

Cabrini Practice OSCE 5

Candidate Instructions:

This station is a **Standardised Case-Based Discussion**. 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. For example, when discussing drugs, describe your dosage regimen and the reasons why you chose that regimen, as opposed to other regimens.

Case Information:

A 70 year old male presents to your ED with unconscious collapses. He reports feeling lightheaded then losing conscious and collapsing. This has occurring 4 times over the last 2 weeks. He doesn't have any injuries.

His past history is:

- Hypertension
- Ischemic heart disease
- Gout

His Medications are:

- Metoprolol 25mg bd
- Aspirin 100mg m
- Allopurinol 100mg d
- Simvastatin 20mg n

He has no Allergies

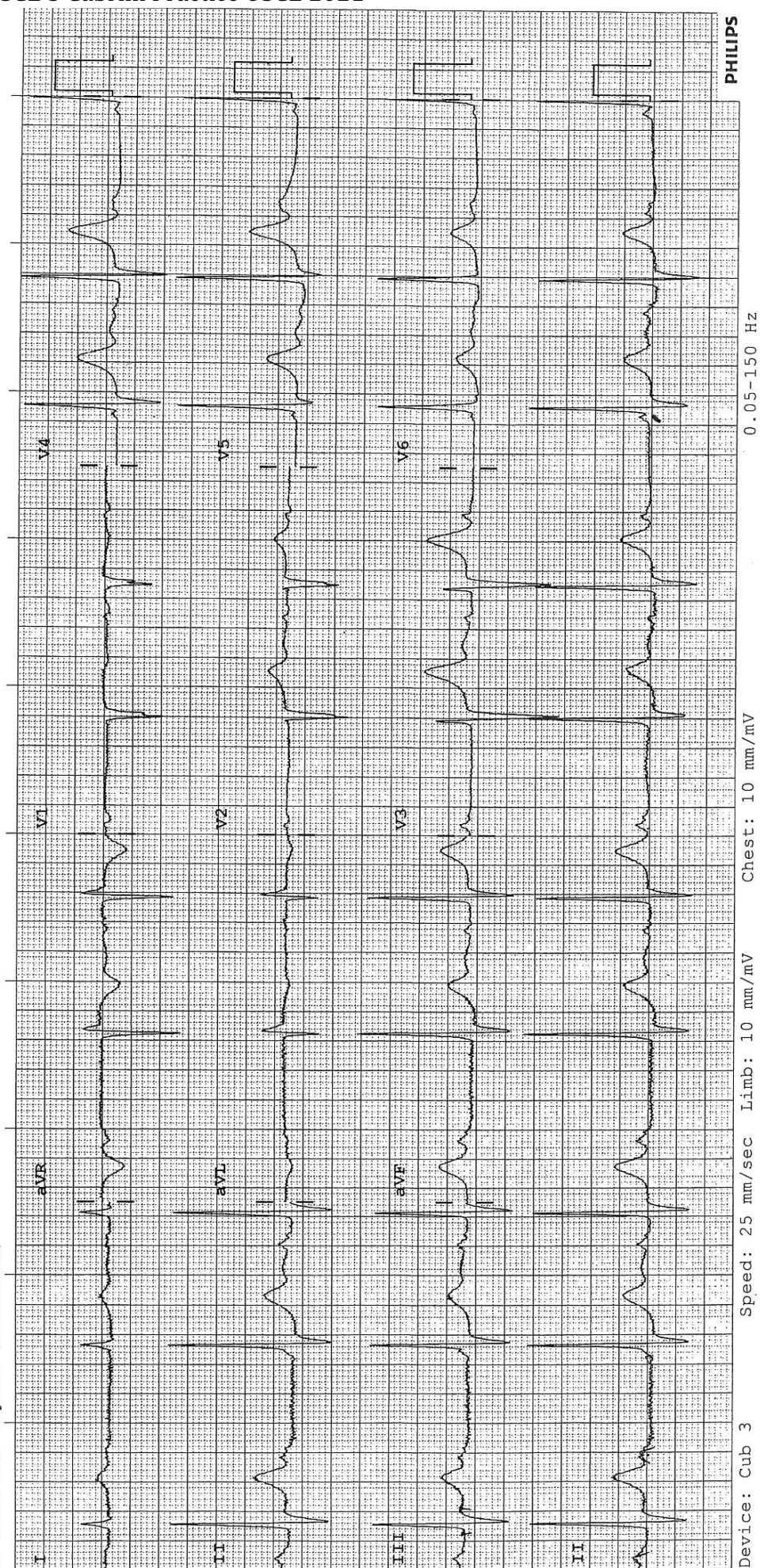
His ECG on arrival is attached.

