

Book 2

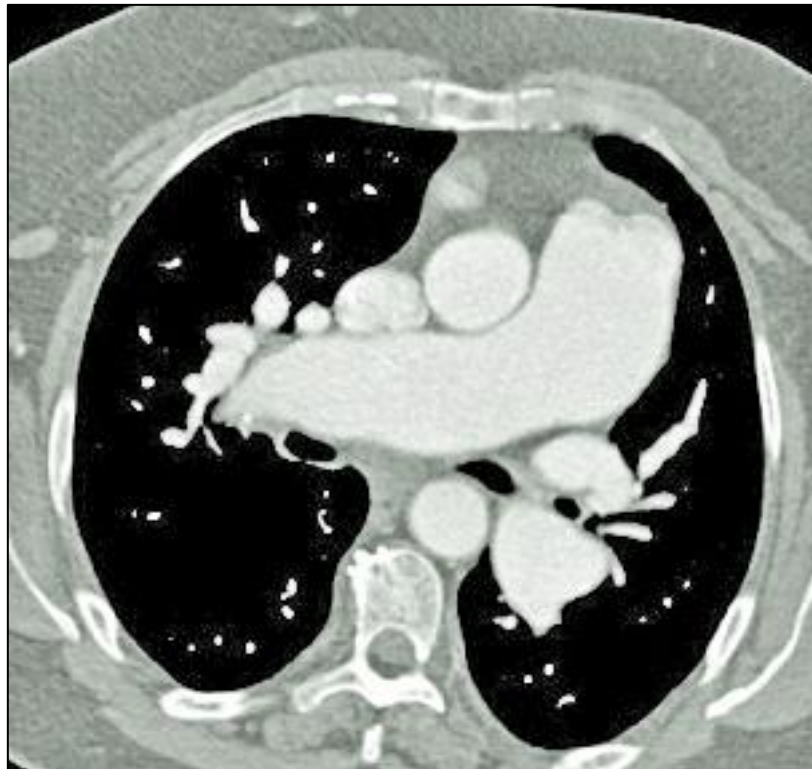
Candidate Name: _____

Question 10 (12 marks)

A 72 year old male has been referred in to your Emergency department by his GP due to concerns over the report of his CT Pulmonary Angiogram report performed as an outpatient. The CTPA reports reads as follows;

Conclusion; No signs of PE. Markedly dilated pulmonary arteries ?pulmonary hypertension – clinical correlation is required.

Image displayed below from CTPA



List 2 clinical symptoms that may be suggestive of Pulmonary Hypertension in this patient (2 marks)

List 2 further ED Investigation that could be used to investigate this patient for evidence of Pulmonary Hypertension. (2 marks)

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With regards to the Aetiologies of Pulmonary hypertension complete the following table with 2 examples of disease for each classification group, except for group 4 which has been pre-completed. 8 marks

Classification Group	Examples of disease
1 – Pulmonary Arterial Hypertension	i. ii.
2 – Pulmonary venous hypertension	i. ii.
3 – Chronic Hypoxaemia	i. ii.
4 – Chronic thromboembolic disease	Pulmonary Embolism
5 - Miscellaneous	i. ii.

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Question 11 (14 marks)

A pre-term female neonate, 4 weeks old (age adjusted to term) is brought in with 12 hours of vomiting. On examination she has sunken eyes and is irritable. Her observations are as follows;

Temp 39.5

CRT 4 secs

HR 172 RR 40 Sats 98% ra

With regards to this vomiting neonate presentation – list 3 obstructive and 3 non-obstructive causes for the vomiting. (6 marks)

Non-obstructive	Obstructive
1.	1.
2.	2.
3.	3.

IV access is obtained and an NG placed for persisting vomiting. A plain AXR is performed and is demonstrated below



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Identify the most significant clinical finding on the abdominal film and the likely diagnosis (2 marks)

Outline your further management for this child. Candidates can assume that apart from the NGT insertion and IV access obtained no further management has been performed. (6 marks)

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Question 12 (13 marks)

A 28 year old male is brought into the department after a motor vehicle accident. He is placed in a C-spine collar for neck precautions as he had been complaining of neck pain. On further questioning you determine that he has an occipital headache. Examination reveals unilateral facial paraesthesia. There are no other focal neurological deficit on examination and he appears well otherwise.

You are concerned about a blunt cerebrovascular injury.

