



HONG KONG COLLEGE OF ANAESTHESIOLOGISTS

DIPLOMA OF FELLOWSHIP

FINAL FELLOWSHIP (INTENSIVE CARE)

LONG ANSWER PAPER

2 Questions

Monday, 19 August 2013 (1:00 pm - 3:00 pm)

NOTICE

- (A) There are two questions.
- (B) Each of the two questions is worth equal marks.
- (C) Write your answers to the two questions in separate books.
- (D) Record your candidate number on the cover of each book and hand in all books.

Question 1

You have just been called to see a single 29-year-old female in the Accident and Emergency Department (AED). She had collapsed at home after complaining of dizziness and difficulty in breathing.

Her parents informed you that she has not been eating much for the past 2 years due to complaints of epigastric discomfort, with progressive weight loss from a previous weight of 45kg. She has been investigated previously for secondary amenorrhoea with findings of hypothalamic hypogonadism of unknown aetiology. Other investigations to explain her weight loss including gastroscopy and ultrasound abdomen had turned out negative. Her body weight is currently at 26kg with a height 160cm.

On examination, she is extremely emaciated with the following parameters:

Glasgow Coma Scale (GCS)-15/15

Blood Pressure (BP)- 60/40mmHg

Heart Rate (HR)-42/min

Blood sugar level -3.6 mmol/L

Oxygen Saturation (SpO₂)- 96% on 10 L/min of non-rebreathing mask with Respiratory Rate (RR) of 25 breaths/min

Temperature -35.6C.

Arterial blood gas (ABG): pH 7.37, pCO₂- 36.9mmHg (4.9 kPa), pO₂- 74mmHg (9.9kPa), BE (-4) mmol/L, HCO₃⁻- 21mmol/L.

a) Outline your initial management in the AED. (3 marks)

b) Her Chest X-ray (CXR) shows a lower lobe consolidation. Subsequent investigations included:

White Cell Count (WCC)- 1.6×10^9 (80% neutrophils),

Haemoglobin (Hb)-7.6 g/dL

Platelet- $63 \times 10^9/L$

i. How will you manage the patient's respiratory insufficiency? (1.5 marks)

Discuss the role of non-invasive ventilation (NIV) vs invasive mechanical ventilation?

Justify your answer

ii. What antibiotic(s) would you start? Justify your answer (1.5 marks)

c) A nasogastric tube was inserted for enteral feeding. Discuss your approach in feeding this patient (2 marks)

d) Discuss some of the potential complications associated with feeding (2 marks)

Question 2

A 57 years old lady, with history of hypertension, diabetes mellitus and depression was presented to Accident and Emergency (A&E) because of dizziness and abdominal pain after taking a large amount of verapamil sustained release tablets for suicidal attempt 6 hours ago. On examination she has mild abdominal distension with diminished bowel sound. Other parameters:

Glasgow Coma Scale (GCS) – 12/15

Blood Pressure (BP) - 75/32 mmHg

Heart Rate (HR) - 35/min.

Oxygen Saturation (SpO₂)- 97% on room air

Respiratory rate (RR) of 15/min

Blood Glucose level - 22.4 mmol/L.

- a) What is your initial management? (2 marks)
- b) Briefly explain the pathophysiological effect of calcium channel blockers and the associated clinical manifestations. (3 marks)
- c) What are the pharmacological treatment options (including dosages) and briefly explain the mechanism of actions. (3 marks)
- d) Lists 2 non-pharmacological support options. (1mark)

Patient subsequently developed further abdominal distension with the following investigation results:

White cell count (WBC) $15 \times 10^9/L$

Urea 22 mmol/L

Creatinine 220 $\mu\text{mol/L}$

Arterial Blood Gas pH 7.02, pCO₂- 20mmHg (2.7 kPa), pO₂- 90 mmHg (12.0 kPa), HCO₃⁻- 11mmol/L, BE (-10) mml/L. FiO₂ – 0.5

Abdominal X Ray (AXR): Dilated small bowel loops

- e) What is your diagnosis and choice of investigation? Give two possible mechanisms? (1 mark)

End of paper