

Question 1:

A 20yo male attends with a grossly swollen painful hand from a punching injury at 36 hours. There is broken skin over the 3rd MCP joint.



- (a) What complications may arise from this injury? (20%)
- (b) Outline your examination (20%)
- (c) Given the appearance of the hand shown, what investigations would you request, assuming no comorbidities and that this is an isolated injury? (20%)
- (d) What are the indications for admission? (20%)

Question 2:

A 45yo male is brought to Launceston ED by ambulance from a property near Launceston Tasmania. He reports that he has been bitten on the hand in the field “by a tiger snake” 20 minutes earlier. A pressure bandage and splint were applied in the field. He experienced a brief syncope within a few minutes of the bite and now complains of mild discomfort in the hand, visual blurring and feeling light headed.

- (a) Sequence your management steps (35%)
- (b) What is the role for VDK in this man? (10%)
- (c) What laboratory tests are appropriate to the management of this case? (30%)
- (d) Complete the table for the clinical presentation of Tiger snake envenomation in humans? (30%)

Symptom/sign/lab result	present/absent (cross out incorrect answer)
Severe pain at the bite site	present/absent

Defibrinating coagulopathy	present/absent
Anti-coagulant coagulopathy	present/absent
Myolysis (clinically significant)	present/absent
Presynaptic paralysis	present/absent
Postsynaptic paralysis	present/absent

Question 3:

Immediately upon commencing Tiger snake antivenom therapy a 45 yo male develops severe dyspnoea, throat “tightness” and light headedness.

- (a) Describe your immediate actions. (70%)
- (b) Describe the hypersensitivity reaction involved. (30%)

Question 4:

A 45yo male has become unresponsive a few seconds after receiving 500mcg of IM adrenaline for florid anaphylaxis (hypoxia, hypotension, welting, wheeze and tongue swelling) to snake bite antivenom.

- (a) You elect to intubate using ketamine and suxamethonium (assuming that there are no contraindications). Complete the table by entering difficulties that you may anticipate and entering the immediate remedies that you’d institute for these.

Potential difficulty	Remedy
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Question 5:

A 45yo male has become unresponsive a few seconds after receiving 500mcg of IM adrenaline for florid anaphylaxis (hypoxia, hypotension, welting, wheeze and tongue swelling) to snake bite antivenom.

- (a) Outline the ventilation strategy that you will employ in this case.

Question 6:

A 47yo Caucasian male who has a prior hypoxic brain injury (secondary to anaphylaxis) complicated by seizures. He is brought to your department with an ongoing generalized seizure despite having had 15mg (0.2mg/kg) of midazolam en-route. His BGL is 12.0mmol/L. No trauma. No other comorbidities.

- (a) Assuming that there are no drug allergies, in the table below sequence the next four medications that you would use to control this seizure

Medication	Immediate potential complications

- (b) Record the immediate complications that you would anticipate with using these medications

Question 7:

Whilst restraining a 47yo male with a convulsive seizure a nurse was kned in the cheek, including the orbit and nose. She experienced immediate epistaxis, facial pain and visual blurring. (photo)

- (a) Assuming that this is an isolated facial injury without loss of consciousness, list six potential immediate ocular complications that you would exclude. (25%)
(b) What non-ocular complications would you seek to exclude? (25%)
(c) Describe your management of a probable acutely fractured nose. (25%)
(d) What are the clinical signs of orbital compartment syndrome? What is the immediate management? (25%)

Answers

Question 8:

You work in a metropolitan ED. In working through your algorithm for status epilepticus you elect to use propofol as a fourth line agent. You note that the patient has a short, thick neck, protuberant teeth and a hypertrophic tracheostomy scar.

- (a) What is your approach to this situation? (30%)
(b) Describe 4-10 steps in performing an emergency surgical airway. (50%)
(c) What are 5 potential complications of this procedure? (20%)

Question 9:

A 70yo female attends with acute, non-traumatic painless right unioocular blindness.

- (a) List 5 potential aetiologies for this presentation (50%)
- (b) What are the clinical features that would suggest Giant Cell Arteritis? (30%)
- (c) What is the treatment for Giant Cell Arteritis? (10%)
- (d) What are the complications of delayed treatment of Giant Cell Arteritis? (10%)

Question 10:

A 55yo male farm hand attends with palpitations for 8 hours and is found to be in AF. He has no history of rheumatic fever, IHD, hypertension, valvular heart disease, previous cerebral ischaemia, peripheral vascular disease or diabetes. He is normotensive and has no ECG evidence of ischaemia. This is his first episode. Apart from the AF his echo is normal.

- (a) Calculate his CHADS2 score
- (b) What is the purpose of this score
- (c) What is the purpose of the HASBLED score
- (d) In the table below List 4 pharmacologic management options for this patient and list two clinically important pros (excluding hypersensitivity reactions) for each

Medication	Pros	Cons
1.	1(i).	1(i)
	1(ii)	1(ii)
2.	2(i)	2(i)
	2(ii)	2(ii)
3.	3(i)	3(i)
	3(ii)	3(ii)
4.	4(i)	4(i)
	4(ii)	4(ii)

Question 11:

A 30yo IV drug user is BIBA with acute stridor. En-route he has been given adrenaline 500mcg IM, ventolin and oxygen. He has an IV in place.

