

1. Lead examiner

Candidate Number:

2. Co-examiner

Final

Mark:

SCENARIO

A 60 year-old man presents with 2 hours of severe central chest pain.

Question 1: What is your differential diagnosis for a serious non-ischaemic cause for this patient's pain? What are the key features in your history and examination that would discriminate these causes?

(2.5 minutes)

Expected Response	Details & Comments	
Differential Diagnosis	PE, Dissection , malignancy, pneumothorax, perforated oesophagus, pneumonia pericarditis/myocarditis, pericardial effusion, traumatic causes	PE, Dissection + 2 others
Pain	Nature: severe, tearing, pleuritic. Radiation: to back, to abdomen. Not relieved with rest. Onset while eating or vomiting?	
Associated symptoms	Cough, haemoptysis Significant dyspnoea. Sweating, vomiting, Stroke symptoms (facial droop, limb weakness or numbness). Calf pain or swelling.	
Risk factors for Venous Thromboembolism	Including: reduced mobility, advanced age, cancer, major surgery, obesity, smoking, fractures.	
Examination	-Vital signs: Tachypnoea, tachycardia, low oxygen saturations. -Blood pressure (high or low) -L – R BP differences. -Radio-radial or radio-femoral delay. -Fever -Crepes, bronchial breath sounds -Pleural rub – with pulmonary infarction. -Pulmonary hypertension (high JVP, loud P2, right sided gallop, RV heave) - - Limb ischaemia -Clinical evidence of DVT – (may be mentioned in associated symptoms) -Signs of pneumothorax or pericardial effusion -Neurological deficits -Surgical emphysema	4 out of 5 bold to pass extra marks for others

Question 2: The patient becomes hypotensive with a systolic BP of 80mmHg before investigations have been performed. Resuscitation is commenced. How will you investigate this unstable patient? (1.5 minutes)

Expected Response	Details & Comments	
Unsuitable to leave resus cubicle. Simple, easy access tests and laboratory assays are useful. But the key to Dx is urgent bedside imaging.		
Bedside tests in resuscitation cubicle.	Would <i>not</i> transfer to radiology for CTPA nor VQ scan.	4 bolded to pass
ECG	Exclude arrhythmia and infarct.	
CXR-mobile	Exclude major pulmonary pathology, may see evidence of dissection but AP view less helpful	
Assessment of oxygenation – SaO2	Pass if mentioned O2 sats earlier	
ABG / VBG	Looking for hypoxia, increased A-a gradient, lactic acidosis.	
D-dimer	Evidence of thromboembolic disease but non-specific, significant delay	If mentions D-dimer ask how it will help
Echo- Bedside, in ED Either by ED or cardiology	Most useful test is bedside echo to look for a cause of the hypotension Tamponade, dilated RV/IVC or decreased RV volume suggesting hypovolaemia	
Hb (point of care)/ other blood tests		

Question 3: The patient remains persistently hypotensive despite initial fluid resuscitation. Bedside echo shows features of massive pulmonary embolism (PE). Outline your management of this patient. (1 minute)

Expected Response	Details & Comments	
Resuscitation	Assume team leadership. Continue resuscitation. ABC. High flow oxygen. Fluid challenge: Vasopressor support.	Bold to pass Prompt vasopressor if needed
Clot removal	Needs urgent thrombolysis : generalised (eg t-PA) or localised (eg urokinase). Mechanical disruption if available?: catheter embolectomy or CPR.	
Anticoagulation	Therapeutic dose heparin or LMWH.	
Disposition	ICU referral or transfer. May require thoracic surgical, respiratory, haematology or interventional radiology involvement.	

Question 4: The patient stabilised and was admitted. It is brought to your attention that the patient was seen in your ED 2 days ago with chest pain and admitted to CCU under Cardiology. He was discharged after a negative exercise stress test. Describe your response to this. (2 minutes)

Expected Response	Details & Comments	
Key Issues	- Critical Incident / potential missed diagnosis. Reporting of this. - Joint ED and Cardiology investigation Clinical Governance: Risk management, identifying quality improvement issues - Open disclosure - Liaison with patient and/or next of kin - Education opportunities	3 Bolted to pass
Clinical Governance Aim: Investigate with Cardiology to identify systems causes, and prevent recurrences.	ED Admitted via ED. Investigate and manage ED processes. Cardiology Discharged from CCU. Discuss with cardiology unit. Blame free investigation, Serious outcome. Indications for "Root Cause Analysis" or at least investigate further. Notifications: eg "Risk Man", hospital legal counsel.	
Liaison with pt and/or NOK	Meet with patient/spouse/family, Discuss situation and explain what has happened. Plan to feedback to family once investigation is complete.	
Education Opportunities	Use case as teaching example	

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

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

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