

RGA- SSSA

SAMPLE EXAM QUESTIONS

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Viva 1: Resuscitation, Trauma, Crisis Management

CANDIDATE INSTRUCTIONS

It is a Sunday afternoon in Scenarioville, and you are called to ED. The patient is a 30-year-old male who has rolled his quad bike. He has a fractured femur and a head laceration on initial assessment. His heart rate is 120 bpm, and his Blood Pressure is 80/40 mm Hg.

What are the potential causes of hypotension? What is your initial management for this patient?

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Question 1a: What are the potential causes of hypotension?

Question 1b: What is your initial management for this patient?

Candidates were required to list differential diagnoses for shock in trauma and outline their initial approach to a trauma patient, including "Trauma Call" activation & preparation, and describe a Primary Survey.

Question 2a: Following your initial management, the nurse comes to say that the patient's GCS has dropped from 12 to 6. How will you manage the patient now?

(Prompt if not discussed: Which drugs would you choose for induction?)

Question 2b: What are your strategies for managing this patient with his head injury after he is intubated?

(Prompt if not discussed: • Are there any ventilatory or circulatory strategies used? • Does this patient need sedation? • When should he have a CT scan?)

The patient's GCS drops from 12 to 6, and candidates were required to recognise the need for intubation in the clinically deteriorating patient with traumatic brain injury and describe strategies to prevent secondary brain injury.

Question 3: A CT scan of the head shows that this patient has an extradural haemorrhage. What needs to be done to transfer this patient?

(Prompt if not discussed: • Who do you need to communicate with? • How do you manage the patient while waiting for retrieval?)

The third component of this viva assessed the candidate's ability to outline their practice in arranging retrieval of the patient to a tertiary trauma centre and clinical management of the patient whilst awaiting transfer.

Learning objectives for assessment:

RT_1.1: Discuss the diagnostic approach and resuscitative management of a patient with a potential perioperative crisis.

RT_1.6: Describe the implications of manual in-line stabilisation of the neck for airway management.

RT_1.8: Classify causes of shock e.g., hypovolaemic, distributive, cardiogenic, obstructive and discuss their management.

RT_1.9: Outline an approach to obtaining vascular access in the shocked patient.

RR_ME_1.6: Prioritise treatment or management options taking into account clinical urgency and available resources.

RT_1.7: Describe principles of prevention of secondary brain injury, including control of intracranial pressure and airway management, in head injury and other suspected intracranial events.

RT_1.19: Outline the required personnel, equipment and drugs for crisis management.

RR_ME_1.2: Apply knowledge of biomedical science to anaesthesia practice.

RT_1.22: Outline the process for arranging a patient transfer of the critically ill patient requiring care beyond the capability of their current location.

RT_1.23: Discuss requirements for the safe transfer of critically ill patients (also refer to the Safety and quality in anaesthetic practice clinical fundamental and ANZCA, ACEM and CICM profession).

RR_ME_1.5: Formulate appropriate anaesthetic management plans in collaboration with patients, their families, other health care professionals and team members.

RR_CL_1.0: Recognise the importance of referral pathways in arranging appropriate transfer when patient factors, surgical factors or facility factors make it necessary for care to be provided at a different site.

Viva 2: Airway Management

CANDIDATE INSTRUCTIONS

A 28 year old man presents to ED at 12 noon, 24 hours post tonsillectomy. He has been bleeding for 2 hours, with 3 vomits of frank blood that filled a small bowl. His vital signs are HR 110, BP 110/70, O2 sats 98% on room air. This morning he ate some eggs and had coffee at 0700 hrs.

What are your main concerns with this patient?

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Question 1a: What are your main concerns with this patient?

Question 1b: What is your induction and airway plan?

Question 1c: (Ask if the candidate does not volunteer this in their preceding answer) What is a Rapid Sequence Induction, and what are the indications for its use?

Candidates were assessed on their ability to identify the key risks relevant to a patient with a post-tonsillectomy bleed. These are largely related to airway management – elevated aspiration risk and airway soiling, potentially difficult laryngoscopy and ventilation, and sharing of airway access with the proceduralist as well as haemodynamic issues with blood loss. Candidates were required to recognise the need for a Rapid Sequence Induction for the securement of this patient’s airway and were assessed on their ability to define and describe their approach to an RSI, including the utilisation of equipment, drugs and personnel.

