

Candidate number		Score	
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MET Call Oncology

Stem

You are the ICU consultant on call overnight at a tertiary hospital. You receive a call from your registrar, who is attending a MET call on the ward.

They inform you that there is a 28 year old male on the oncology ward who has been discovered to have a GCS of 3 by the nurse performing routine observations. He is breathing spontaneously with snoring respirations and has a HR of 60 bpm and BP of 150/80 mmHg.

The history they have so far is that he was admitted 3 days ago with acute confusion. On CT head on admission he was discovered to have multiple haemorrhagic intracerebral mass lesions, including a 40 mm x 40 mm mass in the left frontal lobe. A subsequent CT chest/abdo/pelvis revealed multiple lesions within the lungs, liver and spleen.

1. Describe how you would respond to your registrar on the phone?

- Determines how comfortable the registrar is managing the situation (registrar is junior and not comfortable)
- Appreciates urgency of situation and that ultimately patient requires airway management, urgent CT head, neurosurgical review, transfer to ICU
- Provides some temporising advice to registrar while coming in (basic airway/breathing/circulation management, check glucose, determine whether there is on-site support for registrar in meantime e.g. anaesthesia)

Prompt: Midway through your conversation, the patient begins to have a tonic clonic seizure. Your registrar says that they feel out of their depth and requests that you attend urgently to help them, and you do so.

Excellent 15	Good pass 12	Pass 8	Fail 5	Bad fail 2	Abysmal 0
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When you arrive at the patient's bedside you find he has a GCS of 3. He has a fixed and dilated left pupil.

2. Describe your immediate management?

- Identifies patient needs urgent CT head but requires airway management prior to this (airway protection, ICP management)
- Describes safe intubation with reference to preparation/optimization which may include
 - Use of checklist
 - Ensure adequate assistance available
 - Monitoring
 - States airway plan with back-up plan
 - Preoxygenation
 - RSI given fasting status unclear
 - Notes raised ICP and makes sensible drug plan with goals:
 - Avoidance of sympathetic stimulation with laryngoscopy
 - Avoidance of hypotension with induction
 - Capnography to confirm ETT placement
- Describes ICP management
 - Head up and neutral position, normoxia, normocapnia, osmotherapy, maintain MAP (target 80mmHg)
 - Sedation, analgesia, paralysis
- Urgent neurosurgical consult



Excellent 20	Good pass 15	Pass 10	Fail 7	Bad fail 3	Abysmal 0
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3. What are the principles of safely transporting this patient to the CT scanner?

- Maintain the same standard of care as the patient is currently receiving (in terms of monitoring and expertise)
- Staff – at least a nurse, orderly and medical practitioner with adequate skills for transporting a ventilated patient
- Monitoring – pulse ox, capnography, ECG, NIBP, alarms for breathing system disconnection or ventilator failure
- Drugs – sedatives, muscle relaxant, vasopressor
- Equipment – oxygen, suction, airway equipment

Excellent 10	Good pass 7	Pass 5	Fail 3	Bad fail 1	Abysmal 0
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A CT head is performed which demonstrates the intracranial lesions as described. There is 13mm of midline shift and left uncal herniation.

4. What are your management priorities now?

- Urgent neurosurgical consult
- Transfer to theatre

Excellent 5	Good pass 4	Pass 3	Fail 2	Bad fail 1	Abysmal 0
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A category 1 craniotomy is booked. However, the neurosurgeon is coming in from home and you decide to transport the patient back to ICU to await theatre. During this time, you notice that the patient is becoming progressively tachycardic and hypotensive, with a HR up to 170bpm and BP of 80/40 on escalating doses of metaraminol, then noradrenaline.

5. What are your differentials for this haemodynamic disturbance, and how would you identify the cause?

- Hypovolaemic - blood loss
- Cardiogenic – SVT, Takotsubo
- Vasoplegic - Effect of drugs used for sedation; drug error; anaphylaxis; post foramen magnum herniation – vasomotor centre damage, catecholamine depletion and loss of sympathetic tone
- Obstructive – SVC obstruction, tension pneumothorax following intubation/mechanical ventilation

Excellent 10	Good pass 7	Pass 5	Fail 3	Bad fail 1	Abysmal 0
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Identifying the cause

- Clinical examination
 - Warm and vasodilated vs cool/shut down
 - Evidence of bleeding (abdominal distension)
 - Evidence of coning
 - Skin rash, bronchospasm (anaphylaxis)
 - Review infusions for drug errors
- Investigations
 - ECG – SVT?
 - eFAST scan at bedside
 - Free fluid in abdomen
 - Lung sliding
 - Echo
- CXR
- Blood gas

Excellent	Good pass	Pass	Fail	Bad fail	Abysmal
5	4	3	2	1	0

Thankfully, the anaesthetist appears to wheel the patient off to theatre, where he undergoes a craniotomy and resection of frontal lobe tumour. Due to persistent hypotension, he undergoes a CT C/A/P immediately post-op which reveals extensive active haemorrhage from a splenic lesion.

He is taken directly from CT for splenic artery embolization.

On arrival back in ICU, you see that in total he has received 6 litres of crystalloid, 8 units of PRBC, and 2 units of FFP.

7. What is your assessment and management of this patient's coagulation status?

- Patient has received massive unbalanced transfusion
- Send coagulation studies and/or TEG/ROTEM and use results to guide further product replacement (if indicated)
- Assess for ongoing bleeding
- Examine for evidence of DIC clinically
- Ensure normothermia, ionized calcium >1, aim normal pH

Excellent	Good pass	Pass	Fail	Bad fail	Abysmal
10	7	5	3	1	0

What is your plan for this patient for the next 12 hours?

8. What is your assessment and management of this patient's coagulation status?

- Patient should be desedated and assessed clinically
- Discuss with neurosurgery whether post-craniotomy imaging required today
- Assess for any evidence of ongoing bleeding
- Correct coagulopathy
- Meet with family

Excellent	Good pass	Pass	Fail	Bad fail	Abysmal
10	7	5	3	1	0



Gestalt Marks

Excellent 10	Good pass 7	Pass 5	Fail 3	Bad fail 1	Abysmal 0
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Preliminary total

/100

Divide preliminary total by 2 if any of the following occur:

- Doesn't check whether the registrar needs help /wants them to attend.
- Doesn't prioritise securing airway prior to CT
- Doesn't mention ICP management without direct prompting
- Doesn't identify patient has received a massive (unbalanced) transfusion and may have a coagulopathy as a result

Final total

/100

General viva comments

Viva specific comments

Top-tip