CME: Respiratory medicine (137954): self-assessment questionnaire

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SAQs and answers are ONLINE for RCP fellows and collegiate members

Format

Candidates are asked to choose the best answer from the five possible answers. This best of five format is used in many medical examinations; however, the questions are not intended to be representative of those used in the MRCP(UK) Part 1 or Part 2 Written Examinations.

The answering process

1   Go to https://cme.rcplondon.ac.uk
2   Log on using your usual RCP username and password
3   Select the relevant CME question paper
4   Answer all 10 questions by selecting the best answer from the options provided
5   Once you have answered all the questions, click on Submit

Registering your external CPD credits

Carrying out this activity allows you to claim two external CPD credits. These will be automatically transferred to your CPD diary, where you can review the activity and claim your points.

1. **A patient with bronchiectasis cultured *Pseudomonas aeruginosa* in their sputum for the first time. They had a slight worsening of their cough with an increased volume of purulent sputum but felt otherwise well.**

    What treatment should they be offered?

    (a) Intravenous ceftazidime for 14 days.
    (b) Intravenous ceftazidime for 14 days and nebulised colistin for 3 months.
    (c) Oral ciprofloxacin 500 mg twice daily (BD) for 7 days.
    (d) Oral ciprofloxacin 750 mg BD for 14 days.
    (e) Oral co-amoxiclav 625 mg three times daily (TDS) for 14 days.

2. **A patient with bronchiectasis was admitted with their third exacerbation in a year. They responded well to intravenous antibiotics.**

    Which of the following additional management options should be considered next?

    (a) Nebulised 0.9% saline.
    (b) Nebulised 7% saline.
    (c) Oral carbocisteine 750 mg TDS.
    (d) Physiotherapy review for optimisation of airway clearance.
    (e) Trial of long-term oral antibiotics.

3. **A 69-year-old man with a known diagnosis of idiopathic pulmonary fibrosis (IPF) presented with acute breathlessness and dry cough to the emergency department (ED). Two months previously, his forced vital capacity (FVC) was 1.7 L (45% of predicted) and diffusion capacity for carbon monoxide (DLCO) was 18% of predicted. He had been on pirfenidone for the previous 3 years. Due to breathlessness, he had not been able to leave his house for the last 12 months despite using ambulatory oxygen therapy at 4 L/min. His white cell count was 12×10^9/L, C-reactive protein was 45 mg/L, and haemoglobin, renal and liver profiles were normal. His COVID-19 swab test was negative. The ED started broad-spectrum intravenous antibiotics. A CTPA has been done. It shows background chronic fibrotic changes including honeycombing consistent with a pattern seen in IPF with bilateral areas of superimposed ground-glass change. There are no pleural effusions or findings of any pulmonary embolisms. His respiratory rate was 32 breaths/min and oxygen saturation while breathing oxygen via a non-rebreathe face mask at 15 L/min was 85%.**

    What is the appropriate next step in his management?

    (a) Assess and palliate his symptoms of breathlessness.
    (b) Refer to the intensive care team to consider for invasive mechanical ventilation.
    (c) Start continuous positive airway pressure (CPAP).
    (d) Start high-dose intravenous methylprednisolone 500 mg for 3 days.
    (e) Start intravenous co-trimoxazole.

4. **A 78-year-old man presented to the ED with deterioration of his breathlessness over the previous 3 days. He has had a diagnosis of idiopathic pulmonary fibrosis and has been on pirfenidone for the previous 18 months. His comorbidities included heart failure and hypertension. He had an exercise tolerance of 100 metres without using oxygen. Examination revealed he was moderately breathless and had bilateral basal inspiratory fine crackles, but there were no other abnormalities. His blood tests showed a normal white cell count and C-reactive protein. His chest X-Ray did not show any new changes.**

What would be the most appropriate next step in his management?

(a) Obtain an urgent echocardiography.
(b) Order computed tomography pulmonary angiography (CTPA).
(c) Prescribe intravenous antibiotics.
(d) Prescribe prednisolone 30 mg once daily (OD).
(e) Refer to critical care.