What are the two major vessels involved in blunt cerebrovascular injury? (2 marks)

List four (4) clinical features of blunt cerebrovascular injury in the aforementioned vessels. (4 marks)

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Name a screening criteria used to evaluate blunt cerebrovascular injury (BCVI) (1 mark)

List 3 risk factors for a blunt cerebrovascular injury? (3 marks)

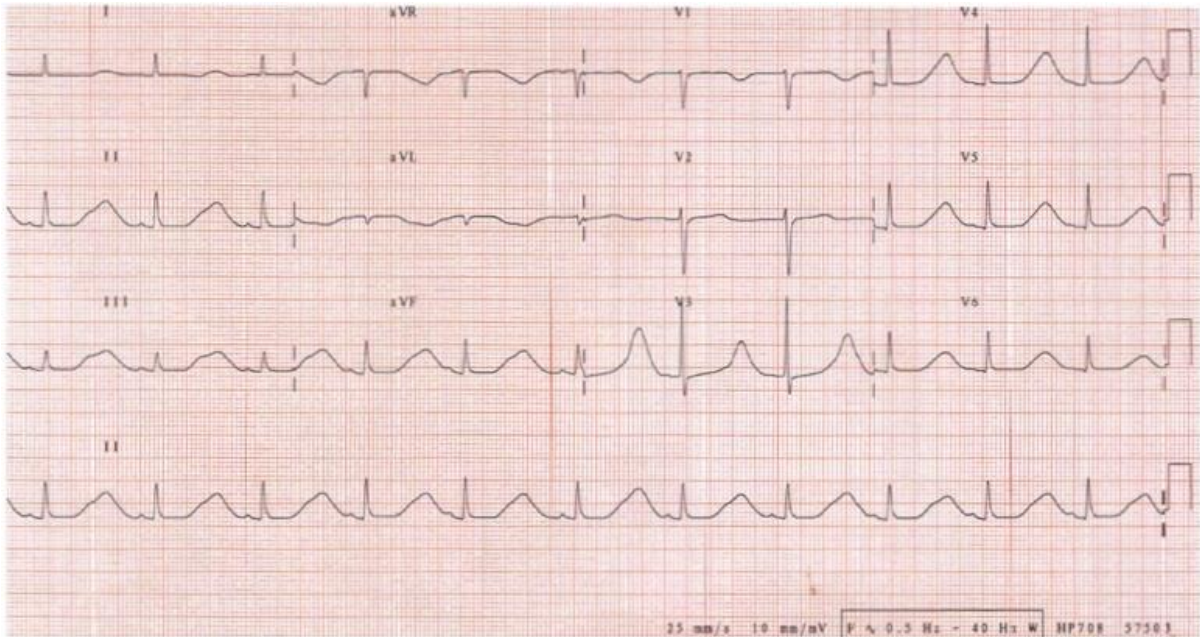
Candidate Name: _____

List 3 signs and/or symptoms which would suggest a blunt cerebrovascular injury (3 marks)

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Question 13 (14 marks)

A 28 year-old-male is brought in by an ambulance following a syncopal episode while at the shopping mall. His initial ECG is shown below.



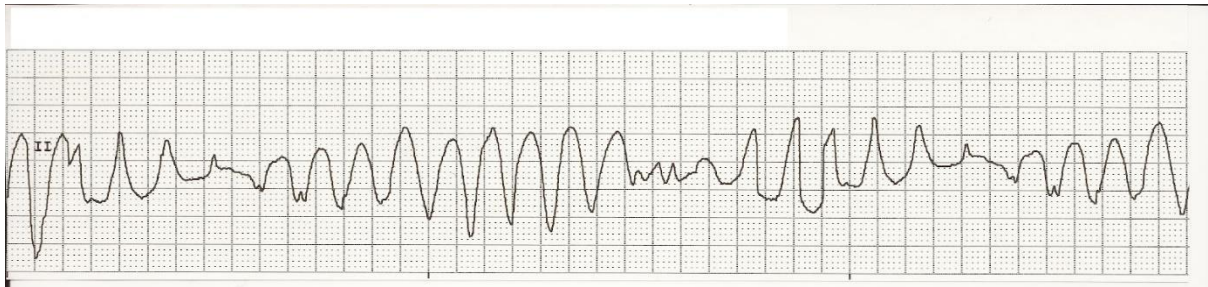
What is the primary abnormality seen on the above ECG (1 mark)

List 5 pharmacological causes (each from a different class of drug) that may cause the above abnormality (5 marks)

List 3 non-pharmacological causes or risk factors for the above abnormality (3 marks)

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While assessing him, you notice the rhythm strip with the ambulance paperwork.