Question 2a: Following rapid sequence induction of anesthesia, you obtain a poor view of the larynx due to blood and secretions. The Laryngoscopy view is brief and intermittent. However, after some maneuvering, you intubate the patient using a bougie and attach the ETT to the circuit. How do you check the placement of the ETT?

Question 2b: There is no end to tidal CO₂. What do you do next?

If asked whether an action described (tried by the candidate) in 2b has worked – state “not convincingly.”

Question 2c: The O₂ saturation begins to drop from 98% to 92%. What is your plan in the presence of further decline in saturation?

Question 2d: On attempting your alternative plan/Plan B, you are still unable to convincingly oxygenate. What do you do next?

The clinical scenario proceeded to describe a series of airway findings at laryngoscopy with a view to elicit the candidate’s approach to confirmation of endotracheal placement, and response to a lack of end tidal CO₂ on the monitor and subsequent deterioration in the patient’s clinical condition as evidenced by a declining oxygen saturation reading. Candidates were expected to outline a systematic approach to a potential Can’t Intubate Can’t Oxygenate situation and describe appropriate planning for Front-of-Neck Access (FONA).

Question 3a: On attempting Plan C – you are able to oxygenate the patient. The surgeon rapidly packs the tonsillar bed, following this you are able to obtain a 2b view and insert a smaller sized ETT through the vocal cords. Once the ETT placement is confirmed, the Surgeon wishes to rotate the bed 180 degrees. What are the considerations in a shared airway case?

Question 3b: What would be your extubation considerations specifically for THIS patient?

Question 3c: What considerations should be made when deciding on the post-op end destination for this patient?

The third component of this viva explores aspects of case management where the patient's airway access is shared with the proceduralist as well as appropriate extubation and post-anaesthetic care for a patient who has experienced airway complications in the context of emergency airway surgery. A good candidate was able to outline various risks around extubation and describe an approach to minimise these, and to weigh up whether a higher/tertiary level of care was warranted for this patient.

Learning objectives for assessment:

AM_1.6: Discuss the clinical features, possible causes and management of perioperative airway obstruction.

AM_1.9: Describe a 'can't intubate can't oxygenate' drill including equipment required to be immediately available and the technique for performing an emergency surgical airway.

AM_1.12: Discuss the issues involved in a shared airway.

RR_ME_1.5: Formulate appropriate anaesthetic plans in collaboration with patients, their families, other health care professionals and team members.

RR_CM_1.9: Communication complications and difficulties to patients and other health professionals to facilitate future anaesthetic care, both verbally and in writing, for example, airway difficulty or anaphylaxis.

Viva 3: General Anaesthesia & Sedation

CANDIDATE INSTRUCTIONS

You are currently in the pre-admission clinic. Your next patient is a 36-year-old female who is booked for an elective laparoscopic cholecystectomy in 1 week's time. She has a Body Mass Index of 38.

Please outline your assessment of this patient.

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Question 1a: Outline your assessment of this patient.

Prompt if not discussed: • How would you assess for signs/symptoms of OSA? • How would you assess the airway?

Question 1b: Advise the candidate to take notes on further history and exam findings and provide the following information:

Further History • HTN – controlled on perindopril 4mg daily • GORD – well controlled with occasional waterbrash, on esomeprazole 20mg daily • Chronic back pain – on combination oxycodone/naloxone 10mg BD (Targin) • Exercise capacity: METS>4

Anaesthetic History: persistent PONV post-D and C

Examination • Vitals: unremarkable (if specifically requested - BP 130/80mmHg) • Height 170 cm, Weight 109 kg • Airway: Mallampati III, congested oropharynx, otherwise unremarkable • Normal cardiovascular and respiratory exam

Then ask: Are you happy for this patient to proceed with their surgery in Scenarioville?

Candidates were required to outline their approach to undertaking a pre-anaesthetic assessment of an obese patient booked for elective surgery, with particular emphasis on obesity related issues including obstructive sleep apnoea (OSA), metabolic syndrome, cardiovascular issues such as hypertension as well as relevant past anaesthetic history including any previous airway difficulties.

