Infectious diseases (36225)

Self-assessment questionnaire

SAQs and answers are ONLINE for RCP Fellows and Collegiate Members

The SAQs printed in the CME section can only be answered online to achieve external CPD credits. The closing date is 21 November 2008 (midnight GMT).

Format

SAQs follow a best of five format in line with the MRCP(UK) Part 1 exam. Candidates are asked to choose the best answer from five possible answers. All comments should be sent in via email only: clinicalmedicine@rcplondon.ac.uk

We recommend that answers are submitted early so that any problems can be resolved before the deadline.

The answering process

1 To access the questions, log on to the Fellows and Members area www.rcplondon.ac.uk/Members Please contact the Information Centre if you have lost or forgotten your username or password: infocentre@rcplondon.ac.uk
2 Select: **Self assessment**
3 At the top of the SAQ page select the current CME question paper
4 Answer all 10 questions in any order, by selecting the best answer
5 Click on **Submit for final marking**.

After submitting your answers NO changes can be made.

The marking process

- You must submit the answers before the closing date shown at the top of the screen
- Answers will be marked automatically on the date displayed for that paper
- You can find your marks on the CME page under **My past CME papers**.

Registering your external CPD credits

A pass mark of 80% allows you to claim two external CPD credits. Only the first seven distance-learning credits will be counted as external; the remainder can be claimed as personal credits. Credits can be recorded using the online diary system. All *Clinical Medicine* SAQs are listed under **External Approved CPD.**

1 Which of the following statements about blood-based interferon gamma release assay is correct?

(a) It is the only test used to diagnose tuberculosis (TB)
(b) It uses antigens found in BCG vaccination
(c) It has eliminated the need for Mantoux testing
(d) It relies on host T lymphocyte cell-mediated immunity
(e) Results are provided within four hours of taking the blood sample

2 Which of the following statements about drug-resistant TB is correct?

(a) It is present in a quarter of new UK cases
(b) It may be rapidly diagnosed using solid-phase culture techniques
(c) It arises from the use of directly observed therapy regimens
(d) It is not a problem in clinical practice
(e) It should be considered in patients with a history of previous TB treatment

3 Which of the following classes of antibiotics has been implicated in the emergence of the hypervirulent *Clostridium difficile* 027 strain?

(a) Aminoglycosides (eg gentamicin)
(b) Quinolones (eg ciprofloxacin)
(c) Macrolides (eg erythromycin)
(d) Extended spectrum penicillins (eg amoxicillin/clavulanate)
(e) Third-generation cephalosporins (eg ceftriaxone)

4 A previously healthy 70-year-old lady develops diarrhoea five days after starting a course of amoxicillin/clavulanate for a chest infection which has now resolved. She has passed four watery motions over the last 24 hours and is systemically well. A faeces sample is sent for culture and *C. difficile* toxin assay. What is the most appropriate next course of action?

(a) No action, await microbiology results
(b) Oral metronidazole 400 mg three times daily for 10 days
(c) Oral vancomycin 125 mg four times daily for 10 days
(d) Stop the antibiotics
(e) Symptomatic treatment with loperamide

5 Hospital A has noted a rapid increase in the number of new cases of *C. difficile* infection. A comprehensive infection control programme is set up. Which of the following measures is likely to be ineffective against the outbreak?

(a) Requiring all staff to use alcohol gel prior to patient contact
(b) Establishing an isolation ward for infected patients
(c) Provision of personal protection equipment (gowns and gloves) for contact with proven or suspected cases
(d) Enhanced ward cleaning schedules
(e) Restricting use of cephalosporins and quinolones

6 A 25-year-old man is referred to the outpatient clinic with a three-month history of night sweats, malaise and itching. He has lost around 8 kg in weight and on examination is very thin and has enlarged cervical and axillary lymph nodes.

Bilateral mediastinal lymphadenopathy is detected on chest X-ray. Which of the following is the most likely diagnosis?