5. **An independent 45-year-old person with no comorbidities was found to have a segmental pulmonary embolism on CTPA. There were no signs of right ventricular strain on the scan. They had a respiratory rate of 15 breaths/min, oxygen saturations on room air of 99%, a pulse rate of 81 beats/min and regular, and blood pressure of 131/75 mmHg. The full blood count, renal and liver profiles, and troponin were normal.**

Which 30-day mortality risk category would they be classified in?

(a) High.
(b) Intermediate.
(c) Intermediate–high.
(d) Intermediate–low.
(e) Low.

6. *In patients with chronic obstructive pulmonary disease with a history of type 2 respiratory failure, what oxygen saturations should you aim for?*

(a) 80%–90%.
(b) 88%–92%.
(c) 90%–94%.
(d) 92%–98%.
(e) 94%–100%.

7. *In an acute asthma exacerbation, which of these signs would prompt an urgent critical care review?*

(a) Bilateral wheeze.
(b) Inability to complete sentences.
(c) Partial pressure of carbon dioxide ($PaCO_2$) of 5.8 kPa.
(d) Partial pressure of oxygen (PaO_2) of 9 kPa on air.
(e) Peak expiratory flow rate (PEFR) <50% best/predicted.

8. **A 60-year-old woman presented to the medical assessment unit with a 4-week history of worsening dyspnoea on exertion. Eight years previously, she had adenocarcinoma of the right breast, treated by a mastectomy and radiotherapy. She was not breathless at rest. Her World Health Organization performance status was 0. Her blood pressure was 132/84 mmHg, heart rate of 80 beats/min, temperature of 37˚C and oxygen saturation of 98% on room air. Her chest X-ray demonstrated a new moderate sized right pleural effusion. The C-reactive protein and all other blood tests were unremarkable.**

What is the most appropriate next step in her management?

(a) Admit the patient for an ultrasound-guided intercostal chest drain and send pleural fluid for cytology, biochemistry and microbiology.
(b) Arrange for an indwelling pleural catheter under ultrasound guidance, pleural fluid cytology and referral to the breast cancer multidisciplinary team.
(c) Discharge the patient and arrange an early appointment under the pleural clinic.
(d) Perform an ultrasound-guided therapeutic pleural aspiration, draining as much fluid as tolerated; send pleural fluid for cytology, biochemistry and microbiology; arrange for a CT of the chest and abdomen; and refer to the pleural clinic.
(e) Perform an ultrasound-guided diagnostic pleural aspiration; send pleural fluid for cytology, biochemistry and microbiology; arrange for a CT of the chest and abdomen; and refer to the pleural clinic.

9. **A 64-year-old woman was admitted with palpitations and insomnia. She was being treated with targeted therapy for stage IV non-small-cell lung cancer. Blood tests showed suppressed thyroid stimulating hormone and elevated T4 in keeping with hyperthyroidism.**

What drug class is the most likely to cause this adverse effect?

(a) Anaplastic lymphoma kinase inhibitor.
(b) C-ros oncogene 1 inhibitor.
(c) Epidermal growth factor tyrosine kinase inhibitor.
(d) Immune checkpoint inhibitor.
(e) KRAS G12C protein inhibitor.

10. **A 30-year-old woman with history of asthma presented to the ED with a history of shortness of breath and chest tightness. She had night-time wakening for a week and had been using her salbutamol inhaler 8–10 times per day for the previous 3 days. She was struggling to speak in sentences. Her respiratory rate was 30 breaths/min and her heart rate was 120 beats/min. Her PEFR was 120 L/min (her best PEFR was 400 L/min).**

What should be done first?

(a) Give a bolus dose of intravenous magnesium.
(b) Give high-dose beta-2 agonists.
(c) Give intravenous hydrocortisone.
(d) Start an intravenous infusion of salbutamol.
(e) Start intravenous antibiotics.

CME Diabetes SAQ

Answers to the CME SAQ published in *Clinical Medicine* in September 2021

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
(b)	(e)	(c)	(c)	(e)	(d)	(e)	(e)	(e)	(e)