With further information provided about the patient including potentially difficult airway, history of post-operative nausea & vomiting (PONV), and chronic opioid use, it was expected that a candidate would recognise that although there are increased risks with this patient, it is within the RGA scope of practice.

Question 2a: It is now 1 week's time. Describe your induction and intra-operative anaesthetic plan for this lady.

Question 2b: The intra-operative course is uneventful, and the surgeons are closing the wound. Describe your approach to the safe extubation of this patient.

The clinical scenario moves on to the day of surgery, and candidates were asked to outline their anaesthetic induction, intraoperative anaesthetic plan and extubation plan. Candidates were

required to recognise and address the obesity-related risk factors and demonstrate clinical reasoning behind their approach, including the choice of drugs and equipment.

Question 3: An hour after arriving in recovery, she is comfortable and only has mild nausea. She is expressing a desire to get home to her 6-month-old infant. The surgeons are happy for her to be discharged. What further information do you want to elicit to determine if she is appropriate for discharge?

The third component of this scenario is in the Post-Anaesthetic Care Unit (PACU/Recovery), and required candidates demonstrate an understanding of discharge criteria and recommendations as outlined in ANZCA Professional Document PG15(POM) Guideline for the perioperative care of patients selected for day stay procedures 2018 and to take into account factors such as post-operative analgesia in a patient with OSA and late risk of PONV in the rural context. This component was generally answered well by most candidates.

Learning objectives for assessment:

GS_1.6: Discuss indications, contraindications and other patient, surgical and anaesthetic factors influencing the choice of agents for:

- induction and maintenance of anaesthesia
- muscle relaxation and reversal
- management of PONV
- pain management

GS_1.7: Describe alterations to drug response in the following subgroups:

- opioid tolerance

GS_1.9: Discuss the aetiology of and measures to prevent intra-operative awareness under general anaesthesia and methods to monitor the depth of anaesthesia.

SQ_1.18: Demonstrate knowledge of criteria for safe discharge of patients from the post anaesthesia care unit

Viva 4: Regional Anaesthesia

CANDIDATE INSTRUCTIONS

A 65-year-old female (60kg) is having a right total knee replacement.

- Past medical history: Hypertension, Type 2 Diabetes, Glaucoma
- Medications: Metoprolol, Candesartan, Metformin, eye drops
- No known drug allergies.

You take over the case after your colleague has placed a spinal anaesthetic with 2.7ml 0.5% heavy bupivacaine and 15mcg fentanyl. They have handed over the case, with an adequate block (motor block and T4 bilaterally to cold). Surgeons are prepping the skin.

The patient complains of nausea and starts dry retching. What do you do?

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Question 1a: The patient complains of nausea and starts dry retching. What do you do?

Prompt if not discussed: What are the differential diagnoses?

If asked what the heart rate and BP are: The HR is 35bpm, sinus bradycardia. The BP is 60/30mmHg.

Question 1b: After initial therapy is provided: The heart rate remains at 40bpm and systolic BP 80 mmHg. What do you do?

This scenario begins with a patient who has nausea and vomiting in the context of spinal anaesthesia. Candidates were assessed on their ability to assess this situation by obtaining relevant information such as vital signs from anaesthetic monitors and to recognise bradycardia with haemodynamic compromise by being provided with a heart rate and blood pressure reading. Candidates were expected to list differential diagnoses and describe their initial management of this clinical situation. Most candidates identified a high spinal and treated the bradycardia and hypotension. Atropine, ephedrine and adrenaline were mentioned, with appropriate 10-20 microgram doses of adrenaline quote.

Question 2a: The situation resolves and the surgery is completed with no further issue. The surgeon injects 100ml of 0.2% ropivacaine at the end of the case. The nurse calls you back to recovery as your patient is agitated and complaining of light headedness. What are your differential diagnoses?

Question 2b: What are the signs of local anaesthetic toxicity?

Question 2c: You notice the patient having short runs of ventricular tachycardia on the monitor. What do you do?

Question 2d: Your patient initially improves for 10 minutes and subsequently has further runs of VT?

