



UNIVERSITY OF JAFFNA, SRI LANKA
SECOND EXAMINATION FOR MEDICAL DEGREES PART (II) - August 2023
Academic Year 2017/2018

Pathology Paper II- Structured Essay Question - (SEQ)

Date: 21.08.2023.

Time: 03 hours

ANSWER ALL THE 10 QUESTIONS

Write the answers in the given space below each question.

1. A 35-year-old nursing officer presented to the medical clinic with a history of low-grade fever with a productive cough for 3 weeks duration. Her chest X-ray showed a cavitory lesion in the left upper lobe with left-sided pleural effusion. Biopsy of the lesion revealed a granulomatous inflammation.

1.1. Define the term granuloma. (10 Marks)

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1.2. List five (05) causes of granulomatous inflammation. (20 Marks)

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1.3. Mention the most probable diagnosis in this patient. (05 Marks)

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1.4. List four (04) risk factors for the condition mentioned in 1.3. (20 Marks)

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1.5. List four (04) other investigations (except chest X-ray and biopsy) which support your diagnosis and indicate the expected findings. (20 Marks)

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1.6. List **five (05)** complications of the condition mentioned in 1.3.

(25 Marks)

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2. A 65 –year- old hypertensive man was admitted to the medical ward with sudden onset of chest pain. He was suspected to have acute myocardial infarction (MI).

2.1. Define the term infarction.

(05 Marks)

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2.2. List different types of infarction and give one example for each.

(15 Marks)

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2.3. List **three (03)** investigations you will request to support the diagnosis in this patient and indicate the expected changes.

(30 Marks)

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2.4. Describe briefly the relationship of hypertension with myocardial infarction..

(30 Marks)

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2.5. List **five (05)** possible complications of MI.

(10 Marks)

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2.6. Despite treatment, the patient died on 10th day of admission. Briefly mention the autopsy changes that you would expect in the heart of this patient. (10 Marks)

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3. A 48-year-old long standing diabetic patient is reviewed in the medical clinic, he complains of worsening bilateral leg swelling for the last 3 months. He also mentions of frothiness of urine.

His serum creatinine is 0.9mg/dl (noirmal 0.7 to 1.3 mg/dL) and urine report show 2+ of protein and there are no pus cells or red cells.

Urine protein creatinine ratio is 446mg/mmol (Normal <15mg/mmol).

3.1. Mention the clinical picture described above. (15 Mark

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3.2. Mention the clinical feature would suggest a diagnosis of diabetic nephropathy? (15 Mark

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3.3. List the indications for performing a renal biopsy for this patient. (30 Mark

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3.4. Briefly describe the histological finding would you expect in the biopsy of following sites.

3.4.1. In glomerulus. (20 Mark:

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3.4.2. In tubules and interstitium. (10 Mark:

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3.4.3. In the vessels.

(10 Marks)

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4. A 19 –year- old girl presents with faintishness, lethargy and light headedness. Examination revealed pallor with no organomegaly. Clinician suspects severe iron deficiency anaemia (IDA).

4.1. State **three (03)** different questions you would ask from this patient to ascertain cause for iron deficiency with reasons. (20 Marks)

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4.2. List **three (03)** tests you would perform in the initial work up and indicate the expected findings in each test in IDA. (20 Marks)

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4.3. Outline the serum iron study findings expected in IDA. (20 Marks)

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4.4. Describe how you would monitor response to therapy in IDA. (20 Marks)

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4.5. State **three (03)** advices you would give to the patient to improve iron deficiency (20 Marks) with reasons.

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5. A patient presents with high fever, gum bleeding and palpitation. Examination revealed pallor, purpura and mild hepatosplenomegaly. Acute leukemia is suspected by clinician.

5.1. Outline the pathological basis for

5.1.1. Pallor in acute leukemia.

(20 Marks)

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5.1.2. High fever in acute leukemia.

(20 Marks)

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5.1.3. Gum bleeding and purpura in acute leukemia.

(20 Marks)

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5.2. Briefly describe the blood picture findings expected in acute leukemia.

