

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:

You are a consultant in a tertiary emergency department. A 31 year old man presents with 6 hours of severe central chest pain, in the background of a flu-like illness over the last week.

Vital signs at presentation:

HR 60 bpm
BP 100/60 mmHg
RR 35 /min
O2 sat 93% room air
Temp 37.5 deg

He is triaged to the resuscitation area. A 12-lead ECG is taken (provided)

Your task:

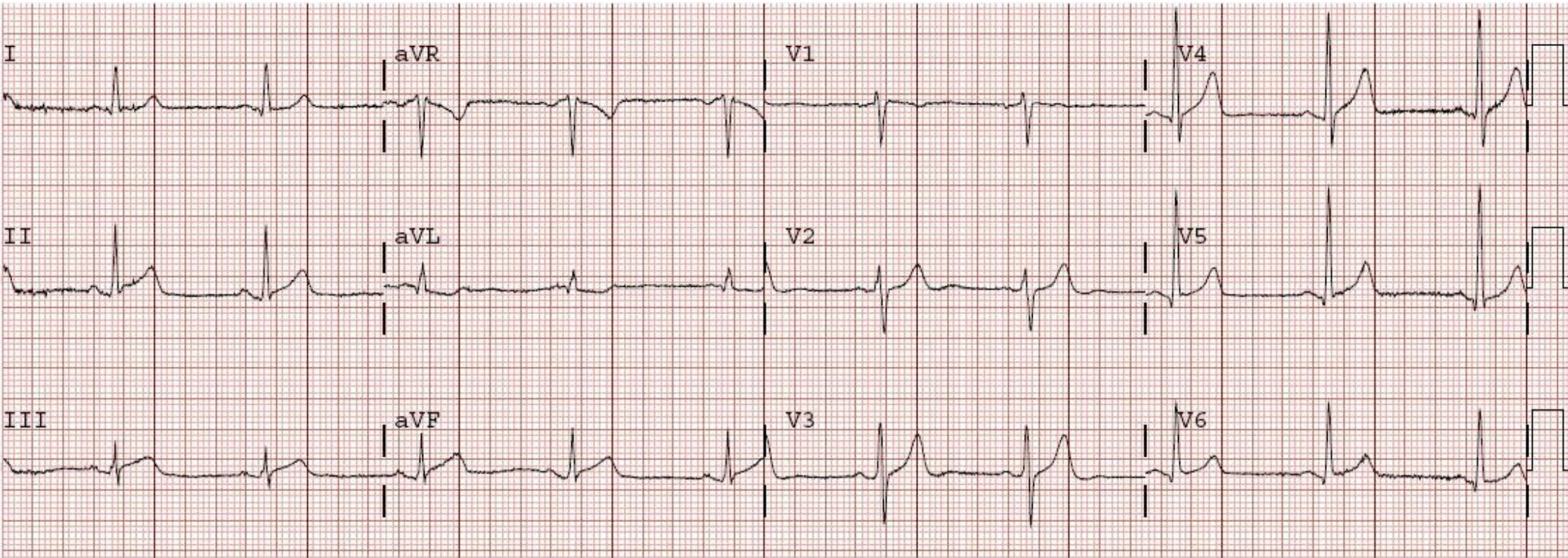
1. Describe and interpret the ECG.
2. Answer any further questions from the examiner.

This OSCE will assess the following domains:

Medical Expertise (60%)

Prioritisation and Decision-making (40%)

A copy of this case information is provided in the examination room.



1. Lead examiner

Candidate Number:

2. Co-examiner

Final Mark:

SCENARIO

You are a consultant in a tertiary emergency department. A 31 year old man presents with 6 hours of severe central chest pain, in the background of a flu-like illness over the last week. Vital signs at presentation:

HR 60/min, BP 100/60 mmHg, RR 35/min, O₂ Saturation 93% on room air, Temperature 37.5°C

He is triaged to the resuscitation area. A 12-lead ECG is taken (included in stem).

