

2. A 22 year old woman presents with a 2 month history of shortness of breath, irregular heart beat and haemoptysis. She has previously been followed up in the Cardiac Clinic for 1 year during which she has been relatively stable. Physical exam reveals dyspnoea at rest, temperature of 36.7°C , pulse rate of 120 beats/min with irregularly irregular rhythm. The jugular venous pressure is 14 cm of water. Praecordial exam reveals a tapping apex beat in the 5th intercostal space, mid-clavicular line. The heart sounds are irregular and there is a mid-diastolic murmur at the apex. There are fine bibasal crepitations.

(a) What is the clinical diagnosis?

(2 Marks)

(b) List 6 factors that could have contributed to the worsening of her clinical state.

(3 Marks)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

(c) List 3 investigations that will elicit her underlying structural cardiac lesion and the expected finding for each.

Investigations (3 Marks)

Expected finding (3 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

(d) List 4 long-term complications of the cardiac lesion (other than mortality). (4 Marks)

1. _____
2. _____
3. _____
4. _____

(e) Outline 5 principles of management of this patient.

1. _____
2. _____
3. _____

(5 Marks)

1. A 27 year old man presents with a 3 week history of progressive shortness of breath, dry cough and low grade fever. He has received a course of oral amoxicillin without much improvement. He completed treatment for sputum positive pulmonary tuberculosis (PTB) 2 months ago; and had responded well to the PTB treatment. Physical examination reveals a cachectic patient in severe respiratory disease and with florid oral thrush. His pulse rate is 111 beats/minute, temperature is 37.9°C, respiratory rate is 32 beats/minute. SpO₂ is 110/75 mmHg and O₂ saturation on pulse oximetry is less than 90% on room air. He weighs 46 kg. HIV test done after counselling comes back as positive.

(a) What is the most likely diagnosis? (2 Marks)

(b) What is the WHO clinical stage of this patient? (1 Mark)

(c) List 5 priority investigations you would carry out and the expected findings.

Investigations (5 Marks) **Expected findings (5 Marks)**

- | | | | |
|----|-------|----|-------|
| 1. | _____ | 1. | _____ |
| 2. | _____ | 2. | _____ |
| 3. | _____ | 3. | _____ |
| 4. | _____ | 4. | _____ |
| 5. | _____ | 5. | _____ |

(d) List 2 parameters that objectively indicate severity of respiratory disease and the need for adjunctive therapy in this patient. (2 Marks)

- | | | |
|----|-------|-----------|
| 1. | _____ | (5 Marks) |
| 2. | _____ | |

(e) Outline 5 principles of management of this patient.

- | | |
|----|-------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |
| 4. | _____ |
| 5. | _____ |

A 61 year old man is brought to the casualty with acute onset of right-sided body weakness. The patient was eating lunch when he suddenly lost strength in the right side of his body. He was unable to move his right arm and leg and also noted a loss of sensation in the right arm and leg. He had difficulty speaking. His medical history is remarkable for longstanding hypertension. Physical exam reveals blood pressure of 184/100 mmHg. Neurological exam reveals right facial droop and dense right hemiplegia. CT scan of the brain shows no evidence of haemorrhage.

(2 Marks)

(a) What is the diagnosis?

(1 Mark)

(b) What vascular territory is involved?

(4 Marks)

(c) List 4 risk factors for this condition.

1. _____
2. _____
3. _____
4. _____

(d) List 4 priority investigations to establish the predisposing factors and the expected findings.

Investigations (4 Marks)

- | | |
|----------|----------------------------|
| 1. _____ | Expected finding (4 Marks) |
| 2. _____ | 1. _____ |
| 3. _____ | 2. _____ |
| 4. _____ | 3. _____ |
| | 4. _____ |

(5 Marks)

(e) Outline 5 principles of management of this patient.

1. _____
2. _____
- _____
- _____
- _____

10. A 40 year old woman presents with a 5 week history of palpitations, heat intolerance and an anterior neck swelling. She has lost 3 kg weight despite an increased appetite. On examination, the neck swelling moves up with swelling.

(2 Marks)

(a) What is the most likely diagnosis?

Hyperthyroidism

(b) List 5 signs you would expect to find during physical examination. (5 Mark)

1. _____
2. _____
3. _____
4. _____
5. _____

(c) Outline 4 priority investigations you would carry out to establish the diagnosis and the expected finding.

Investigations (4 Marks)

Expected findings (4 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

(3 Marks)

(d) Outline 3 definitive treatment options for this patient.

1. _____
2. _____
3. _____

(e) List 2 expected complications of this condition (other than mortality). (2)

1. _____
2. _____

8.

A 35 year old African man presents with tense ascites, leg oedema and a liver span of 3 cm. He has no Pruritus and no respiratory signs. Serum albumin was found to be 20g/L and serum-ascites albumin gradient was $> 11\text{g/L}$.

(a) What is the clinical diagnosis?

(2 Marks)

(b) List 4 possible causes of this condition.

(4 Marks)

- 1. _____
- 2. _____
- 3. _____
- 4. _____

(c) List 3 complications that this patient is at risk of.

(3 Marks)

- 1. _____
- 2. _____
- 3. _____

(d) List 4 tests you would carry out on the ascitic fluid and how you would interpret the results.

