

UNIVERSITY OF JAFFNA, SRI LANKA
SECOND EXAMINATION FOR MEDICAL DEGREES OCTOBER 2011
PATHOLOGY Paper II

Date: 18.10.2011.

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

Answer each QUESTION in separate answer book

1. **A patient presenting with right sided colicky loin pain radiating downwards with an episode of haematuria is suspected as having urinary calculi. On ultrasound scanning the right kidney is found to be hydronephrotic.**

- 1.1. List the four main types of urinary calculi giving one possible predisposition to calculi formation for each of the four (4) types mentioned** (40 Marks)
- 1.2. Describe briefly the morphology (macroscopy and microscopy) of a hydronephrotic kidney.** (30 Marks)
- 1.3. List four (4) other causes of hydronephrosis.** (20 Marks)
- 1.4. State one other complication of calculi formation in the urinary tract** (10 Marks)

A 65 year old male presents with shortness of breath and is found to have a consolidated area in the right lobe of the lung. He also has had two bouts of haemoptysis. A bronchial carcinoma is suspected. He is also found to have a high serum calcium level.

- 2.1. Give 2 other causes that might give rise to a similar X ray appearance** (10 Marks)
- 2.2. Describe the pathology of bronchial carcinoma (macroscopic and microscopic appearances)** (40 Marks)
- 2.3. List 4 other possible diagnostic modalities (Investigations) in this case.** (20 Marks)
- 2.4. Briefly explain the possible basis for this patient's high serum calcium levels** (30 Marks)

A 65 year old patient has had diabetes mellitus for the past 15 years. The diabetic control has been poor.

- 3.1. Describe the pathological features that you would expect in:**
 - 3.1.1. Heart** (30 Marks)
 - 3.1.2. Kidney** (30 Marks)
 - 3.1.3. Liver** (20 Marks)
- 3.2. List 4 investigations that you would do when following up this patient giving reasons** (20 Marks)

4.
 - 4.1. Define 'Shock' (10 Marks)
 - 4.2. List the major types of shock giving clinical examples (40 Marks)
 - 4.3. Discuss the metabolic and circulatory effects of cardiogenic shock (50 Marks)

5.
 - 5.1. List 5 common causes of liver cirrhosis (20 Marks)
 - 5.2. Outline the steps involved (pathogenesis) of liver cirrhosis (30 Marks)
 - 5.3. Name 5 clinical consequences that can arise in a patient with liver cirrhosis giving reasons (30 Marks)
 - 5.4. Describe the mechanism of formation of ascites in a cirrhotic patient (20 Marks)

6. A 26 year old male presented with short duration of illness and treated for meningitis. He died after intensive management
 - 6.1. List 5 bacterial pathogens causing acute pyogenic meningitis. (25 Marks)
 - 6.2. Describe the autopsy findings (macroscopic and microscopic changes) of intracranial structures in acute pyogenic meningitis. (50 Marks)
 - 6.3. List 5 pathological complications of acute pyogenic meningitis. (25 Marks)

7.
 - 7.1. Mention 5 precancerous lesions of colorectal carcinoma . (20 Marks)
 - 7.2. Briefly describe the macroscopic appearances of 2 precancerous lesions mentioned above. (40 Marks)
 - 7.3 Brief out the sequence of events of one of the precancerous lesions mentioned in 7.1 leading to colorectal carcinoma. (20 Marks)
 - 7.4 Briefly describe the complications (other than colorectal carcinoma) of one of the lesions mentioned in 7.1. (20 Marks)

8.
 - 8.1. What is hyperplasia? (10 Marks)
 - 8.2. Briefly discuss the causes and pathological sequelae of thyroid hyperplasia (40 Marks)
 - 8.3. Briefly describe the interpretation of the following FNAC (Fine Needle Aspiration Cytology) report "FNAC of right lobe solitary thyroid nodule revealed Follicular neoplasm" (25 Marks)
 - 8.4. Mention the tumour markers of thyroid malignancy with their usefulness in clinical practice (25 Marks)

9. A 62 year old previously healthy lady presented with headache, dyspnea and blurred vision.
Her full blood count is given below:

RBC count $7.1 \times 10^{12}/l$
Hb **21.0** g/l
Haematocrit 63 l/l
MCV 82 fl
MCH 28pg

WBC count $20.6 \times 10^9/l$
Neutrophil $14.2 \times 10^9/l$
Eosinophil $01.6 \times 10^9/l$
Basophil $01.0 \times 10^9/l$
Lymphocyte **$03.6 \times 10^9/l$**
Monocyte $00.2 \times 10^9/l$

Platelet count $710 \times 10^9/l$

- 9.1. What is the most likely diagnosis? (20 Marks)
9.2. List 2 most useful blood investigations and their expected findings that would confirm the diagnosis (40 Marks)
9.3. List 2 well recognized clinical consequences of the condition mentioned in 9.1 (20 Marks)
9.4. Briefly mention the prognosis and the possible complications of the condition mentioned in 9.1 (20 Marks)

10. An 8 year old girl was brought to the hospital following spontaneous excessive gum bleeding. On inquiry mother told that the child had few episodes of spontaneous muco-cutaneous bleeding in the past. There is a family history of similar illness. Von Willebrand's disease is suspected.

- Briefly mention the role of vWF (von Willebrand Factor) in the normal haemostatic response to vascular damage (20 Marks)
List the coagulation investigations and the expected findings in vWD (40 Marks)
List 2 drugs (other than coagulation components) used to treat mild vWD (20 Marks)
List the possible complications of plasma derived coagulation components for these patients (20 Marks)