Question 1: (1.5 mins) **Describe and interpret the ECG** (incl in stem)

Expected Response	Details & Comments	
12 Lead ECG	Sinus rhythm, approx. 60 bpm	
	Infero-lateral ST elevation -1 mm, concave upwards laterally. PR segment depression, most obvious in inferior leads	
Relevant negatives	Normal axis, no ectopics, QTc looks within normal range	
Differential diagnosis	Acute Pericarditis, Myocarditis, Myocardial infarct less likely High take-off – normal variant	
Interpretation	Young patient with clinical and ECG features suggesting acute pericarditis. Borderline fever and Hypoxia, and hypotension are a concern – distributive or restrictive shock. Needs urgent cardiac Ix.	

Question 2: (1.5 mins) **His blood pressure subsequently falls to 85/50. His pulse is 110 and he is increasingly dyspneic and still has chest pain. Outline your approach to this patient.**

Expected Response	Details & Comments	
Cardiovascular compromise	Shock: Cardiogenic / obstructive ; septic ? Pericardial effusion with tamponade. ? Myocarditis-cardiomyopathy ? Aortic dissection Other: PE, Pneumonia with incipient septic shock,	
Clinical features	Hx – Pericarditis sx, other risks ie ischemia, IVDU, autoimmune etc Exam – JVP, Lungs, heart sounds, periphery, septic focus, (ie LVF, Tamponade etc)	
Bedside Investigations	ECG monitoring; Repeat 12-lead ECG, ABG, BSL Urgent CXR Bedside echo – volume, tamponade, LV function global or local, valves Prompt – What is the role of bedside ultrasound?	
Initial Management	Depending upon dx. Consider IV fluid bolus; titrated narcotic analgesia; supplemental O ₂ , BiPAP	
Definitive / Disposition	Formal echocardiogram Pending outcome of initial findings Requires admission, likely CCU or HDU/ICU ? Cath Lab – Balloon pump etc	
Pathology	FBE, Troponin, UEC	

Question 3: (2 mins) **The patient continues to deteriorate despite initial Mx. Your findings are of cardiogenic shock from severe myocarditis, without pericardial tamponade. Describe your technique to intubate this patient**

Expected Response	Details & Comments	
Equipment	BVM device, suction, laryngoscope, ETT size 7.5 or 8; oropharyngeal airway; ventilator	
Drugs	Cardiostable induction drugs: SENSIBLE Optimise hemodynamic state with commencement of low dose aramine or adrenaline prior to induction. Cardiostable sedation maintenance - fentanyl/midaz. Ongoing muscle relaxation.	
Induction / Intubation	Pre-oxygenation, positioning, cricoid pressure	
Post intubation	Confirmation of tube positioning: bedside methods (incl capnography), CXR	
Ventilation settings	ETT Ventilator settings: 5 ml/kg TV, RR 15, minimal PEEP, FIO ₂ 1.0 Titrate to clinical and ABG parameters	
Maintenance	Ongoing sedation and muscle relaxation and hemodynamic support Gastric tube	

Question 4: (2 mins) Soon after successful intubation the patient's BP is 60/40 mmHg. Outline your approach to the hypotension.

Expected Response	Details & Comments	
Confirm BP		
Check rhythm		
Check induction drugs	Side effects, correct dose and drug, allergy etc	
Examine patient	Chest – trachea, air entry, bronchospasm, rash	
Check ventilator	Disconnect and hand ventilate, check circuit and settings etc	
Repeat tests	ECG, CXR, echo, electrolytes	
Antiarrhythmic drugs as needed	Amiodarone?	
Fluid	As required	
Inotropic support	Adrenaline/aramine boluses if recalcitrant hypotension, followed by infusion. Aim for normotension (MAP $\geq$ 75mmHg).	
Other	Specific Rx: ? corticosteroids Refer to ICU / cardiology Consider IABP/VAD if refractory shock Retrieval and transfer prn	

Comments: (if you fail the candidate, please state why)

If the candidate fails the exam overall, what feedback would you suggest CIC provide for this SCE?