Test (4 Marks)

Results Interpretation (4 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

(e) Outline 3 principles of management of the ascites in this patient. (3 Marks)

(a) List 5 differential diagnoses for this presentation.

(5 Marks)

1. _____
2. _____
3. _____
4. _____
5. _____

His complete blood count reveals WBC - $348 \times 10^9/L$, platelets - $602 \times 10^9/L$, Hemoglobin - 9 g/dl.

(b) What is the most likely diagnosis?

(1 Mark)

(c) List 4 priority investigations and the expected findings.

Investigations (4 Marks)

Expected findings (4 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

(d) List 3 phases in the natural course of this condition.

(3 Marks)

1. _____
2. _____
3. _____

(e) Name 3 drugs used in the management of this condition.

(3 Mark)

1. _____
2. _____

2. A 22 year old woman presents with a 2 month history of shortness of breath, irregular heart beat and haemoptysis. She has previously been followed up in the Cardiac Clinic for 1 year during which she has been relatively stable. Physical exam reveals dyspnoea at rest, temperature of 36.7°C , pulse rate of 120 beats/min with irregularly irregular rhythm. The jugular venous pressure is 14 cm of water. Praecordial exam reveals a tapping apex beat in the 5th intercostal space, mid-clavicular line. The heart sounds are irregular and there is a mid-diastolic murmur at the apex. There are fine bibasal crepitations.

(a) What is the clinical diagnosis?

(2 Marks)

(b) List 6 factors that could have contributed to the worsening of her clinical state.

(3 Marks)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

(c) List 3 investigations that will elicit her underlying structural cardiac lesion and the expected finding for each.

Investigations (3 Marks)

Expected finding (3 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

(d) List 4 long-term complications of the cardiac lesion (other than mortality). (4 Marks)

1. _____
2. _____
3. _____
4. _____

(e) Outline 5 principles of management of this patient.

1. _____
2. _____
3. _____

(5 Marks)

4. A 61 year old man is brought to the casualty with acute onset of right-sided body weakness. The patient was eating lunch when he suddenly lost strength in the right side of his body. He was unable to move his right arm and leg and also noted a loss of sensation in the right arm and leg. He had difficulty speaking. His medical history is remarkable for long standing hypertension. Physical exam reveals blood pressure of 184/106 mmHg. Neurological exam reveals right facial droop and dense right hemiparesis. CT scan of the brain shows no evidence of haemorrhage.

(a) What is the diagnosis?

(2 Marks)

(b) What vascular territory is involved?

(1 Mark)

(c) List 4 risk factors for this condition.

(4 Marks)

1. _____

2. _____

3. _____

4. _____

(d) List 4 priority investigations to establish the predisposing factors and the expected findings.

Investigations (4 Marks)

Expected finding (4 Marks)

1. _____

1. _____

2. _____

2. _____

3. _____

3. _____

4. _____

4. _____

(e) Outline 5 principles of management of this patient.

(5 Marks)

1. _____

2. _____

3. _____

4. _____

5. _____

Index Number _____

5. A 23 year old woman presents with general malaise, leg swelling, progressive reduction in urine output, poor appetite and nausea. She has pallor ++, bilateral pitting oedema ++ and blood pressure is 182/115 mmHg. She is nulliparous. She has been managed for hypertension for the last 3 years.

Investigations reveal:

Urinalysis - protein +++, RBCs ++, granular casts, no growth obtained on culture.
FBC - Haemoglobin 9.2 g/dl, MCV 86 fl.

WBC - $5.3 \times 10^9/L$, platelets - $176 \times 10^9/L$

UECr - Serum creatinine 201 $\mu\text{mol/L}$,

Urea 13 mmol/L, K⁺ - 5.3 mmol/L,

Na⁺ - 131 mmol/L

Renal ultrasound shows - echogenic kidneys, right - 8.1 x 3.6 cm, left - 7.9 x 3.6 cm

(a) What is the clinical diagnosis? (2 Marks)

(b) List 4 possible secondary causes of this condition and give screening tests for these secondary causes.

Secondary Cause (4 Marks)

- | | | | |
|----|-------|----|-------|
| 1. | _____ | 1. | _____ |
| 2. | _____ | 2. | _____ |
| 3. | _____ | 3. | _____ |
| 4. | _____ | 4. | _____ |

Screening Test (4 Marks)

(c) What is the commonest haematological complication associated with this condition? (1 Mark)

(d) List 4 causes of the haematological complication. (4 Marks)

- | | |
|----|-------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |
| 4. | _____ |

(d) Outline 5 principles/modalities used to slow down the progression of this condition (5 Marks)

3. A 63 year old man presents with a 3 month history of cough, frank haemoptysis and weight loss. He has a 30 pack-year history of cigarette smoking. Sputum microscopy and culture is negative for tuberculosis.

(a) What is the most likely diagnosis? (2 Marks)

(b) Outline other clinical features that would be indicative of the diagnosis under the areas:

(4 Marks)

General Exam

1. _____
2. _____
3. _____
4. _____

(4 Marks)

Local Effects

1. _____
2. _____
3. _____
4. _____

(c) Outline 4 priority investigations you would carry out and the expected findings.

Investigations (4 Marks)

Expected finding (4 Marks)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

(d) Outline 2 approaches to the definitive management of this condition.

(2 Marks)

1. _____
2. _____