



Cabrini Practice OSCE 3

Standardized Case Based Discussion

Candidate Instructions

This is a **7 minute** Standardised Case-Based Discussion station.

You will be interacting directly with an Examiner. You will be asked to outline your assessment and management to the following clinical situation. Further information will be provided as the case evolves. The examiner will be assessing your medical knowledge as well as your reasoning and rationale to your approach and decisions.

Please be as specific as possible when answering. You are an emergency consultant in a tertiary level hospital. For example when discussing drugs describe doses, when discussing investigation or management provide reasons why you chose that approach.

Case Information:

Andrew Smith is a 67 year old man who has been brought in by ambulance following an out of hospital cardiac arrest. He developed chest pain had a witnessed collapse. His wife called the ambulance and his son performed chest compressions until the ambulance arrived.

History as per the paramedic team:

Initial rhythm was ventricular fibrillation (VF), DC shock x 2 delivered, 1 mg adrenaline IV

CPR with bag valve mask ventilation performed

Return of spontaneous circulation (ROSC) was achieved 10 minutes after emergency call

Time since start of pain 75 min

The patient's vitals on arrival to hospital are:

HR 55 bpm

BP 85/50 mmHg

RR 12 /min

SaO2 94 % (6L/min O2)

GCS 14 (Eyes open to voice)

There are no covid concerns with this patient.

The Patients ECG on arrival to ED is attached.

Domains assessed:

Medical Expertise 60%

Assessment 20%

Treatment 40%

Prioritisation and Decision-making 40%



Cabrini Practice OSCE 3

Examiner Instructions

This is a **7 minute** Standardised Case-Based Discussion station.

This OSCE is a standardised case based discussion OSCE involving the ED management of a patient with ROSC following an out of hospital cardiac arrest.

The OSCE assesses the candidate's ability to:

- Identify inferior STEMI with RV involvement
- Management of AMI
- Management of hypotension (modifications with RV involvement) with fluids then inotropes
- Recognition of need to intubate for PCI
- Safe approach to RSI in this patient
- Anticipate potential for deterioration e.g. progressive heart block, further VF

The questions are standardised for this SCBD. They are to be delivered in the same manner to all candidates.

If a candidate's response is confusing or lacking in the medical expertise expected – then the examiner may probe further for clarity or to provide the candidate with an opportunity to show their depth of medical knowledge or to justify their decision making process.

This OSCE will assess the following domains:

Medical Expertise – 60%

Assessment 20%

Treatment 40%

Prioritisation and decision making – 40%

Examiner Instructions

Questions:

0-2 Mins *'Please interpret this ECG which was taken on patient's arrival to ED.'*

- Inf STEMI
- RV involvement – 2 features- STE V1 +/- STD V2, STE III>II, RV leads
- Prolonged PR(1st degree AV block)
- Cardiogenic shock

2-5 Mins *'What are your immediate priorities' in this patients management? Please explain why.'*

- Mx AMI – activates cath lab / aspirin / prasugrel or equivalent(ticagrelor)/ heparin / supportive care e.g. analgesia
- Initial Mx hypotension (consideration of modifications with RV involvement) – pre-load dependent – IVF crystalloid bolus. Avoids nitrates and B-Blockers. Considers / excludes LVF, new murmur, heart block.
- further hypotension Mx :
 - o Use of peripheral inotropes ideal – recognises inotropes eg Adrenaline will increase myocardial work and transiently worsen myocardial ischaemia
 - o Does not mandate CVL insertion prior to inotropes/ intubation (not feasible)
- Conduction disturbance – anticipates need for positive chronotropes, pacing. Prepares for VF, optimised electrolytes, Amiodarone or Lignocaine.
- Prioritises early reperfusion and identifies this as key priority

5-7 Mins – *'The cardiac cath lab has been activated and will be ready in 20 minutes. Despite your management the patient has 2 further episodes of VF which respond to defibrillation. These are now the patients vital signs(hand to candidate), he is combative. What would you do now and why?'*

