

**Department of Emergency Medicine
Prince of Wales Hospital**

**ACEM NSW
Fellowship Exam Practice
(2019.2)
27 August 2019**

**Short Answer Questions
Booklet 2
Questions 10-18**

Directions to Candidates

1. Write your name on the front page of each question booklet and on each subsequent page.
2. Answer each question in the space provided.
3. No exam papers or materials to leave the room.

Candidate name: _____

Name: _____

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Name: _____

SAQ 10 (this is a double question- 20 marks)

22 female BIBA with status epilepticus following probable drug ingestion at a college party. It has just been terminated by paramedics following a second dose of midazolam IV.

Q1. List 5 causes for seizures in this patient? (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

She is currently haemodynamically stable, but drowsy. ECG shows sinus tachycardia.

You performed an ABG with the following results:

pH 7.1	pO ₂ 110	pCO ₂ 40	hCO ₃ ⁻ 10
Na 118	K 5.4	Glu 9	Lactate 12

Q2. Describe and explain 3 important findings. (3 marks)

1. _____

2. _____

3. _____

Q3. What is your next treatment option and treatment target? (2 marks)

Name: _____

Q4. You suspect SIADH. What investigation results would help confirm this diagnosis? (3 marks)

Q5. What likely drug/class of drug might she have ingested? (1 mark)

Q6. Give 5 organ systems that can be affected with use of this? (6 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

Name: _____

SAQ 11 (10 marks)

A 63 year old male presents with frank haematemesis.

Q1. Describe what features of the history and examination may suggest the aetiology, starting with what might suggest oesophago-gastric varices as the cause? (3 marks)

Q2. Complete the following table as it relates to the correction of coagulopathy occurring during acute upper gastrointestinal bleeding. (3 marks)

Coagulopathy	Threshold	Management
Platelets		
INR		
aPPT		
Fibrinogen		

Name: _____

Q3. Apart from transfusion of blood products and endoscopic management, describe the emergency department treatments available for acute upper gastrointestinal bleeding, and when they might be used. (4 marks)

Name: _____

Q2. How do you differentiate between failure of output and failure to capture in a paced ECG?
(2 marks)

Q3. What are the effects of a magnet on (i) AICD and (ii) pacemaker function? (2 marks)

i. AICD: _____

ii. Pacemaker: _____

Name: _____

SAQ 13 (10 marks)

A 2 year old arrives in the ED with her mother. She has been lethargic for the last 12 hours. She has no significant past medical history. She has no sick contacts.

HR 150/min BP 80/50, RR 44 , SaO2 96% on room air.

BSL: high.

vBG: pH 7.03, HCO₃ 3 mmol/L.

Capillary refill is 2 seconds

Q1. The bedside nurse establishes IV access and asks if you would like an IV fluid bolus. What do you want and why? (2 marks)

Q2. What is the most serious cause of her altered mental status do you need to keep in mind? (1 mark)

While you are writing up her notes, the alarm alerts to the following changes:

HR 90/min, BP 140/50

Q3. How will you manage this? (3marks)

Name: _____

Her conscious state deteriorates despite the measures you have taken. You decide to prepare for intubation.

Q4a. You remember that she is severely acidotic with pH of 7.03 HCO₃ of 3mmol/L.
What is the most significant complication you must prepare for? (1 mark)

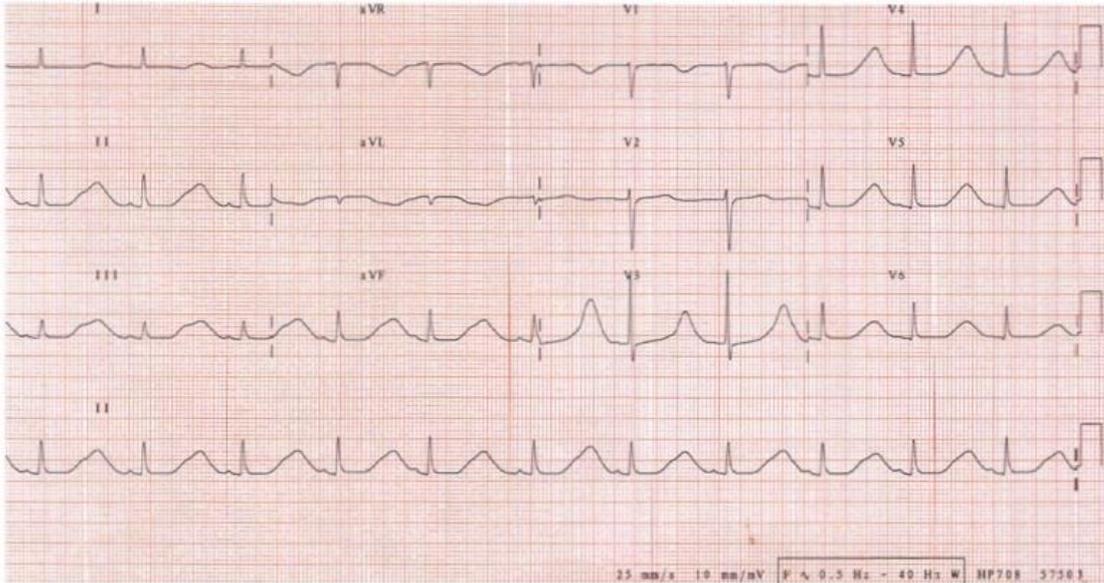
Q4b. What role does the severe acidosis play in this? (2 marks)