The clinical scenario then moves to the Recovery/Post-Anaesthetic Care Unit (PACU), and candidates were required to list differential diagnoses for agitation and light-headedness in a patient who had

received a large volume of local anaesthetic drug shortly prior, including Local Anaesthetic Systemic Toxicity (LAST). Candidates were then asked to describe the clinical features of LAST and outline the management of LAST. To avoid candidates simply following ALS protocol, it was specified the patient had persistent ventricular tachycardia but remained haemodynamically stable, prompting candidates to further explore LAST treatment.

Question 3a: The VT resolves, but the patient requires an adrenaline infusion to maintain a mean arterial pressure (MAP) of 70 mmHg. She is conscious, saturating at 97% on room air and a respiratory rate of 16. What do you do now?

Question 3b: (if not discussed above) The patient is transferred successfully, are there any other actions you would take following this incident?

The third component of this scenario assesses post-critical incident management, including clinical care of a patient with ongoing haemodynamic instability in the rural context, the need to consider transferring to a higher level of care, and aspects of post-critical incident documentation and communication.

Learning objectives for assessment:

RT_1.4 describe the presenting features, diagnosis, short-term and referral management of patients with suspected local anaesthetic toxicity

SQ_1.12 describe the prevention and management of injuries sustained during anaesthetic care

RA 1.7 Outline the assessment and management of minor and major complications associated with a central neuraxial block

RT_1.1 Management of bradycardia

RT_1.23 Discuss requirements for the safe transfer of critically ill patients (also refer to the Safety and quality in anaesthetic practice clinical fundamental and ANZCA, ACEM and CICM professional document: PG52(G) Guideline for transport of critically ill patients 2015)

Viva 5: Paediatric Anaesthesia

CANDIDATE INSTRUCTIONS

You will be doing an elective dental list in SCENARIOVILLE next week. The first patient on the list is a 10-year-old boy, who is ~25kg, for a dental examination under anaesthesia +/- restorations as required. He has had limited medical or dental care due to behavioural issues.

Past Medical history includes:

- Autism (non-verbal)
- ADHD
- Mild asthma

Medications:

- Melatonin 5 mg nocte
- Ritalin 10 mg bd (mane, midi)
- Salbutamol PRN

Allergies: Nil

How will you plan in advance for his anaesthetic?

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Question 1: How will you plan in advance for his anaesthetic?

Prompt if not discussed: i) What are the key factors for his Pre-Anaesthetic assessment? ii) Would you consider premedicating this child? If yes: What are the options? What are the advantages/disadvantages of each option? When/how/when to give it? If no – elaborate and justify why?

If the candidate refuses to proceed in Scenarioville, encourage them to continue: You have colleague support to proceed, “Scenarioville hospital routinely cares for these patients”, “You decide to proceed”.

Candidates were expected to realise that they had one week to prepare this child for anaesthesia, and to recognise that due to severe autism it would be difficult and establishing rapport with the child’s parent(s)/carers would be important for success.

Candidates were assessed on ability to identify the various issues and how they would approach each of them. Pre-medication would be important, and candidates were expected to be aware of a few options (preferably but not necessarily including dosing, which could be checked) and to be aware of the pros and cons of the various options.

Question 2a: The dentist asks for a nasal tube. What are the advantages and disadvantages of using a nasal tube vs oral ETT or LMA?

Question 2b: You agree to proceed with a nasal intubation. His premedication has worked well, and he is now cooperative with everything except cannulation. How will you induce this child?

Following the pre-operative assessment, the scenario moved to the day of the procedure. The dentist asks for a nasal tube. Candidates were assessed on knowledge of the advantages and disadvantages of using a nasal tube vs oral ETT or LMA. Having agreed to nasal intubation and with working premed, planned for intravenous induction when the child became uncooperative. Candidates were asked how will you induce this child? They were assessed on the approach retrieving a situation for intravenous induction versus an approach for safe inhalational induction.

Question 3a: The case is proceeding well. You notice that there is a loss of etCO₂. Outline your management.

Prompt if not discussed: • What are the possible causes of this trace? • How will you identify the cause?

