



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA, GALLE

Final Examination for Medical Degrees - January/ February 2024

SURGERY- PAPER I



Index No:

Friday 19th January 2024

Answer All Eight Questions

3 hours (1.00 pm – 4.00 pm)

1. A 25 - year old man was travelling as a front seat passenger in a car which was hit by a van from left side. He was brought into the emergency department half an hour later immobilized in a spinal board. He was communicating rationally but complained of pain over left chest and on moving the left arm.

Examination revealed him to be tachypneic and tachycardic with distended neck veins.

1.1. Name two (2) possible diagnoses.

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(10 Marks)

1.2 State two (2) clinical signs each to support each of the above diagnoses.

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(20 Marks)

1.3 Which of the diagnosis require urgent intervention before any investigation and what is the appropriate intervention?

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(10 Marks)

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1.4 List two (2) bed side imagines which are indicated

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(10 Marks)

1.5 Outline the appropriate specific treatment measures for each of the diagnosis

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(20 Marks)

Patient has a deformity over left arm. There are no external wounds.

1.6 What is the most likely diagnosis?

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(10 Marks)

1.7 Name one clinical sign you must demonstrate to ensure adequate distal perfusion.

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(10 Marks)

1.8 Outline the management of arm injury if above sign is negative.

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(10 Marks)

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2. A 35 - year- old man was crushed across on his pelvic area by a wooden beam falling across. He is brought to the emergency department immobilized on a spinal board. Patient complains of severe pain in the injured area. His pulse rate is 130/min, BP is 90/60 mmHg and has a distended abdomen. Patient is unable to sit up but his pulses, sensation and motor movements in the lower limb are preserved.

2.1 List two (2) possible injuries.

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(10 Marks)

2.2 State five (5) initial steps in his management at the emergency department.

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(20 Marks)

2.3 eFAST revealed free fluid in the peritoneum. List the two (2) different possible types of fluids

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(10 Marks)

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2.4 Ultra sound scan revealed a distended bladder. Attempts to pass a urinary Catheter failed due to an obstruction and pre-urethral bleeding. What is the most likely cause and the most appropriate next step in the management?

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(10 Marks)

2.5 Hemodynamic parameters of the patient improved significantly after transfusing 10 units of blood. List five (5) Non invasive measures which can be taken to reduced bleeding at emergency department.

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(20 Marks)

2.6 State two (2) Invasive options to reduce or arrest bleeding.

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(20 Marks)

2.7 Per-rectal examination revealed blood and a bony-fragments. How would it affect the further management?

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(10 Marks)

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3. A 62-year-old male presents with bleeding per rectum and sense of incomplete evacuation of faeces for 3 months.

3.1 List four (4) causes except rectal cancer.

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(10 Marks)

3.2 List four (4) investigations you would perform to arrive at diagnosis.

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(10 Marks)

3.3 Outline the steps in the preparation of this patient for colonoscopy.

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(30 Marks)

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3.4 At colonoscopy, locally advanced lower rectal cancer was detected.

Describe the management.

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(50 Marks)

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4. A 50 -year- old female with Diabetes and Hypertension is admitted for sapheno femoral ligation and stripping for varicose veins in right lower limb.

4.1 List five (5) preoperative investigations.

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(10 Marks)

4.2 List five (5) complications of Varicose veins

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(10 Marks)

4.3 Describe the pathogenesis of complications of varicose veins.

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(20 Marks)

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4.4 Briefly describe the preoperative optimization of this patient.

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(20 Marks)

4.5 On the post op day 1, patient is complaining of pain and swelling in the right calf.

A clinical diagnosis of deep vein thrombosis of right popliteal vein is made.

Describe the Management of this condition

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(40 Marks)

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5. A 70 -year-- old man undergoes an emergency tracheostomy.

5.1 List parameters you would monitor in the 1st 24 hours of this man.

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(20 Marks)

5.2 6 hours later, this man is found restless, dyspneic, and struggling to breath.
A whistling sound was coming from the tracheostomy site.

5.2.1 List the likely causes for this respiratory distress

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(20 Marks)

5.2.2 List the steps in immediately management of this patient.

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(20 Marks)

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5.3 List indications for tracheostomy.

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(20 Marks)

5.4 List five (5) complications following tracheostomy

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(20 Marks)

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6. A 50-year-old woman is admitted to casualty surgery unit with an 8cm long superficial cut injury over her right forearm.

She is hemodynamically stable and has no other injuries. Her body weight is 60 kg.

She is a known patient with bronchial asthma and on inhalers.

Her surgery is planned under local anesthesia.

6.1 Write two (2) steps you would practice in the operating theatre prior to the suturing.

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(20 Marks)

6.2 State the most appropriate local anaesthetic agent of choice and mention the dose for this lady.

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(20 Marks)

6.3 List four (4) clinical features which indicate systemic toxicity of the local anaesthetic agent

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(20 Marks)

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6.4 Outline the emergency management of systemic local anaesthetic toxicity

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(40 Marks)

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7. A 65-year-old woman presented to the surgical clinic with a lump at the right groin.

7.1.1 State four (4) most likely differential diagnoses.

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(20 Marks)

7.1.2 State three (3) clinical signs that you would look to confirm each condition stated in 7.1.1

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(20 Marks)

7.2 It is found to have an ulcer with signs of local infection in the leg just above the medial malleolus

7.2.1 Which two of the lumps you stated in 7.1.1 would you like to consider as the diagnosis?

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(10 Marks)

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7.2.2 Name a single investigation that you carried out to get the final diagnosis of the lump.

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(10 Marks)

7.2.3 What would you expect to find in the imaging investigation you stated above.

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(10 Marks)

7.2.4 State five steps in management of these condition you stated in (7.2.1)

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(30 Marks)

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8. A 30-year-old motorcyclist is admitted 45 minutes following a road traffic accident. He complains of right side upper abdominal and right loin pain. He has no pain elsewhere. His blood pressure is 100/60mmHg. Pulse rate is 110 beats /min. He has mild pallor. He has marked tenderness in the right side of the abdomen and the right loin. Bowel sounds are heard. Rest of the examination is unremarkable. He passes blood stained urine after admission.

8.1 What is the most likely diagnosis?

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(10 Marks)

8.2 Name two (2) life-threatening conditions that should be excluded in this man.

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(20 Marks)

8.3 List the parameters you would observe in monitoring this patient

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(10 Marks)

8.4 Name the best investigation to arrive at a definitive diagnosis.

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(10 Marks)

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8.5 List the findings you would expect in the above investigation to come to the diagnosis.

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(10 Marks)

8.6 List the steps in treatment of this patient

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(40 marks)