Q4c. How would you prevent/mitigate this? (1 mark)

Name: _____

SAQ 14 (10 marks)

A 26 year old male presents following a polypharmacy overdose. An ECG is obtained, as shown below.

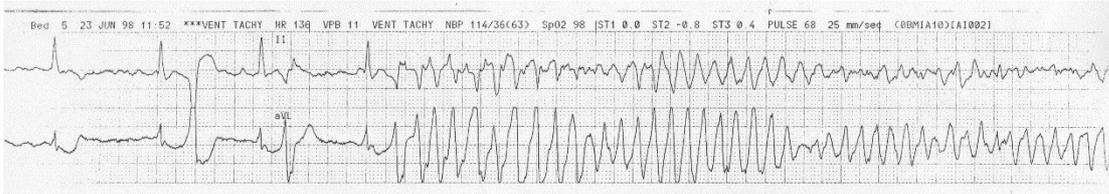


Q1. List 5 *classes* of medications with one appropriate example, that could produce these ECG findings in overdose. (5 marks)

Class	Drug

Name: _____

The patient becomes bradycardic, HR 45, and develops the following rhythm on monitor.



Q2. What is this condition and give 4 treatment regime for this condition? (5 marks)

Condition: _____

Treatment: _____

1. _____

2. _____

3. _____

4. _____

Name: _____

SAQ 15 (10 marks)

A 20yr old female presents with a unilateral throbbing headache and vomiting. She is afebrile, GCS 15 and haemodynamically stable. She states that Google told her she has a migraine.

Q1. List 4 differentials and 1 discriminating features in each of history/examination findings.
(4 marks)

Diagnosis	Historical feature	Examination feature

She has no high risk features for a secondary cause of headache.

Q2. Which investigation do you order? (2 marks)

Name: _____

Q3. What are four treatment options for migraine with an NNT <5? (4 marks)

NB You are not required to list the NNT.

1. _____

2. _____

3. _____

4. _____

Name: _____

SAQ 16 (10 marks)

47 yr male, Sebastian, presents with increasing headache. His boss called an ambulance when he started to behave strangely.

Your intern has initially sent bloods. On her examination, Sebastian had a low grade fever. She felt he was quite "frontal", but he had no lateralising neurology.

