

## Just a cough? (answers on page 45)

### Part one

Amos is a 25-year-old man who has been physically active and fit until 2 months ago, when he developed a cough. He initially thought that this was due to moving to the city from his small town – he assumed it was because he wasn't used to dusty air. When the sputum was flecked with rust-coloured specks he still didn't worry, but a bright red blob of blood in it one morning took him to see his doctor. Asked about his recent general health he admitted that he was more tired than usual, had lost about 5 kilos in weight, and had an occasional night when he had sweated profusely.

**Q1 Based on this information alone, which of the following diagnoses are you considering for Amos's problems?**

- (a) Tuberculosis.
- (b) AIDS.
- (c) Aspergillosis.
- (d) Lymphoma.
- (e) Chronic obstructive lung disease.
- (f) Lung cancer.

### Part two

Amos denies any sexual behaviour or drug abuse that might initiate HIV infection. He has never smoked, nor has he knowingly been in contact with anyone with tuberculosis. Examining his chest you find that he has good expansion on both sides with normal breath sounds. Your only suspicion is of an area to the right of the sternum that is oddly dull to percussion. His heart sounds are normal and his apex beat in the 4<sup>th</sup> rib interspace below the left nipple. He is in sinus rhythm, with a heart rate of 88 per minute and a blood pressure of 120/80 mmHg. He has no lymphadenopathy, and there is no palpable liver or splenic enlargement. He has a temperature of 37<sup>o</sup> C, his respiratory rate is 18 per minute, his haemoglobin is 138 g/l, with a white cell count and differential in the normal range. C-reactive protein level (CRP) is 60 mg/l. Renal and liver function test results are normal. Oxygen saturation is 100% in room air. A chest X-ray showed a large mass in the anterior mediastinum.

**Q2 You feel you are now able to narrow down your differential diagnosis. Which of the following are you considering?**

- (a) Lymphoma.
- (b) Tuberculosis.
- (c) Thymoma.
- (d) Benign thyroid tumour.
- (e) Germ cell tumour.

In a biopsy from the mass are many multinucleated giant cells that the pathologist defines as Reed–Sternberg cells, derived from B lymphocytes. You now have a definitive diagnosis.

### Part three

**Q3 Which of the following are true of Amos's case?**

- (a) He has Hodgkin's lymphoma.
- (b) Without lymphadenopathy you can rule out lymphoma.
- (c) Absence of liver or spleen enlargement also rules out lymphoma.
- (d) The giant cells are strongly indicative of tuberculosis or sarcoidosis.
- (e) The CRP result indicates an infection, therefore cultures need to be taken of the blood and of the biopsy material before a definitive diagnosis can be made.

**Q4 This condition more commonly presents with other symptoms and signs. Which of the following would you accept as classically linked with Amos's diagnosis?**

- (a) Regular fevers above 38<sup>o</sup> C.
- (b) Repeated drenching night sweats.
- (c) Severe weight loss – more than 10% of body weight in half a year.
- (d) Obvious enlargement of lymph glands particularly in the neck, but also in axillae and inguinal regions.
- (e) Rapidly advancing dyspnoea.

**Q5 With which of the following regimens does Amos's physician initiate treatment?**

- (a) A combination of antituberculous drugs.
- (b) High-dose steroids.
- (c) Radiotherapy.
- (d) Surgical removal of the mediastinal mass.
- (e) Anti-thyroid medication.
- (f) A cocktail of chemotherapeutic agents.

### Part four

### Part five