

## Student Instructions

You are the Foundation Doctor on the respiratory ward. Anna Stetics is a 61 year old lady who has presented to clinic after a recent episode of breathlessness. She has had multiple recent admissions for a chronic illness. Her medication includes the following:

Bisoprolol 1.25mg OD

Omeprazole 20mg OD

Rivaroxaban 15mg OD

Please take a history from Anna and perform the appropriate examination. Please focus on her most recent admission to hospital. You will then be asked to discuss the case with the examiner.

## Patient Instructions

You are Anna Stetics, a 61 year old lady who enjoys the theatre and watching your soap operas. You used to work as a receptionist at a GP surgery, but recently have had to stop working due to ill health.

PMH:

You came into hospital around three weeks ago when you came over all short of breath. You were really worried at the time that you had picked up another infection. You were struggling to breathe even when sat down on your lovely new sofa.

The problem came on all of a sudden, and at first you thought you were just a bit anxious – this happens to you sometimes. You tried to walk it off, but that didn't work. Then you tried to have a lie down on the sofa, and that didn't work either. That's when you started to get concerned. You developed a bad cough over the following few hours, and when you coughed up a little bit of blood, that was the last straw: you went straight to A&E.

In terms of the cough, there wasn't any green or white stuff, just mostly dry with occasional spotting of blood. The side of your chest was a little sore, mostly when you tried to take a deep breath in. It was a sharp pain, which didn't really move anywhere. Nothing made it better, and you felt that it was stopping you from breathing properly. You didn't have a temperature at this time.

The main reason for your worries was because you're currently undergoing chemotherapy for Multiple Myeloma. You have been in and out of hospital receiving the treatment – this is your second cycle. The first cycle was an absolute disaster: you ended up having to go into hospital with a really bad chest infection. They told you that the chemotherapy had messed with your immune system, and that made you at risk of picking up a bug. At that time you had a bad temperature and green phlegm in your cough. This time it felt different, however.

You have lost quite a bit of weight recently, but that is apparently to be expected with the

Myeloma. You had some diarrhea, but again this was something you were warned about when you had the chemotherapy.

Once you got into hospital, they did a scan and told you that you had a blood clot in your lung. They put you on some medicine to thin your blood and got you an appointment for clinic. Apparently having the Myeloma meant you were more at risk of this.

ICE:

You were really anxious when you came into hospital with the shortness of breath, because you feel that you were very close to dying when you had your last infection. The side effects of the chemotherapy are hard enough without this! You've been put on one of the new blood thinning medicines, which you are glad about, because you've heard that warfarin means that you need lots of blood taken, and you hate needles!

PMH:

You were diagnosed with multiple myeloma three or four months ago – the whole time has been a blur. You had your first round of chemotherapy and picked up an infection which hospitalized you after that. You have never had any blood clots before, not in your lungs or your leg. You get a bit of acid reflux and take a tablet for that in the morning.

SH:

You live with your husband, who has been really supportive throughout all of this. He is your rock and you don't know what you would do without him. You are usually quite active, but the chemotherapy absolutely knocked you out, so you were too tired to do anything. This meant that you've spent most of the last two months on the sofa. You feel that you're letting everyone down by not helping out! You haven't been on any flights recently.

FH:

Your mum died of breast cancer and your dad had a bleed in his brain when you were very young. You don't think either of them ever had any blood clots like this.



## Examiner Instructions

The student should take a focused history on the most recent admission for breathlessness. A quality history will identify multiple risk factors for pulmonary embolism. An appropriate examination would be a respiratory examination.

An example of a sound differential diagnosis would sound something like:

“My primary diagnosis would be a respiratory cause, specifically pulmonary embolism. This is due to the acute history of shortness of breath, haemoptysis and pleuritic sounding chest pain. The patient has multiple risk factors for PE, including malignancy and recent immobility. An alternative diagnosis to consider would be an infective cause: pneumonia. This is because the patient recently had chemotherapy and is immunocompromised. She also has a history of what sounds like an infection and would be at risk of neutropenic sepsis given her background.”

Some questions for discussion may include:

- How would you investigate this patient in the acute setting?
- Do you know any scoring systems for pulmonary embolism?
- How is pulmonary embolism managed acutely?
- How long may a patient be put on warfarin after a pulmonary embolism?
- Who decides between warfarin and New Oral Anti-Coagulants, and what may influence their decision making?
- How do we manage the immunocompromised patient in hospital?