What is the abnormality seen on the rhythm strip? (1 mark)

Discuss your management of this man (4 marks)

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Question 14 (15 marks)

A 36 year old man fell off his skateboard while going to work. He presents to the emergency department with a closed forearm fracture. Your registrar comes to you and tells you that she plans to do a procedural sedation for a closed reduction in ED.

What is the minimal level of monitoring would you require, in order to conduct a safe procedural sedation? (3 marks)

Your registrar plans to use Ketamine as her agent of choice for the procedural sedation.

Please complete the following table regarding this medication (8 marks)

Ketamine	
Onset of effect	IM – IV –
Dose	IM – IV –
Duration of effect	IM – IV –
Adverse effects	1. 2.

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List four (4) factors which will predict difficult bag-mask ventilation (4 marks)

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Question 15 (15 marks)

An 8 week old girl was brought to the emergency department at 3am for an episode of cyanosis, floppiness and apnoea, 10 minutes after an early morning breastfeed. Mum stated that the whole episode lasted about 15-20 seconds. She was born at 36 weeks via forceps delivery with no complications, and discharged on day 3 of life.

List the criteria to say a child had a Brief Resolved Unexplained Event (BRUE) (5 marks)

List 5 differential diagnosis of BRUE in broad categories with 1 specific example each (5 marks)

Describe the features of a Lower Risk BRUE (5 marks)

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Question 16 (20 marks)

A 32 year old male was brought in by Police and Ambulance after being found running in the streets naked. He has just finished sitting postgraduate exams and went out with his fellow candidates to celebrate. On examination, he is confused and agitated, febrile to 40°C, HR 140 bpm, BP 163/92. Patient has a history of recurrent Migraine and is taking Amitriptyline as prophylaxis.

Give 5 differentials for this patient's presentation. Each should be in a different category (5 marks)

List the Hunter Toxicity Criteria Decision Rule (5 marks)

Fill in the table with respect to the different Toxidromes (10 marks)

Toxidrome	Mental status	Eyes	Lungs	Pulse rate	Bowel sounds	Bladder	Neurological
Sympathomimetic							
Cholinergic							
Anticholinergic							
Opioid withdrawal							
NMS							
Serotonin Syndrome							

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Question 17 (12 marks)

You are a new Consultant in a district ED. Your Director has assigned you to supervise a senior Registrar who is doing an Administrative role in his final year of training. He was asked to be involved in development of guidelines in the ED and is seeking advice from you about its processes.

List 6 general key steps for developing a guideline (6 marks)

During the Literature review phase and benchmarking with other institutions, your registrar has noted large differences from current guidelines in your institution and current state-wide practice.

You have explained that in order to understand how care can be improved, it is important to understand the current context of how care is provided.

List diagnostic tools used to identify how care is provided? (6 marks)

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Question 18 (11 marks)

A 32 year old female has been brought in to your tertiary ED with a 2 days history of increased drowsiness, confusion and hypothermic at 33C. Her mother has attended with her and reports she has not been taking any of her medications for the last 1 month.

Medications listed are;

Sodium Valproate 500mg BD

Thyroxine 100mcg OD

Methadone 100mg OD

GCS 14

Temp 33C

HR 66 BP 92/62

RR 16 Sats 95% on 1L NP

Her VBG is below

pH 7.387
PO2 15.3 mmHg
PO2 35.8 mmHg
HCO3 21.1 mmol/L
Hb 129 g/L
Cr 73 micromol/L
Na 130 mmol/L
K 4.0 mmol/L
Cl 105 mmol/l
iCa 0.66 mmol/L*
Glucose 10.4 mmol/L
Lactate 2.5mmol/

You suspect a myxoedema coma.

Provide 4 differential diagnoses for this patient apart from Myxoedema coma (4 marks)

Her Thyroid function tests are below;

TSH 25.0 Miu/L (H)

Thyroxine free <3pmol/L (L)

Triiodothyronine Free <1.5pmol/L (L)

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Excluding medication non-compliance, list 4 possible triggers for this presentation (2 marks)

No other trigger or cause for the patient's presentation has been found and you are confident it is due to omitted medication causing a myxoedema coma.

Outline your treatment of this patient in the ED (5 marks)

END OF BOOKLET

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