He is alert, diaphoretic, and pale, febrile T-38.5C, PR 100SR, BP 120/80, RR 20, Sats 96% R/A. He has impaired mouth opening and abdominal rigidity. He reports feeling unwell and complains of difficulty swallowing and back pain and over the past three days.

- (a) What is your DDX for this presentation? (40%)
- (b) What is the pathophysiology of tetanus (20%)
- (c) What are the priorities in the management of this man with generalized tetanus? (40%)

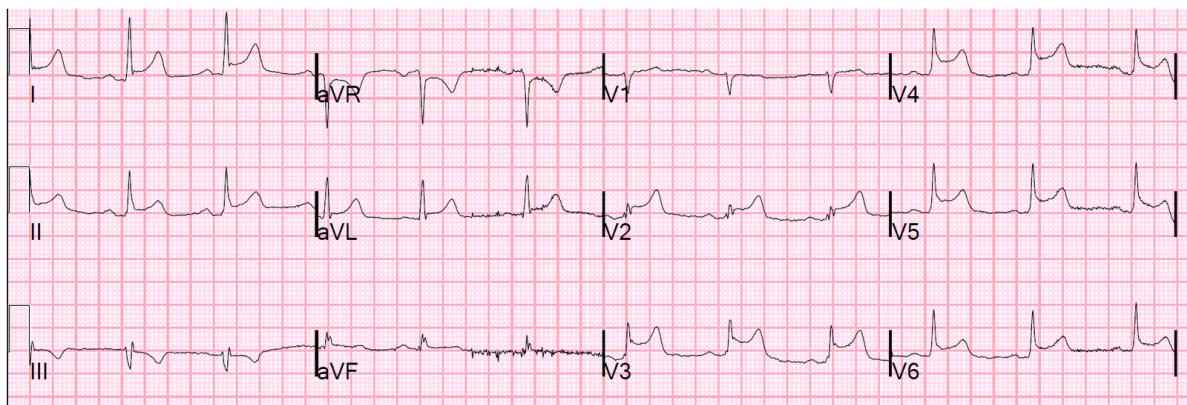
Question 12:

A 24yo female is BIBA with fever, mutism and increased muscle tone.

- (a) List 5 drug induced syndromes that have hyperthermia as a presenting sign. (10%)
- (b) What are the cardinal features of the history and clinical examination that define this as Neuroleptic Malignant Syndrome as distinct from Hyperserotonism? (40%)
- (c) What are the indications for intubation in this woman with NMS? (25%)
- (d) How would you manage her hyperthermia? (25%)

Question 13:

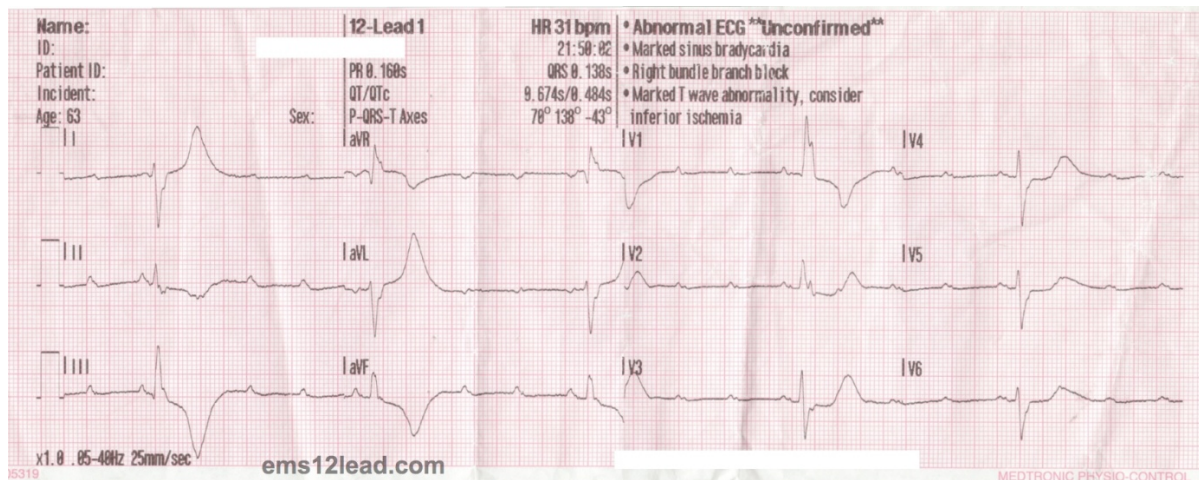
A 55yo male is BIBA with severe CP of 45 minutes duration. He has had oxygen, 600mcg of GTN, 300mg of oral aspirin followed by 250mls of NS for hypotension. ECG attached (assume standard calibration and paper speed)



- (a) What is the diagnosis from this ECG? (15%)
- (b) What are the most likely causes for acute hypotension in this setting? (30%)
- (c) What are the principal interventions for cardiogenic shock in AMI? (20%)
- (d) List 8 absolute contraindications to giving fibrinolytic therapy. (35%)

Question 14:

A 74yo, normally active and independent female presents with light headedness. PR 30bpm, BP 70/40. She is on no medications. She denies chest pain at any stage.