(15 Marks)

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5.3. Outline how diagnosis of acute leukemia is confirmed.

(15 Marks)

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5.4. List **five (05)** investigations (except FBC, BP and test used for the confirmation) (10 Marks) required in the management of a patient with acute leukemia.

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6. A 5 – year- old boy was brought by his mother to the accident and emergency unit with a history of high fever, severe headache, vomiting and sensitivity to light of 3 days duration. Examination revealed neck stiffness.

6.1. Mention the most probable diagnosis. (05 Marks)

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6.2. Name **two (02)** initial blood tests that can be done in this patient and indicate the expected changes. (10 Marks)

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6.3. It was decided to do cerebrospinal fluid (CSF) analysis in this patient.

6.3.1. Name the procedure done to collect CSF in this patient and mention **two (02)** contraindications for that procedure. (15 Marks)

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6.3.2. Mention **two (02)** specific features of the containers used for CSF collection. (10 Marks)

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6.3.3. List **four (04)** test that will be ordered in CSF of this child and indicate the expected findings. (20 Marks)

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6.3.4. Mention the order of draw of the tests mentioned in 6.3.3. (10 Marks)

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6.3.5. When should the random plasma glucose sample taken in relation to the CSF and give the reason to do this test? (15 Marks)

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6.4. Mention **three (03)** complications of the condition mentioned in 6.1. (15 Marks)

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7.5. List **five (05)** symptoms of hyperthyroidism.

(15 Marks)

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7.6. List **five (05)** eye signs of hyperthyroidism caused by autoimmune disease.

(15 Marks)

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8. A 65-year-old man presented with episodes of upper abdominal pain related to his meals. He has been on analgesics for the last two years for his knee pain. It was diagnosed and treated as peptic ulcer disease.

8.1. Briefly describe the term peptic ulcer disease (PUD). (10 Marks)

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8.2. Mention the aetiological factors for the PUD. (15 Marks)

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8.3. Mention the pathogenesis of chronic peptic ulcer disease. (25 Marks)

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8.4. List the complications of PUD in the stomach. (15Marks)

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9. A 45 - year – old farmer presented with left loin pain and loin mass.
- 9.1. List **three (03)** possible differential diagnoses. (10 Marks)
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- 9.2. Identify the most likely diagnosis in following situation in addition to given above clinical features.
- 9.2.1. On examination left side persistent varicocele and visible haematuria. (05 Marks)
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- 9.2.2. Father of above patient died of cerebral aneurismal rupture. (05 Marks)
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- 9.2.3. Ultrasound scan showed gross hydronephrosis but no hydroureter with thin renal parenchyma. (05 Marks)
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- 9.3. This patient’s contrast CT scan revealed heterogeneously enhancing 12cm renal mass with extension in to left renal vein. Blood investigations revealed polycythaemia and hypercalcaemia
- 9.3.1. Mention the most likely diagnosis. (05 Marks)
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- 9.3.2. Mention the most likely histological type in this patient. (10 Marks)
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- 9.3.3. Explain the reason for the polycythaemia and hypercalcaemia. (15Marks)
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- 9.3.4. Explain the pathophysiology for irreducible left side varicocele. (15Marks)
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- 9.3.5. List **three (03)** risk factors for above pathology mentioned in 9.3.1. (10 Marks)
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9.3.6. Briefly describe the macroscopic appearance of this tumour.

(20 Marks)

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10.

10.1. "Cervical cancer is preventable".

10.1.1 Define cervical intraepithelial neoplasia.

(15 Marks)

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10.1.2. Mention the classification of cervical intraepithelial neoplasia.

(15 Marks)

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10.1.3. Briefly describe the importance of cervical cancer screening program.

(20 Marks)

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10.2. Describe histopathological features of uterine fibroid.

(15 Marks)

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10.3. "Endometrial hyperplasia is a premalignant condition".

10.3.1. Describe histopathological classification of endometrial hyperplasia.

(20 Marks)

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10.3. 2. Mention **five (05)** risk factors for endometrial hyperplasia.

(15 Marks)

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