Question 3b: You identify a tube disconnection near the filter and reconnect. The case finishes uneventfully. i) How will you manage the extubation of this child? ii) How do you decide when to proceed with the next patient?

The scenario evolved with a sudden loss of EndTidal CO₂ trace on the monitor. Candidates were assessed on their knowledge of potential causes of this situation, with good candidates having a sensible approach to this issue and a methodical approach to identify the cause, including differentials of common, less serious issues through to rarer and more serious, potentially life-threatening situations.

The candidate was then told that the cause was identified as a simple disconnection near the filter end of the circuit, which was resolved by reconnection, with the case proceeding uneventfully. They were then asked how they would manage the extubation of this child. Candidates were assessed on having a safe approach to either awake or deep extubation, knowing the pros and cons of each and possible complications that may arise at this stage of the procedure. Finally, candidates were then asked how they would decide when to proceed with the next patient. Again, the assessment was on having a safe approach to this question.

Learning objectives for assessment:

SS_PA_1.23: Describe the pre-anaesthetic consultation and the preoperative preparation of paediatric patients and their parents

SS_PA_1.22: Discuss the common conditions identified in a preoperative assessment that may require further investigation, optimisation and/or referral to a tertiary hospital for specialist anaesthetic care, for example:

• Prematurity and ex-prematurity • Asthma • Sleep apnoea • Cystic fibrosis • Down syndrome • Cerebral palsy • Autism • Obesity • Diabetes

SS_PA_1.5: Describe techniques for endotracheal intubation in paediatric patients

SS_PA_1.6:L Discuss indications for paediatric nasal intubation

SS_PA_1.9: Discuss the principles of mechanical ventilation in paediatric patients, including appropriate ventilation, normal volumes and pressures, and the role of PEEP

Viva 6: Pain Medicine

CANDIDATE INSTRUCTIONS

You are the on-call rural generalist for the Scenarioville hospital. Your rural generalist colleague calls you at 11pm from the emergency department to ask for your assistance with analgesic management of a case. A 25 year old, otherwise fit and well male has presented with bilateral foot and lower leg burns after walking in a campfire after a couple of beers. He has been given 5mg of IV morphine by the paramedics during the 1 hour retrieval time from his campsite. On your assessment, he is writhing in pain, slurring his words, and appears to have an altered level of consciousness.

What are your considerations with respect to his analgesic management in the Emergency Department?

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Question 1a: What are your considerations with respect to his analgesic management in the Emergency Department?

Question 1b: The patient's conscious state improves, and he is transferred to the ward to await surgical assessment. What is your ongoing analgesic plan for this patient going on to the ward?

This clinical scenario describes a patient with severe acute pain despite a small dose of morphine and an altered level of consciousness (LOC). Candidates were expected to indicate that they recognised the likely inadequacy of a dose of 5mg of morphine for this patient and an appreciation of the potential causes of the altered LOC, such as head injury and intoxication. They were required to formulate an appropriate strategy for multimodal analgesia in the Emergency Department setting and plan for ongoing analgesia as an inpatient. Good candidates were able to outline their approach to opioid analgesia using oral and/or parenteral routes and consider the use of ketamine.

Question 2: The following day you are contacted by the surgical registrar. They have discussed the case with the tertiary burns unit and are happy for the patient to continue to be managed at your centre. The surgical registrar requests your input to assist with the patient's recurrent dressing changes. How would you approach the management of recurrent dressing changes in this patient? If the candidate wants to transfer the patient, state: Resources are adequate to manage this patient in "Scenarioville."

Candidates were then advised that the patient is to be managed locally for recurrent burns dressing changes and were expected to demonstrate knowledge of the requirements for safe procedural sedation and to discuss techniques and drugs for analgesia & sedation. Better candidates mentioned an appropriate discussion with the surgeon about the extent and frequency of dressing changes and where they would be performed (ward, procedure room or theatre).

Question 3a: The patient presents 3 months later complaining of ongoing pain in one of his feet. He describes the pain as "electrical shocks", and you notice dryness of the skin and hairlessness around the site of the pain. How would you approach his assessment and management?