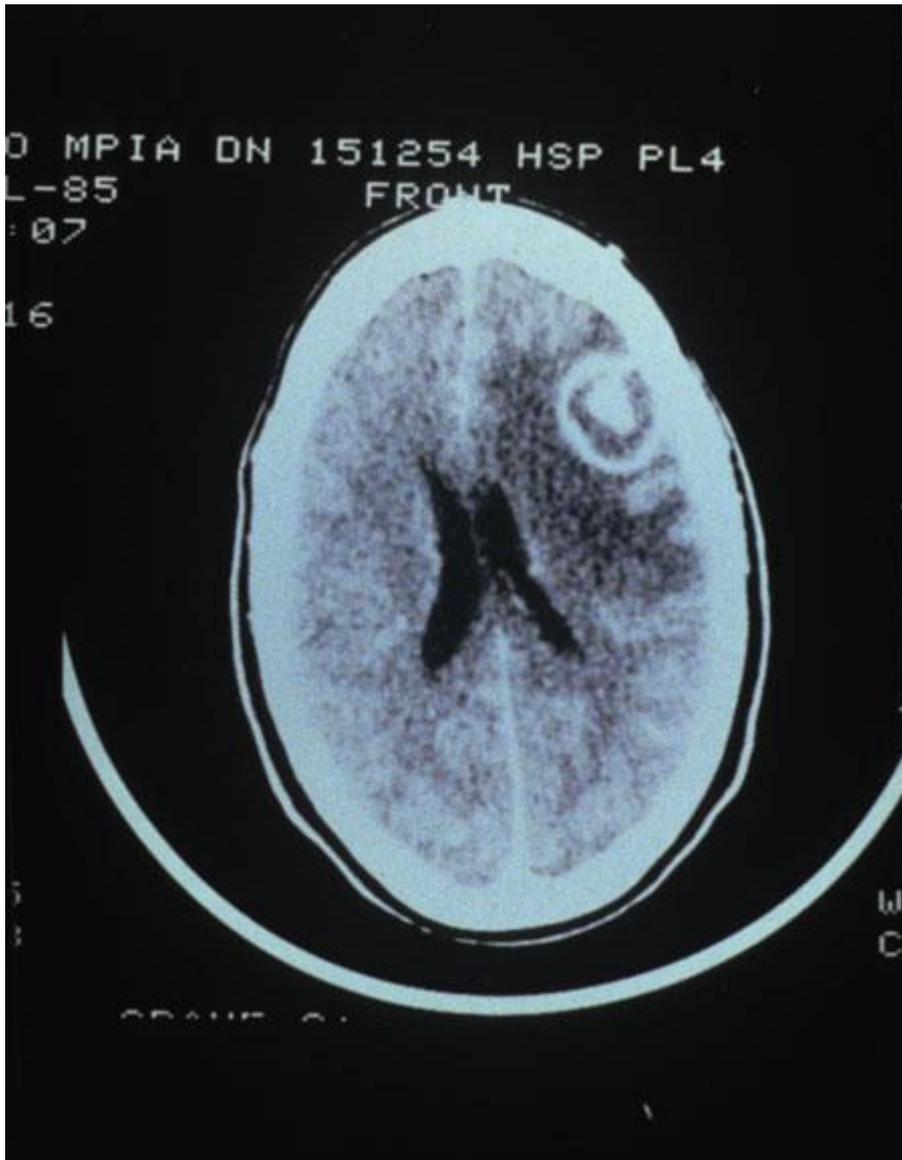
Q1. What signs/symptoms may indicate frontal lobe involvement? (3 marks)

His partner arrives quite distressed. Sebastian has not been taking his HAART for over a year. He works as a construction worker, and with the early starts, he frequently forgets to take his medication.

Sebastian has no other medical problems, and has never taken non prescribed drugs. .

Q2. What key investigations would you like to further evaluate this patient? (2 marks)

He returns from his CTB.



Q3. Please describe 4 clinically relevant features in his post-contrast CT Brain. (2 marks)

1. _____

2. _____

3. _____

4. _____

Name: _____

His partner asks about the likely outcome of his current condition.

Q4. What is his likely prognosis post treatment? (3 marks)

Name: _____

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SAQ 17 (10 marks)

A 75 year old lady presents with haemoptysis. She has been coughing up bright red blood for a few hours and estimates the volume as 2 cups.

PMH includes HTN, and AF and she is taking Apixaban 5mg BD, Metoprolol 25mg BD and Amlodipine 10mg D.

On assessment she looks well, BP 156/89, Pulse 72 irregular, CRT < 2 secs, RR 20, Sats 97% on room air and faint crepitations are heard at the left lung base.

Q1. List 2 drugs that can be used to reverse Apixaban in acute bleeding. Include the route and dose of each (2 marks).

1. _____

2. _____

Q2. What specific imaging modality is required to try and identify the bleeding site? (1 mark)?

Q3. List 4 differences in your approach to intubation in this scenario as compared to a predicted easy intubation. (4 marks)

1. _____

2. _____

3. _____

4. _____

Name: _____

Q4. What 3 definitive treatment options are available to treat massive haemoptysis? (3 marks)

1. _____

2. _____

3. _____

SAQ 18 (10 marks)

A 43 year old lady presents with a sudden onset of the most severe headache she has ever experienced. The onset was during an exercise class in her gym 8 hours ago. She does not have a history of headaches or migraines. She is normally in good health with no significant medical history. Her only medication is the Oral Contraceptive Pill
Her examination is unremarkable. Notably, her GCS is 15 with no neurological deficits.

Q1 Other than a subarachnoid haemorrhage or sentinel bleed, what other differential diagnoses are there for a thunderclap headache? List 4. (4 marks)

1. _____

2. _____

3. _____

4. _____

Her non -contrast CT brain is reported as “no acute intracranial abnormality and no subarachnoid blood is seen”.

Lumbar Puncture is performed and a traumatic tap is reported with visible blood in the tubes.

Q2. Her CSF cell count reveals red cells. List 4 features which would make the diagnosis of a bloody tap, rather than SAH more likely. (2 marks)

1. _____

2. _____

3. _____

4. _____

Name: _____

MRI with MRA is performed confirming SAH with an 8mm aneurysm within the anterior communicating artery.

Q3a. Detail your haemodynamic aim in this situation. (1 mark)

Q3b. What drug therapies, would you use to achieve these goals? (2 marks)

Q3c. Why do we aim for this BP endpoint? (1 mark)

-End of Booklet 2-