- What is the diagnosis from this ECG? (20%)
- What are your options for managing this condition acutely? (40%)
- Describe the steps in external pacing (40%)

Question 15:

A 22yo female attends with a sudden onset severe unilateral headache.

- What features on history and examination support the diagnosis of Acute Sub-arachnoid Haemorrhage? (20%)
 - What features support the diagnosis of hemicrania? (20%)
 - What is the optimal timing for an LP to exclude the diagnosis of SAH? (10%)
 - Describe your procedure/technique for lumbar puncture. (30%)
- The LP result (after a negative CT for SAH) follow:

MICROBIOLOGY REPORT - STERILE ASPIRATE for M/C/S				
Specimen Type: Cerebrospinal fluid				
Macroscopic Description: Blood stained				
Cell count	Tube 1	Tube 2	Tube 3	
Leucocytes	177	180	140	$\times 10^6/L$
Polymorph. cells:	131	130	120	$\times 10^6/L$
Mononuclear cells:	46	50	20	$\times 10^6/L$
Erythrocytes:	73500	80000	82000	$\times 10^6/L$
India ink: Cryptococcus neoformans not detected				
Microscopy: No bacteria seen				
<hr/>				
Protein	12.30 +	g/L	(0.15-0.45)	
Glucose	1.7 -	mmol/L	(2.2-5.0)	

- What is the next step in the diagnostic work up given this result? (20%)

Question 16:

A 28yo male has been BIBA.

Assaulted by a “business” partner in a carpark late at night.

Found unconscious, prone when people were alerted by yelling.

He has a stab wound to the right lateral chest and a blunt skull injury with bogginess.

GCS – 3, PR 140, BP 70/40, RR 36, Sats not accurate (poor peripheral perfusion), pupils equal 4mm, sluggish.

Pre-hospital Mx: intercostal needle right chest, 3 sided dressing right chest, IVC, NS 250mls, oxygen , collar.

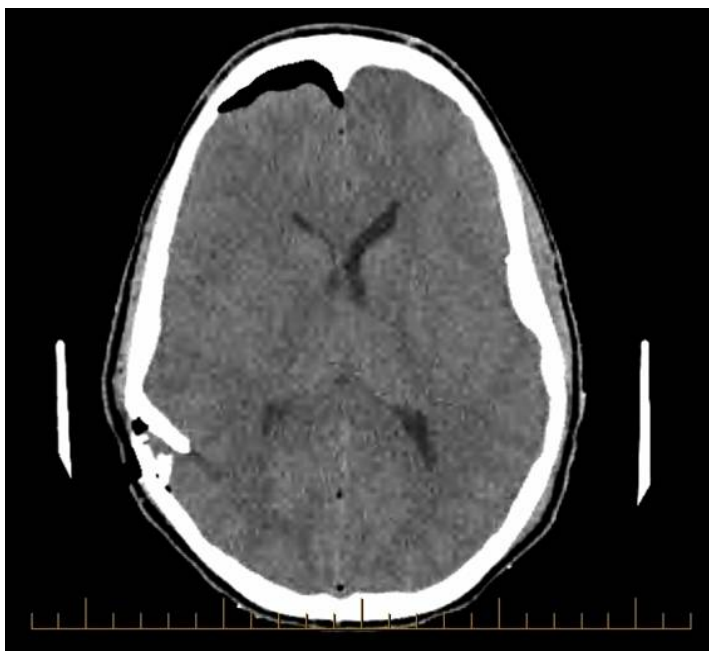
- (a) How do you manage his shock (25%)
- (b) Describe your technique for ICC insertion for a stabbed chest (25%)
- (c) Describe your approach to intubation in this situation (25%)
- (d) Will you intubate before or after ICC insertion? Justify your decision. (25%)

[Answers 16](#)

Question 17:

You have intubated a patient with a severe head injury from an assault.

His CT is attached.



- (a) List the abnormalities on this CT (50%)
- (b) Would you provide seizure prophylaxis? (20%)
- (c) Outline your management and define your physiological targets in the initial resuscitation for this presentation. (30%)

Question 18:

A three year old child is brought in by her mother in with the presenting complaint of vomiting.

Her initial observations are: Temp 37C, PR 120, normal colour, RR 18, Oxygen saturation 99% R/A, GCS 15, pupils 3mm, briskly reactive.

After 10 minutes in the waiting room the triage notes that she has a staggering gait. You are called to review her in the CIN room.

She is pale and drowsy with generally reduced tone, PR 88, RR 10, pupils 2mm and slightly sluggish.

- (a) Outline 5 essential steps in her resuscitation (20%)
- (b) Apart from ingestions list 4 potential aetiologies for her presentation (20%)
- (c) List 5 potential toxicological aetiologies for this presentation (20%)
- (d) You learn that her mother had given methadone to settle her behaviour. What is your response? (20%)