normal with clear lung fields.

ECG is given below:



- 3.1. What is the ECG diagnosis? (10 marks)
- 3.2. Outline five (05) important steps in the initial assessment and management. (30 marks)
- 3.3. Patient was stabilized and transferred to short stay unit (SSU). Next morning she is ready for discharge.

List two (02) classes of medications needed to be added to her previous regimen giving reasons. (20 marks)

Two weeks later she is readmitted to ETU with a history of right sided hemiparesis for one hour duration. Pulse 104 beats/minute irregularly irregular, blood pressure 200/100 mmHg, GCS 15/15. Neurological examination revealed dense right sided hemiparesis and the NIHSS score was 12. Non contrast CT brain shows left internal capsular haemorrhage.

- 3.4. List two (02) instructions that you could have given on discharge to prevent this complication. (10 marks)
- 3.5. Outline five (05) steps in the initial assessment and management of this readmission. (30 marks)
4. A 45-year-old farmer was admitted to a local hospital, 2 hours after an unidentified snake bite. On admission, he had pain and bleeding at the bite site in the left ankle. He also complained of double vision and drooping of his eyelids. Few hours later he complained of difficulty in speech and was unable to walk. Then he was transferred to a teaching hospital. On admission to the ETU Medical Officer examined him and confirmed that patient had right sided arm and leg weakness and slurring of speech. They immediately ordered some blood investigations and started treatment.
- 4.1. What is the investigation you would do immediately in the ward to confirm the likely snake? (05 marks)
- 4.2. What is the most likely snake? (05 marks)
- 4.3. Briefly describe your next steps in the assessment and management. (40 marks)
- 4.4. List four (04) possible complications you will anticipate in this patient. (10 marks)
- 4.5. Write how you would manage each of the complication in 4.4. (20 marks)
- 4.6. While the patient was receiving treatment, he complained of cough and itching. On examination pulse was 120 beats/minute, systolic blood pressure was 90 mmHg and bilateral rhonchi were heard on auscultation. Briefly outline how you would manage this situation. (20 marks)

5. A 34-year-old previously healthy patient was brought to the ETU by his brother since he had noticed change in behaviour for the last 3 days. He has been aggressive and abusive and the brother was concerned about this new change in behaviour.
- He refused to be triaged and was verbally abusive to the triage nurse. When the nurse tried to calm him down he became more agitated and tried to bang his head on the wall. He further refused any one coming closer to him and almost tried to physically assault the triage nurse. You were the consultant on duty.
- 5.1. List five (05) possible causes for the above clinical presentation. (15 marks)
- 5.2. List five (05) general principles in the initial evaluation and management of this patient. (25 marks)
- 5.3. Even after the initial attempts to calm him down he continues to be aggressive and abusive to the staff and refuses evaluation.
- List three (03) drugs of different classes with doses and routes of administration that could be used to calm him down. (15 marks)
- 5.4. Briefly describe four (04) steps in monitoring and additional management needed during and after the above treatment process given in 5.2 and 5.3. (20 marks)
- 5.5. This incident was reported to the ETU Director and he asked you to draft a proposal to provide a safe environment against violence to staff
- List five (05) important suggestions you would make in your proposal. (25 marks)
6. A 66-year-old patient with hypertension is admitted with symptoms suggestive of hypertensive encephalopathy.
- 6.1. Write three (03) physical signs to support the diagnosis of hypertensive encephalopathy. (20 marks)
- 6.2. Outline the pathophysiology of hypertensive encephalopathy. (20 marks)
- 6.3. Briefly describe the assessment and management of hypertensive encephalopathy. (60 marks)

7. A 60-year-old farmer is brought in following suspected poisoning with an organophosphorus insecticide.

7.1. What clinical features would favour the diagnosis? (10 marks)

7.2. Describe his management. (40 marks)

Two hours after admission his condition improves. He now wishes to make a dying declaration.

7.3. Define the term dying declaration. (10 marks)

7.4. State the medico-legal importance of a dying declaration. (10 marks)

7.5. Describe how you would record a dying declaration. (30 marks)

8. A 1-year-old boy weighing 10 kg was admitted to the ETU with history of cough and shortness of breath. On admission SaO₂ was 90% with oxygen and there was marked recessions and poor response to conventional therapy. Emergency registrar decided to connect the child to high frequency nasal canula (HFNC) Oxygen therapy

8.1. List four (04) key advantages of HFNC Oxygen therapy. (20 marks)

8.2. Outlines five (05) main steps in delivery of HFNC Oxygen therapy. (20 marks)

8.3. List five (05) important parameters that needs monitoring in this patient. (10 marks)

8.4. List five (05) complications of HFNC Oxygen therapy in this patient. (10 marks)

8.5. List five (05) indications and five (05) contraindications for HFNC Oxygen therapy in paediatric practice in the ETU. (40 marks)

9. A 45-year-old construction worker has fallen off the third floor and landed on the ground. He is brought to ETU by ambulance service. On admission he is unconscious (GCS 3/15) with respiratory rate of 25/minute, pulse rate of 84 beats/minute and a blood pressure of 80/50 mmHg. No external injuries are evident.

9.1. Describe how you would immobilize the patient in the ETU. (20 marks)

9.2. How would you manage his airway? (10 marks)

9.3. List two (02) most likely injuries in this patient. (20 marks)

9.4. List five (05) urgent imaging modalities you would consider in this patient according to priority. (20 marks)

9.5. Outline five (05) steps you would take to stabilize his circulation in the ETU. (30 marks)

10.

10.1. A 14 year-old boy presents to the ETU with his parents complaining of painful right scrotum for the last 6 hours.

10.1.1. List four (04) key clinical features that may help to distinguish torsion from epididymo-orchitis in this patient. (20 marks)

10.1.2. List five (05) clinical conditions other than the above which can present with acute scrotum. (10 marks)

An ultrasound scan is requested in this patient

10.1.3. List two (02) disadvantages of the use of ultrasound in this patient. (10 marks)

10.1.4. List four (04) aspects of information that you would communicate to the patient and his parents. (20 marks)

10.2. A 25-year-old man presents with loin to groin pain of 1 day duration following a long journey. He has vomited over 15 times and initial treatment at an OPD has given only temporary relief. The patient is febrile, has a pulse rate of 130 beats/minute and a blood pressure of 95/65 mmHg.

10.2.1. What is the most likely diagnoses? (10 marks)

10.2.2. List six (06) immediate steps in his management. (30 marks)