- Recognises that patient will not be able to lie still & flat for PCI, hence intubation required.
- Approach to intubation
 - 1)Pre-oxygenation sitting. NIV 100% or BVM. PEEP. Role for non-apnoeic RSI, and/or apnoic oxygenation.
 - 2)Circulatory support: Ideally initiate adrenaline pre-induction either infusion or 50 -100mcg bolus (maximum safe dose in view AMI) / metaraminol bolus 0.5-2mg / noradren peripheral.
 - 3)Induction drugs: Ketamine 0.5 -1 mg/kg preferable. Other combinations may be accepted. Not propofol
- Relaxant - Rocuronium 0.9-1.5mg/kg, Suxamethonium 0.75-1.50 mg/kg
- Recurrent VF - Amiodarone 300 mg load. Lignocaine acceptable
 - Correct hypokalaemia/Give Mg
 - Expedites PCI
- Anticipates patient may need pacing
- Endeavours to expedite cardiac cath / updates the cardiologist re: reperfusion
- Transport equipment / monitoring
- Anaesthetist for cath lab
- Further Prompt regarding intubation:

'The interventional cardiologist has asked you to bring the patient in 15 minutes. They tell you that they will have to lie flat and still for 30 minutes for the procedure.'



Vital signs after successful defibrillation:

HR 55 /min

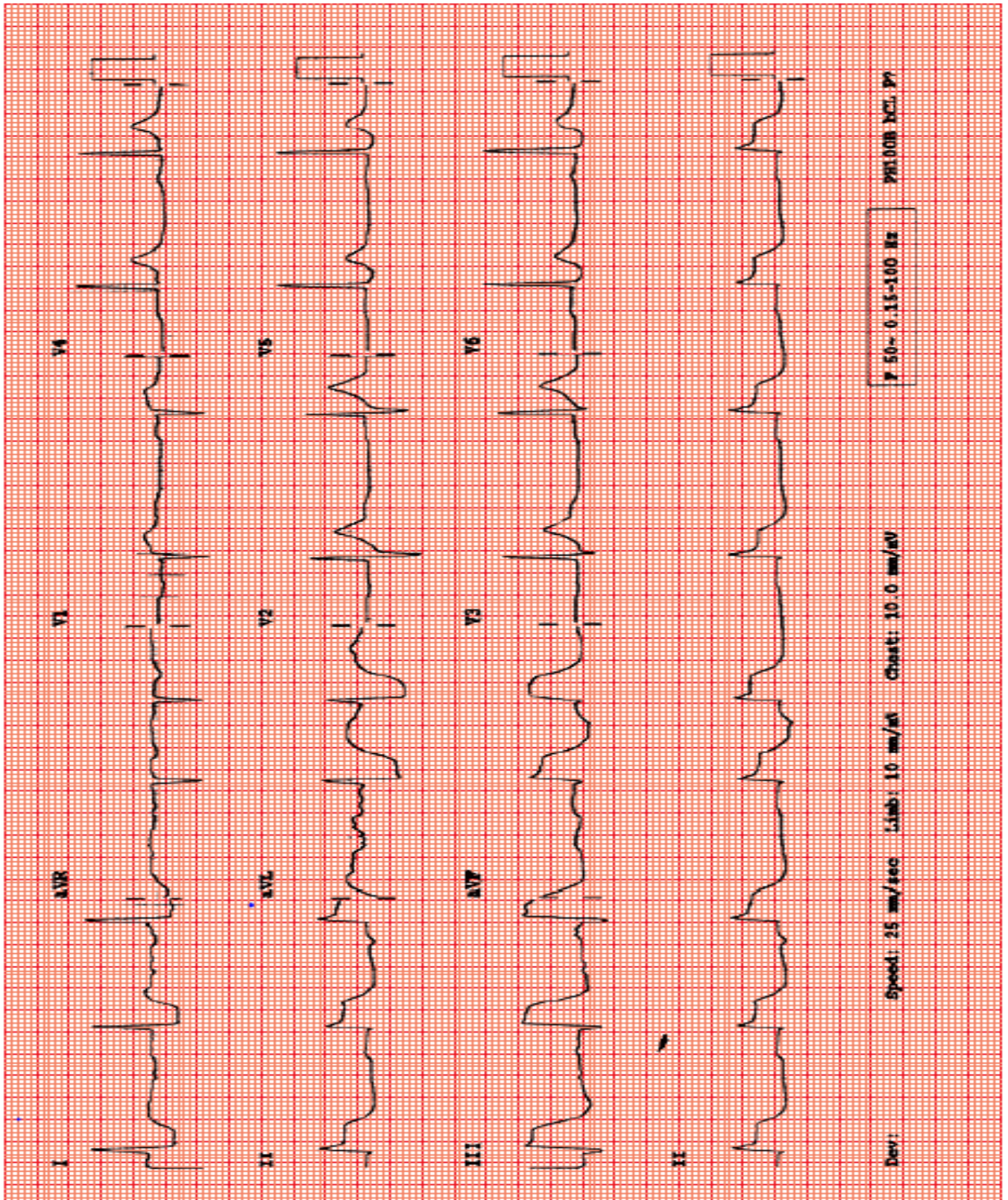
BP 80 /40

RR 18 /min

SpO2 96 % (6L /min O2)

