

Instructions to Candidates – Aim for 8 minutes

You are a Foundation doctor working in A&E.

It is 10am. Your next patient is Ms Sathya Mohammed, an 83-year-old lady who is complaining of shortness of breath.

Task:

Please take a history and formulate your differential diagnoses.

At 6 minutes the examiner will ask you a few questions.

Script for simulated patient:

Sathya Mohammed, Age 83 C/O: Shortness of breath

HOPC:

You have been experiencing shortness of breath (SOB) for the past 3 hours. This started suddenly since you woke up. You thought you had a nightmare, but the SOB persisted after breakfast and has been getting worse. You also have some chest pain, started at the same time as the SOB. It is right in the middle of the chest – worse when breathing in, no radiation, moving worsens the pain but you thought it might be because of the SOB. Over the last half-hour you have started having a dry cough – no haemoptysis. Otherwise well, no fever, no contact with anyone ill, no trauma. This has never happened before.

Only if asked about your lower limb, you are on a course of antibiotics for a skin infection that developed on your left leg. The skin infection has been ongoing for a while now – almost two weeks. You initially did not sought help as you thought it was just a rash but it became bigger in size and increasingly painful. You made an appointment to visit the GP yesterday and she started you on a course of antibiotics that starts with ‘flu’ but you don’t remember the name of it.

PMH:

Type 2 Diabetes Mellitus, Hypertension

PSH:

Hip replacement last month.

DH:

Metformin, Gliclazide, Losartan, Ramipril, Adcal
Allergy: NKDA

FH: Nil

SH (LOST):

Living situation:

Lives in a house with two small dogs, has stairs. Widow.

Occupation:

Retired Social worker.

Social: Smoking, Alcohol, Recreational drugs, Exercise

No smoke. Drinks occasionally. No recreational drugs.

Travels: N/A

ICE

- I – You are worried that you might have the COVID virus.
- C – Not knowing what’s going on.
- E – You hope that if it is COVID infection, you want to receive full treatment and not get sent home like your friend was. Your friend was only asked to self-isolate.

Questions:

1. What are your differential diagnosis?

Pulmonary embolism (PE) secondary to deep vein thrombosis (DVT), acute coronary syndrome, acute congestive heart failure, late-onset anaphylaxis, pneumothorax, pneumonia

Which is your top diagnosis? Pulmonary embolism

2. What is the scoring system to estimate the clinical probability of PE?

two-level PE Wells score

3. How will you manage this patient?

Anticoagulation based on local policy

Answer sheet:

Area	Clear Fail	Fail	Satisfactory	Good	Excellent
C/O & HOPC					
PMH					
DH					
SH					
FH					
ICE					
Differential dx					
Investigations					
Rapport/ Comm skill					
Overall					

Question	No elements mentioned	Some elements	Most elements	All elements
1				
2				
3				
Overall	Fail	Low pass	Pass	Excellent

Feedback

Pulmonary embolism is a life-threatening condition if undiagnosed and left untreated. The condition can be divided into provoked (i.e., there is a risk factor) and unprovoked (i.e., no identifiable risk factor). – *identifying risk factors in your history is crucial to support your diagnosis.*

Risk factors: Deep vein thrombosis, previous Venous thromboembolism, cancer, long bone fracture, recent surgery, immobility, pregnancy, usage of oral contraceptive pill (oestrogen containing), hormone replacement therapy, obesity, multiple medical comorbidities.

Symptoms: dyspnoea, tachycardia, cough, haemoptysis, pleuritic chest pain, unilateral leg pain, leg swelling.

Two-level PE Wells score: (not the same as Wells' criteria for DVT!)

If the score is >4 points, confirm DVT with CTPA. If unavailable, start on therapeutic anticoagulation according to local policy whilst waiting for the scan.

If ≤ 4, test for D-dimer: If positive, confirm with CTPA. If negative, consider another differential.

Management (NICE suggest):

→Apixaban or Rivaroxaban

→LMWH (Dalteparin/Enoxaparin) followed by Dabigatran or Edoxaban

→LMWH (Dalteparin/Enoxaparin) + vitamin K antagonist (warfarin)

*get baseline bloods before starting on new medications – FBC, PT, APTT, U&E, LFT

Abbreviations:

LMWH: Low molecular weight heparin

CTPA: Computed tomography pulmonary angiogram

FBC: Full blood count

PT: Prothrombin time

APTT: Activated partial thromboplastin time

U&E: Urea and electrolytes

LFT: Liver function tests

References:

<https://cks.nice.org.uk/topics/pulmonary-embolism/>

<https://cks.nice.org.uk/topics/deep-vein-thrombosis/>