Domains Examined:

Medical Expertise:

Investigation Interpretation	30%
Management	40%
Prioritization and Decision making	30%

12 Lead ECG Report (Standard)



Examiner Instructions:

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His ECG on arrival is attached.

Domains Examined:

Medical Expertise:

- Investigation Interpretation 30%
- Management 40%

Prioritization and Decision making 30%

Stage 1: 0 – 2 mins: 'Please interpret his ECG'

Atrial Rate 85, ventricular rate 54

Vent grouped in 2 beats then pause

Second Degree heart block Mobitz 2 - every 2nd QRS is delayed escape beat

Confusing since delayed AV nodal escape beat is narrow complex and similar to the conducted ventricular beats

Hyperacute/peaked T waves ant/lat

This block or Complete Heart Block likely to be causing collapses

Stage 2: 2 – 3 mins: 'What are the potential causes for his ECG?'

Expected Response (need 3 bolds)

Ischaemia

Drugs – metoprolol, beta-blockers, calcium channel blockers, digoxin, amiodarone.

Electrolytes – Hyper/o-kalaemia, hyper/o-calcaemia

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Idiopathic fibrosis of the conducting system (Lenegre's or Lev's disease).

Cardiac surgery (especially surgery occurring close to the septum, e.g. mitral valve repair)

Inflammatory conditions (rheumatic fever, myocarditis, Lyme disease).

Autoimmune (SLE, systemic sclerosis).

Infiltrative myocardial disease (amyloidosis, haemochromatosis, sarcoidosis).

Stage 3: 3 – 7 Mins *'While he is in ED his heart rate falls to 25 bpm and he becomes pale and clammy and complains of chest pain. How would you manage him now?'*

Expected Response:

Life-threatening cardiogenic shock

Supportive:

Resus cubicle, Full monitoring, Team approach, Call for help – cardiologist, ICU

IVC x 2

Fluid Bolus eg N/Saline 500-100mls (will assist with increasing Cardiac output since $CO = HR \times \text{Stroke Volume}$)

Specific:

Treat reversible cases as above – with drugs, ? B blocker OD, reverse ischaemia – PCI, correct electrolytes

Atropine 300-1200mcg

Adrenaline infusion 5-20mcg/min will increase cardiac oxygen demand and therefore ischaemia but used as bridge to definitive Mx eg reperfusion or Pacing

Or Isoprenaline - accept only if qualifies with risk of hypotension and also uses Noradrenaline

Ask candidate to justify choice of inotropes

Pacing- Percutaneous, trans-venous then PPM

Transcutaneous pacing technique: Prompt *'Please describe how you would do this'*

- Connect ECG leads
- Pads on (AP belter)
- Turn on
- Pacing mode - demand, not fixed
- Set rate 50-70bpm, increase mAmps to 70, achieve mechanical capture then increase 5-10 mAmps
- Explain electrical/mechanical capture
- Sedation/analgesia – midazolam/fentanyl or ketamine

If time allows, prompt about:

- Complications: pain/burns, failure to capture-Explain transcutaneous pacing is temporizing measure and bridging to pacing wire/PPM,
- Trouble Shooting if pacing rate not captured at a current of 120-130mA – re-site electrodes and repeat above.

Disposition:

Cardiac Catheter Lab for PCI/Tran-venous Pacing wire/PPM

ICU/CCU

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



Medical Expertise – Ix interpretation	☐	☐	☐	☐	☐	☐	☐
Medical Expertise – Management	☐	☐	☐	☐	☐	☐	☐
Prioritization and Decision Making	☐	☐	☐	☐	☐	☐	☐

[Detailed assessment criteria](#)

Medical Expertise:

Investigation Interpretation – ECG

Atrial Rate 85, ventricular rate 54

Every third p wave conducted, pause after non conducted beat then escape ventricular beat(similar morphology to conducted beat)

Second Degree heart block Mobitz 2 - every 2nd QRS is delayed escape beat - Do not accept CHB

Hyperacute/peaked T waves ant/lat

This block or progression to Complete Heart Block **likely to be causing collapses**

Management

Life-threatening cardiogenic shock

Supportive:

Resus cubicle, Full monitoring, Team approach, Call for help – cardiologist, ICU

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- **Explain electrical/mechanical capture**

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Prioritization & Decision Making (30%)

- Systematic approach to life threatening brady-arrhythmia
- Prioritize aggressive resus- IVF, Adrenaline/Isoprenaline and justifies
- Arranges definitive care ie Transvenous pacing

INFORMATION

Station Summary: SCBD of bradyarrhythmia and management of CHB

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:

