Monash Practice OSCE 2020.1

**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%

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**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

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**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