

OSCE 3

Candidate instructions

Mr White is a 70 year old man who presented to your ED with sudden onset of severe central chest pain followed by a brief syncopal episode. There is no history of trauma and no recent infective symptoms. He is now in a resuscitation cubicle. Initial observations:

- GCS 15
- HR 130 regular
- RR 26
- BP 180/95
- Afebrile
- O2 sats 92% room air

You are to demonstrate the physical examination you would perform on Mr White to differentiate between different causes for his chest pain. You will demonstrate this examination on a 'normal' role-player who will have no actual signs or symptoms. Please describe to the examiners the physical signs you are seeking to determine a particular diagnosis/differential diagnoses.

At the completion of your examination, you will be provided with the clinical findings.

Your tasks are to:

- Demonstrate, by examination on a normal subject, the physical examination you would perform on Mr White to differentiate between different causes for his chest pain.
- Explain to the examiners what you are doing/looking for as your examination proceeds
- After the clinical findings are provided, outline the most likely diagnosis and your rationale.

Domains assessed:

- Medical Expertise
 - Examination skills – 60%
 - Synthesis – 40%

OSCE 3

Clinical Findings

- HR 130 regular
- RR 26
- BP 180/95 (L arm), 170/90 (R arm)
- Afebrile
- O2 sats 92% room air

- Pale and diaphoretic

- JVP normal

- Apex beat displaced lateral to mid clavicular line

- Soft S1

- Soft early diastolic murmur maximal at left lower sternal edge in full expiration

- Lungs – normal percussion, coarse crackles to mid zones bilaterally

- Normal abdominal examination

- No peripheral oedema or calf swelling

- Normal peripheral pulses

- Neurological examination - normal

OSCE 3

Examiner instructions

Candidates are required to:

- Demonstrate by examination on a normal subject, the key components required
- Explain to the examiners what they are doing/looking for as the examination proceeded
- Once provided with examination findings: to give a likely diagnosis, possible underlying causes, complications and rationale.

Domains assessed:

Medical Expertise: Examination — 60%

- Performs a focused structured and relevant physical examination
- Performs a proficient examination technique to elicit physical signs
- Differentiates expected physical signs for different conditions

Medical Expertise: Synthesis — 40%

- Generates a differential diagnosis, with an inherent focus on conditions requiring time critical management
- Formulates a provisional diagnosis to match the clinical signs

Candidates are expected to summarise the differentiation between causes of chest pain plus syncope and then structure a well flowing examination, pointing out the potential features of each diagnosis.

Causes of sudden severe chest pain and syncope:

- Acute coronary syndrome – alone or as a complication of aortic dissection
- Acute aortic dissection
- PE

Signs of each differential diagnosis should be sought as well as contributing factors (eg DVT, HT), and complications (AR, stroke, tamponade etc):

General appearance: anaemia, cyanosis, dyspnoea, diaphoresis

Periph: anaemia, pulse – rate/rhythm/volume – peripheral signs of AR will be absent in acute AR

Radial-radial and Radio-femoral delay

Ask for BP in both arms

JVP elevation – R heart strain

Praecordium:

- scars ?CAGS/valve surgery – , known CAD, risk factor for dissection
 - Feel for apex beat – cardiomegaly, hypertension
 - Parasternal heave (PE)
 - Auscultate – acute AR in dissection, loud P2 (PE)

Lungs – crackles (acute heart failure – AMI or AD), haemothorax, pneumothorax

Legs – peripheral pulses – reduced or asymmetrical (AD), DVT (PE)

Neuro exam – acute stroke secondary to dissection. In the interests of time, the candidate can be stopped during the neuro exam and told to move on.

Specific signs of acute RHF – hypotension, RV heave, hepatomegaly, raised JVP

Signs tamponade – unlikely given hypertensive

The candidate should be stopped at 5.5-6 minutes to discuss clinical findings.

Interpretation of clinical findings:

Acute aortic dissection with acute AR and LVF

- Hypertension
- Tachycardia
- Acute AV regurg murmur
- Displaced apex beat (chronic hypertension)
- Pulm oedema secondary to acute ischaemia/coronary dissection
-

If more time:

What investigations would you do to determine a cause?

ECG – ischaemia – CAD/dissection, RH strain – PE

Bloods – VBG, FBE, trop

CXR – pulm oedema, pulm infarct, main use is exclude other pathology

Bedside echo – R heart strain (PE),

CTA/CTPA