The final part of this clinical scenario is set 3 months later with the patient describing symptomatology that is typically associated with neuropathic pain. Candidates were expected to recognise that this is pain neuropathic features and to be able to list common management strategies for neuropathic pain including pharmacological and non-pharmacological strategies. If opioids were used as part of the strategy, a de-escalation plan needed to be included.

Learning objectives for assessment:

RR_ME_1.1 Integrate the roles of collaborator, communicator, health advocate, leader and manager, medical expert, professional, and scholar into practice as a rural generalist

RR_ME_1.2 Apply knowledge of biomedical science to anaesthesia practice

RR_ME_1.4 Adapt history taking and examination and order further investigations where clinically indicated

RR_ME_1.9 Manage emerging clinical problems or complications of anaesthesia practice early to maximise patient safety and optimise outcomes

PM_1.3 Describe alterations in pain physiology and perception in extremes of age, opioid tolerance and addiction

PM_1.4 Describe the principles of acute pain assessment, including a pain history, the role and limitations of pain assessment scales, the relevance of functional assessment and assessment of adverse effects.

PM_1.8 Outline the role of non-pharmacological measure in the management of acute pain

PM_1.13 Discuss the impact of the following factors on the presentation and management of acute and chronic pain:

- Repeated dressing changes
- Inability to report pain

PM_1.14 Discuss the management of acute pain in patients with addiction, chronic pain and/or opioid tolerance

PM_1.15 List the predictive factors from chronic postsurgical pain and outline measures to prevent or minimise progression from acute to chronic pain

PM_1.16 Outline the diagnosis of acute neuropathic pain and available management options

Viva 7: Obstetric Anaesthesia

CANDIDATE INSTRUCTIONS

It is 2pm on a weekday. You are on-call, and the elective list is finished for the day. The on-call obstetrician rings you, informing you of her decision to take Beth into theatre for a LSCS. You were given the following details about Beth:

- 40-year-old lady from interstate, G5P4 (2 x vaginal deliveries; 2 x LSCS). Currently 38 weeks gestation
- Booked for an elective LSCS somewhere else interstate
- Came to attend a funeral at Scenarioville
- Presented in labour. 4cm dilated on VE. CTG reassuring.
- Bedside ultrasound performed today showed a low-lying anterior placenta
- No previous medical records locally. Patient's pregnancy handbook unavailable.
- Had lunch 2 hours ago.

What are your main concerns with this patient? How will you proceed with assessing this patient?

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Question 1a: What are your main concerns with this patient?

Question 1b: How will you proceed with assessing this patient?

Candidates were asked to identify features of the patient's history that would raise a concern of increased risk of adverse outcomes, which needed to include, at a minimum, the increased risk of peripartum/postpartum haemorrhage (PPH) due to low-lying placenta and grand multiparity. Only a few candidates mentioned placenta accreta spectrum disorders as a risk factor. Additional concerns that could be listed included elevated aspiration risk and risk of uterine rupture. Candidates were expected to provide a description of how they would assess this obstetric patient who has limited antenatal history available, taking into account the risk features identified.

Question 2: Your pre-anaesthetic assessment did not reveal any other significant issues apart from what you have been given. Please outline your anaesthetic plan for this patient.

Candidates were asked to outline their plan for anaesthetic management of this patient, which was expected to include: Suitability for management locally in Scenarioville; Consent including the possibility for blood product transfusion; Clinical preparation such as arranging a Blood Type & Screen or cross-match; Suitable IV access given the risk of PPH; Choice of anaesthetic technique (neuraxial or GA) with some detail on how this might be performed in a way that minimises risk - e.g. RSI if GA chosen, vasopressors prepared if neuraxial chosen. Most candidates provided their usual spinal anaesthesia doses; those performing at a higher level considered adjusting the plan to accommodate a repeat Caesarean section that might lead to a longer surgery duration.

Question 3: (Advise candidate to take notes about clinical progress and provide the following information) You decide to proceed with a spinal anaesthetic. Upon obtaining consent, you proceeded to perform a spinal block, which produced a good block level at T5 bilaterally prior to surgical incision. The baby was delivered and appeared to be vigorous and crying. You administered 100mcg of carbetocin as usual after that and noticed that the obstetricians were struggling to deliver the placenta along with 1.5L of blood already collected in the suction canister. The patient appears lethargic with an HR of 120 bpm, BP of 90/50, and Sats is 96% on room air with diminished waveforms. What would be your immediate management of this patient now?