GCS 13 (E4, V4, M5)

Patients ECG on arrival to ED:



Examiner Marking Sheet

COMPONENT ASSESSMENT

For each Domain below, select the ONE best option that best represents the candidate's level of performance. The option "**minimum level of competency displayed**" represents the level of safe independent practice as a **junior FACEM** in Australasia

Very poor level of competency displayed	Well below minimum level of competency displayed	Below minimum level of competency displayed	Minimum level of competency displayed	Above minimum level of competency displayed	High level of competency displayed	Very high level of competency displayed
---	--	---	---------------------------------------	---	------------------------------------	---

Please rate ALL the following domains:

Medical Expertise: Assessment	☐	☐	☐	☐	☐	☐	☐
Management	☐	☐	☐	☐	☐	☐	☐
Prioritization & Decision Making	☐	☐	☐	☐	☐	☐	☐

Please use the following criteria to inform your ratings above (mandatory items in **bold**)

[Detailed assessment criteria](#)

Medical Expertise- Assessment:

-Inf STEMI

-RV involvement – 2 features- STE V1 +/- STD V2, STE III>II, RV leads

-Prolonged PR(1st degree AV block)

-Cardiogenic shock

Medical Expertise – treatment:

-Mx AMI – activates cath lab / aspirin / prasugrel or equivalent / heparin / supportive care e.g. analgesia

-Initial Mx hypotension (consideration of modifications with RV involvement) – pre-load dependent – **IVF crystalloid bolus**.

Avoids nitrates and B-Blockers. Considers / excludes LVF, new murmur, heart block.

-Conduction disturbance – anticipates need for positive chronotropes, pacing. Prepares for VF, optimised electrolytes, Amiodarone or Lignocaine.

-Approach to intubation

1)Pre-oxygenation sitting. NIV 100% or BVM. PEEP. Role for non-apnoeic RSI, and/or apnoic oxygenation.

2)Circulatory support: Ideally initiate adrenaline pre-induction either infusion or 50-100mcg bolus (maximum safe dose in view AMI) / metaraminol bolus 0.5-2mg / noradren peripheral.

3)Induction drugs: Ketamine 0.5-1 mg/kg preferable. Other combinations may be accepted. not propofol, Relaxant - Rocuronium 0.9-1.5mg/kg, Suxamethonium 0.75-1.50 mg/kg

-Recurrent VF

oAmiodarone 300 mg load. Lignocaine acceptable

oCorrect hypokalaemia

oExpedites PCI

Prioritisation and Decision Making:

Prioritises **early reperfusion** and identifies this as key priority

Actively recognises failure to respond to treatment / deterioration with recurrent VF and agitation signifies need for intubation for PCI

-Recognises with prompt that this patient will not be able to lie still & flat for PCI, hence intubation required.

-Describes practical approach to hypotension which is achievable in 20 minutes in patient also needing intubation

o Use of peripheral inotropes ideal

o Does not mandate CVL insertion prior to inotropes/ intubation (= not feasible)

-Efficient optimization of patient for intubation in < 20 mins. Pre-oxygenation/ circulatory stabilization/ drug doses

Station Summary: SCBD Inf/RV STEMI with cardiogenic shock

INFORMATION

EXAMINER NOTES (For examiner reference only)

OSCE 'incident reporting' notes: Please provide details if an issue occurs which may influence the candidate's exam outcome

e.g. protocol breach, candidate illness, etc

GLOBAL RATING FOR STANDARD SETTING:

This scale is used in the standard setting process for the OSCE. Please rate the candidate's OVERALL performance in this OSCE. The rating should take into account the entirety of the OSCE, rather than just a sum average of the individual domain scores. This element MUST be completed for the standard of the examination to be set.

Well Below
Standard

Below
Standard

Just at
Standard

Above
Standard

Well Above
Standard

In terms of a **safely practicing junior emergency physician**, select the ONE option that best reflects the candidate's performance in this station:

☐
☐
☐
☐
☐

EXAMINER SIGNATURE: