

Instructions to candidate

You are a foundation doctor currently in your A&E rotation.

Peter Malon has presenting with shortness of breath.

Take a history from Peter.

At 4 minutes, the examiner will prompt you to examine the patient.

At 7 minute, the examiner will show you clinical information and ask you questions.

You have 8 minutes to complete this station.

SP script

Name: Peter Malon

Age: 35 years old

This morning you developed sudden onset of breathlessness, which has progressively worsened throughout the course of the day. Now you find it hard to catch your breath even when you are walking in the room. Prior to this, you not had any breathlessness related issue. You have asthma but this is very well controlled. You haven't been coughing, no temperature, no chest pain and no wheeze.

If specifically asked, you deny any trauma to the chest. No weight loss nor loss of appetite.

PMH – asthma (well-controlled, don't need salbutamol)

DH – steroid inhaler. NKDA

FH – Nil

SH – you are a non-smoker. You only drink alcohol occasionally, never binge drinking.

You work as a bus driver. You live with your wife at home.

If specifically asked, you don't do water diving.

You haven't been on a flight for at least 2 years now.

ICE

- I – you think you are having an asthma attack.
- C – you are worried that this asthma attack is very severe and you want it controlled so that you can get back to work.
- E – you hope the doctor can give you some inhalers and steroid tablets to manage this.

Assessment and examination

Expect the candidate to perform an A to E assessment

Provide the relevant information as below when the candidate mentions or performs them as part of their assessment

Observation – RR 24, SaO₂ 90% on room air (RA), HR 110 (regular), BP 125/85mmHg, T 36.9C

A – airway patent, able to converse fully during consultation

B – RR 24, SaO₂ 90% on RA. No tracheal deviation. Chest expansion right side more than left. Percussion slightly resonant on the upper left area of the chest. Auscultation reveals a quiet breath sound on the upper left area of the chest, otherwise vesicular air entry on other areas. No wheeze, no crackles.

C – HR 110, BP 125/85mmHg. CRT <2s, heart sounds S1+S2 - no murmur

D – T 36.9C, BM 7.8

E – nil significant

ABG

- pH	7.43	(range 7.35-7.45)
- pO ₂	9	(range 11.0-14.4 kPa)
- pCO ₂	4.3	(range 4.6-6.5 kPa)
- HCO ₃ ⁻	25	(range 22-28 mmol/L)
- Base excess	0	(range -2 to +2)
- Lactate	0.8	(range 0.5-2.2 mmol/L)

Bloods

FBC

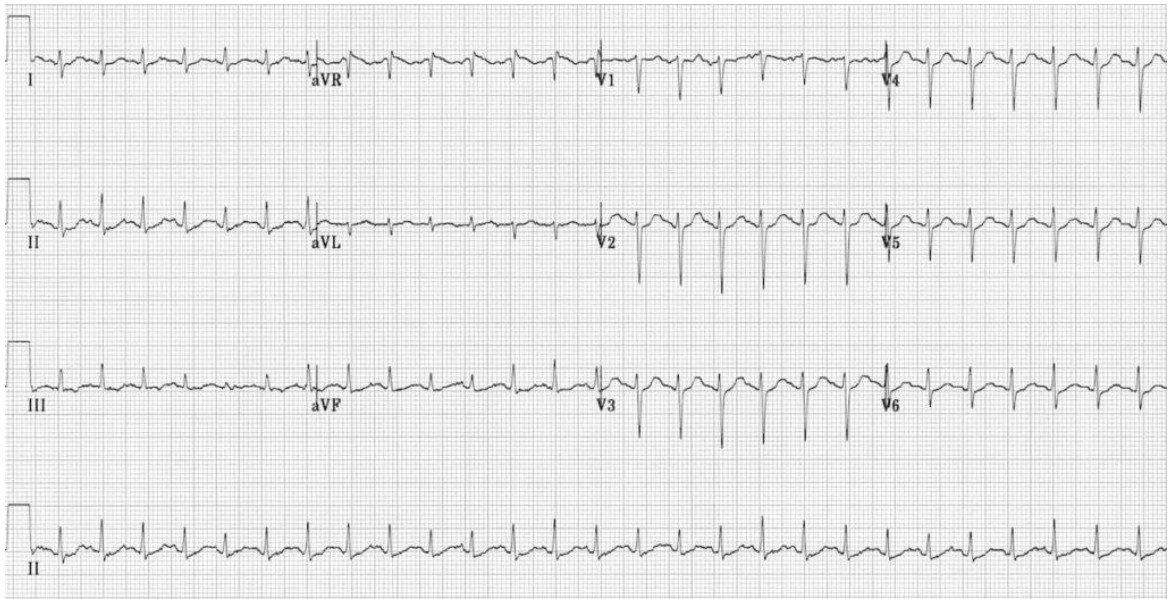
- Hb	145	(range 130-180 g/l)
- Red cell count	5.00	(range 4.50-6.50 x 10 ¹² /l)
- Haematocrit	0.45	(range 0.40-0.54 l/l)
- MCV	90	(range 80-100 fl)
- MCH	30	(range 27-32 pg)
- WCC	4.0	(range 2.6-11.0 x 10 ⁹ /l)
- Neut	3.0	(range 1.8-7.5 x 10 ⁹ /l)
- Lymph	1.0	(range 1.0-4.0 x 10 ⁹ /l)
- Monocytes	0.5	(range 0.2-0.8 x 10 ⁹ /l)
- Eosinophils	0.1	(range 0.1-0.4 x 10 ⁹ /l)
- Basophils	0.02	(range 0.02-0.10 x 10 ⁹ /l)
- Plt	350	(range 140-400 x 10 ⁹ /l)

U&E

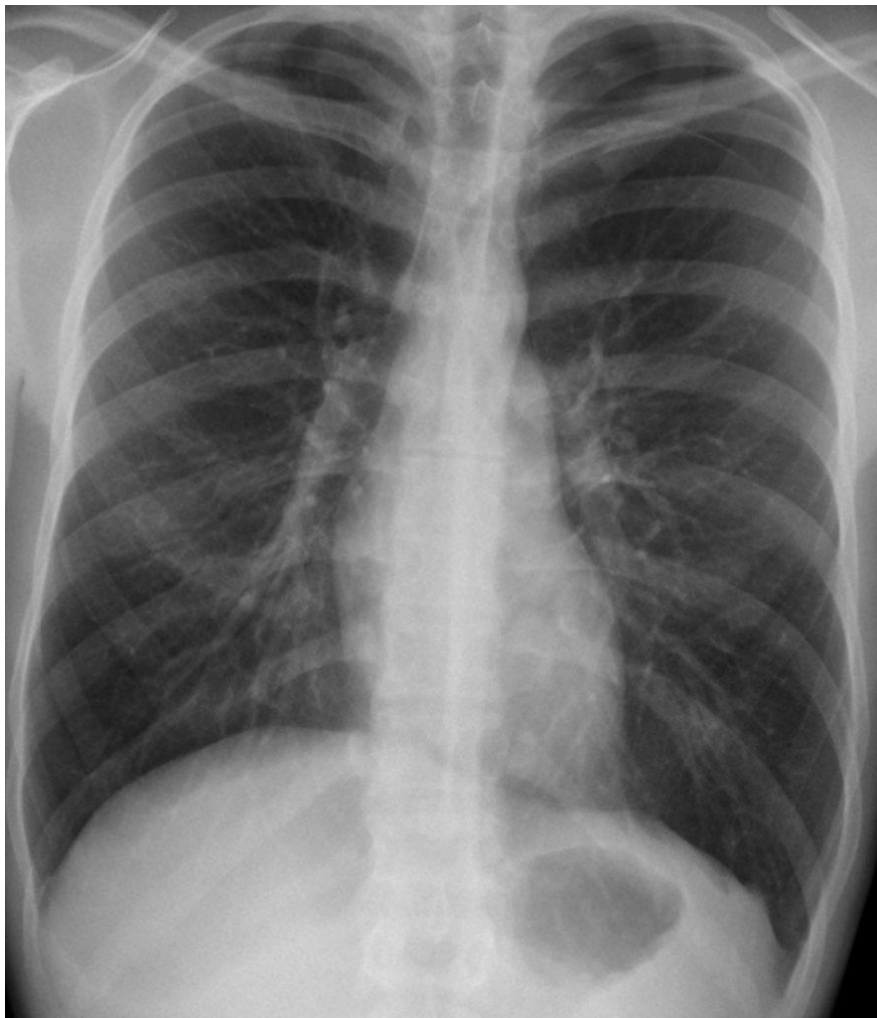
- Urea	3.0	(range 2.5-7.8 mmol/L)
- Creatinine	90	(range 59-104 micrommol/L)
- Sodium	135	(range 133-146 mmol/L)
- Potassium	4.0	(Range 3.5-5.3 mmol/L)
- eGFR	>90	

CRP <4 (range <4)

ECG¹



CXR²



Questions

- 1) What is the diagnosis?
 - a. Pneumothorax (secondary)

- 2) How would you manage this pneumothorax?
 - a. Chest drain
 - b. Oxygen supplement
 - c. Senior review

NB: ECG shows sinus tachycardia and CXR shows pneumothorax on the upper left zone of the lung

Feedback

Did the candidate	Y/N
Adequately take a history from the patient, including red flag symptoms	
Explore patient's ICE in a patient-centered manner	
Perform an adequate A to E assessment on the patient, particularly on the breathing component	
Able to list out the relevant investigations for the patient	
Able to interpret the investigation findings	
Able to identify pneumothorax from their assessment and demonstrates knowledge on its management	

For more information on the management of pneumothorax, visit the British Thoracic Society guideline.

Reference

- 1) Life In The Fastlane, 2021, *Sinus tachycardia*, accessed 2 May 2021, [<https://litfl.com/sinus-tachycardia-ecg-library/>]
- 2) Pressbooks (2017), *Undergraduate Diagnostic Imaging Fundamentals*, available at: <https://undergradimaging.pressbooks.com/chapter/pneumothorax/>