Clinical information was provided that included >1.5L blood loss and haemodynamic changes consistent with PPH. Candidates were expected to describe their management of obstetric haemorrhage, including pharmacological measures (tranexamic acid, uterotonic agents) and blood product use in critical bleeding management. The answers to this were often rather formulaic and not well contextualised to Scenarioville and obstetrics, with frequent use of 2L of crystalloid prior to blood product replacement and a focus on 1:1:1 replacement rather than recognising the pre-existing dilutive coagulopathy of pregnancy and the value of early fibrinogen replacement.

Better candidates included leadership and communication with the clinical team, demonstrated an understanding of the surgical steps likely to be taken actions when encountering a PPH and an appreciation of the potential need for conversion to GA and subsequent transfer to a tertiary centre.

For those who gave a description of how they would manage a conversion to GA, it was somewhat concerning that most wanted to omit opiates and quoted doses of these and induction agent would be considered high for an induction in a shocked patient.

Learning objectives for assessment:

SS_OA_1.6 Describe the special considerations for the pre-anaesthetic consultation in pregnant patients

SS_OA_1.16 Discuss a general approach to the anaesthetic management of unexpected problems that may arise with labour and delivery, including when they require further investigation, optimisation and further specialist care.

SS_OA_1.17 Discuss the assessment and management of peri-partum haemorrhage

SS_OA_1.19 Discuss a structured approach to the diagnosis and management of maternal collapse, with consideration of context-specific causes

RR_ME_1.1 Integrate the roles of collaborator, communicator, health advocate, leader and manager, medical expert, professional, and scholar into practice as a rural generalist

RR_ME_1.6 Prioritise treatment or management options, taking into account clinical urgency and available resources

RR_CL_1.0 Recognise the importance of referral pathways in arranging appropriate transfer when patient factors, surgical factors or facility factors make it necessary for care to be provided at a different site

Viva 8: Perioperative Medicine

CANDIDATE INSTRUCTIONS

An 82-year-old female has presented with a severely angulated distal radius fracture with median nerve paraesthesia after slipping on a step outside the local pub this afternoon. The general surgeon indicates that an urgent reduction of the fracture is required within 2 hours.

Past Medical History:

- Rheumatoid Arthritis
- Asthma
- Hypertension

Pre- Op ECG: Atrial Fibrillation at 70-80bpm

Medications:

- Prednisolone 5 mg daily
- Candesartan 4 mg daily
- Omeprazole 20 mg mane
- Methotrexate – 20 mg weekly (for arthritis)
- Abatacept injection- 125 mg weekly (for arthritis)
- Folic acid – daily
- Ciclesonide 160mcg – 1 puff daily
- Salbutamol PRN

How can this patient be further assessed prior to their procedure?

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Question 1: How can this patient be further assessed prior to their procedure?

This scenario presented a patient with several comorbid conditions requiring emergency anaesthesia/sedation for a trauma-related injury. In addition to briefly describing an anaesthetic assessment that included the patient's fasting status, candidates were expected to outline their evaluation of potential precipitants of the fall and any associated injuries; rheumatoid arthritis, including severity and potential implications for airway management; atrial fibrillation (AF) including reversible causes; the severity and stability of the patient's asthma and hypertension. Most candidates struggled to recognise that the use 3 DMARDs for their rheumatoid arthritis, and who remains on steroids despite the use of biological agents, is a marker of severe disease in the patient.

Question 2a: (Advise candidate to take notes on further history and exam findings and provide the following information)

Further history: • No preceding cardiac/neuro symptoms. No other injuries. No loss of consciousness. • Had 3 glasses of wine and a burger 1 hour ago • No history of known AF; asymptomatic.

PMH: • Uses Ventolin 1-2 times/week • Exercise tolerance: >1 flight of stairs

Further examination: • Weight: 55kg • BP 120/80, SpO₂ 94% (Room Air) • Limited neck extension, otherwise normal airway exam • Scattered wheeze on chest auscultation • Normal cardiac exam

Then ask: How would you optimise the patient and plan for the anaesthetic?