(a) Culture-negative endocarditis
(b) Cytomegalovirus infection
(c) Lymphoma
(d) Epstein-Barr virus infection
(e) Sarcoidosis

7 A 24-year-old man presents with cough, fever, pleuritic chest pain and shortness of breath beginning three days into a flu-like illness. He reports a small amount of haemoptysis on one occasion. On examination, he is tachycardic (98/min), normotensive (105/80 mmHg), tachypnoeic (respiratory rate (RR) 32/min), with bilateral crepitations on auscultation of his chest. He is referred for assessment for level 2 care. Results of investigations are serum sodium 130 mmol/l (137–144), serum urea 4.2 mmol/l (2.5–7.5), serum creatinine 78 µmol/l (60–110), haemoglobin (Hb) 13.5 g/dl (13–18), white blood cell (WBC) count 2 x 10^9/l (4–11), neutrophil count 0.88 x 10^9/l (1.5–7), platelet count 144 x 10^9/l (150–400), serum C-reactive protein 324 mg/l (<10). Chest X-ray shows multilobar infiltrates with a small right-sided pleural effusion. Sputum Gram film reveals numerous clustered Gram-positive cocci. What is the most appropriate combination antimicrobial therapy?

(a) Augmentin + clarithromycin
(b) Cefotaxime + flucloxacillin + clarithromycin
(c) Linezolid + clindamycin + rifampicin
(d) Rifampicin + isoniazid + pyrazinamide + ethambutol
(e) Vancomycin + ciprofloxacin

8 A 74-year-old man with refractory Crohn's disease and a history of aortic aneurysm repair is admitted to hospital for a recurrent fever. He has been receiving total parenteral nutrition at home for the past 12 months because of poor nutritional intake and malnutrition. In the last four months he has received two six-week courses of vancomycin for methacillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia thought to be line related. The line has been removed on each occasion and the patient presented again shortly after stopping antibiotics each time. Physical examination reveals a severely malnourished individual but with no obvious focus of infection. Blood cultures grow MRSA with the same sensitivity pattern as the two previous isolates, including sensitivity to vancomycin, erythromycin, tetracycline, fusidic acid and rifampicin. Which of the following statements about the MRSA is correct?

(a) The MRSA is likely to be fully sensitive to vancomycin, but the patient has not responded because of the presence of deep-seated infection
(b) The MRSA is likely to be sensitive to vancomycin; the patient needs re-education with regard to line care as he is developing recurrent line infections
(c) The MRSA is likely to be resistant to vancomycin and should be referred for specialist testing
(d) The MRSA is likely to be a vancomycin intermediate-resistant *S. aureus* and should be referred for specialist testing
(e) This is the most common sensitivity pattern for MRSA. It is coincidence that this man has had three separate episodes. The MRSA should be referred for typing

9 A 36-year-old man presents to the acute medical unit with a six-week history of a dry unproductive cough associated with night sweats and breathlessness on exertion. His general practitioner has treated him with amoxicillin six days previously with no improvement. On examination, he is febrile with a temperature 39.5°C, tachycardic 100/min, RR 24/min and coarse crackles at both bases of his lung fields. He has evidence of oral candidiasis. A chest radiograph shows bilateral pulmonary infiltrates with a normal cardiac size. The most likely diagnosis is:

(a) *Pneumocystis carinii* pneumonia
(b) Pulmonary TB
(c) Pulmonary toxoplasmosis
(d) Pulmonary oedema due to cardiac failure
(e) Pulmonary cryptococcosis

10 A 26-year-old female asylum seeker from Zambia thought to have HIV is admitted from accident and emergency following an episode of fit. Further questioning of her friends reveals that she has been complaining of a frontal headache, and on occasions has been noted to have left-sided weakness. She has bilateral papillary oedema. Investigations show Hb 7.9 g/dl (11.5–16.5), WBC 4.5 x 10^9/l (4–11) and platelet count 95 x 10^9/l (150–400). Computed tomography head scan shows three enhancing occupying lesions in the right cerebral hemisphere causing midline shift. What is the next most appropriate step in management?

(a) Blood transfusion
(b) Bone marrow aspiration
(c) Lumbar puncture
(d) Confirmatory HIV antibody testing
(e) Intravenous dexamethasone with empirical trial of treatment with sulphadiazine and pyrimethamine

CME Oncology SAQs

Answers to the CME SAQs published in *Clinical Medicine* August 2008

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