Candidates were asked how they would optimise the patient and were expected to describe how they would approach this for the patient's asthma and AF. They were also asked about their plan for the anaesthetic, which was expected to take into account the location for the procedure (ED vs theatre), aspiration risk, potentially difficult airway, risk of rapid AF and justification for the choice of anaesthesia (GA or regional). Good candidates presented a thorough synthesis that took into account patient, anaesthetic and surgical factors in their clinical reasoning.

A significant proportion of candidates opted for a Bier's block, but none mentioned the potential for intoxication/uncooperativeness. Those candidates who opted for GA/RSI described appropriate dose reduction for the elderly and co-morbid patient.

Question 3: The procedure is completed uneventfully. Just prior to starting the next case, you receive a call from the PACU, as the patient's heart rate is 124 bpm. How would you assess and manage this peri-operatively?

Prompt if not discussed: What care does this patient require following their stay in PACU?

The third part of the scenario takes place in the PACU, where the patient has developed a heart rate of 124 bpm. Candidates were expected to outline their assessment and treatment of the patient with new tachycardia including checking vital signs and ECG, review for features of unstable AF and/or ischaemia, blood tests and electrolyte replacement as appropriate.

Most candidates had a systematic approach to this and considered simple causes and treatment (analgesia, fluid resuscitation) for the patient's AF prior to pharmacological options. Several candidates did not commit to choosing a drug until they had spoken with a physician or cardiologist at a tertiary centre. Better candidates went on to address safe discharge from PACU and an ongoing post-operative plan were considered excellent.

Learning objectives for assessment:

PO_1.2: Outline the assessment of perioperative risk, taking into consideration: patient factors, anaesthesia factors, surgical factors, location, facilities, available resources, scope of practice

PO_1.3: Discuss the common conditions identified in a preoperative assessment that may require further investigation, optimisation and/or referral to a tertiary hospital for specialist anaesthetic care:

- Asthma
- Hypertension
- Abnormal pre-operative ECG

RR_ME1.5: Formulate appropriate anaesthetic management plans in collaboration with patients, their families, other healthcare professionals and team members

PO_1.8: Explain how emergency surgery differs from elective surgery in terms of patient pathophysiology, psychology and preparation

RR_ME_1.6: Prioritise treatment or management options, taking into account clinical urgency and available resources

GS_1.6: Discuss indications, contraindications and other patient, surgical and anaesthetic factors, including choice of agents for: induction and maintenance of anaesthesia, muscle relaxation and reversal, management of PONV, pain management

RT_1.1: Discuss the diagnostic approach and resuscitative management of a patient with a potential perioperative crisis, such as: • tachycardia

MARKING RUBRIC

<i>Clinical knowledge and its application</i>	Describes practice that is likely to result in patient harm or risk to patient safety	Limited knowledge and approach	Satisfactorily demonstrates knowledge and approach	Demonstrates above pass level knowledge and approach	Demonstrates high level knowledge and approaches
Component 1	0	1	2	3	4
Component 2	0	1	2	3	4
Component 3	0	1	2	3	4

<i>Attributes</i>	0	1	2	3	4
Quality and Safety	Doesn't consider application of safety standards Is not safe to perform even with close supervision	Limited consideration of or knowledge of relevant safety standards Is safe to perform with close supervision	Safe application and knowledge of safety standards Demonstrates adequate safety for practice without supervision	Describes above pass level application of safety standards Is safe to perform, practising independently	Nuanced consideration of relevant safety standards throughout scenario Is safe to perform and supervise others
Attributes Approach to scenario/rural context	No consideration of context	Limited consideration of context in management	Manages patient in context	Utilises most relevant resources in managing patient	Fully utilises resources within defined context
Structured approach and response to changing clinical situation	Is unstructured Doesn't demonstrate a systematic approach Doesn't follow algorithms	Has limited structure inadequate systematic approach Some knowledge of algorithms but incomplete	Has good structure with clear communication and systematic approach Follows algorithms	Has a highly structured with a clear communication Demonstrates understanding of underlying rationale in use of algorithms	Nuanced responses with a highly structured approach demonstrating depth of knowledge and/or experience