Cystic fibrosis


Pulmonary puzzle

Once bitten, twice shy

**CLINICAL PRESENTATION**

A 46-year-old man of Ethiopian origin was admitted to hospital in 2008 for investigation of cough, increasing dyspnoea and weight loss over several weeks. He was known to be HIV positive. He had a history of several opportunistic infections, including *Cryptosporidium* diarrhoea, tuberculosi,* Mycobacterium avium* complex and *Pseudomonas* pneumonia. He had also been treated in 2005 for visceral leishmaniasis with liposomal amphotericin. His prescribed medication included trimethoprim–suxamethoxazole, clarithromycin, efarine, lamivudine, zidovudine and folic acid. His compliance with highly active antiretroviral therapy (HAART) was known to be poor.

On physical examination he was afebrile. Aside from moderate tachypnoea (24 respirations/min), his vital signs were normal. General examination showed cachexia and marked parotid swelling. The abdomen was non-tender with hepatosplenomegaly. Cardiac/respiratory examination was normal.

Laboratory testing revealed a normal haemoglobin level (14.4 g/dl), leucopenia (total white cell count 1.46×10⁹/l; neutrophils 1.0×10⁹/L) lymphocytes 0.3×10⁹/L, eosinophils 0.1×10⁹/L) and thrombocytopenia (113×10⁹/µl). CD4 count was 34×10⁹ cells/l. Other blood tests were within the normal range, except for hypoalbuminaemia and elevated liver enzymes in a cholestatic pattern.

**Figure 1** Transbronchial biopsy: the lung parenchyma is heavily infiltrated with mononuclear cells containing a large number of small purple/blue staining structures (H&E stain ×40 magnification).

**Figure 2** Transbronchial biopsy: as fig 1, but at higher magnification (H&E stain ×100 magnification with oil immersion).

On admission to our institution, the chest radiograph showed diffuse bilateral airspace opacities mainly in the left upper and right lower lobes (Supplementary fig 1 online). CT scan of the thorax performed elsewhere 1 month prior to his admission showed peripheral pulmonary consolidation throughout the left lung and bilateral areas of ground-glass opacities (Supplementary fig 2). Massive hepatosplenomegaly was noted (Supplementary fig 3). A transbronchial biopsy was performed (figs 1 and 2).

**QUESTION**

What is the diagnosis?

See page 90 for answer

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Needle sharing. The direct human transmission may occur via —

Diagnosis is usually made by biopsy of the affected organs, although microbiological, serological and PCR techniques exist. Visceral leishmaniasis is treated with pentavalent antimony compounds or amphotericin B.

Patients with advanced HIV disease frequently present with respiratory illness, and the differential diagnosis is extremely wide. Asymptomatic hepatitis B may be a common feature in patients with HIV, although in this clinical context its presence narrows the differential somewhat to cytomegalovirus, toxoplasmosis, leishmaniasis, schistosomiasis, endemic mycoses, M. avium complex, miliary tuberculosis and HIV-associated lymphoma.

The previous treatment for leishmaniasis was a red-herring since the parasite is difficult to eradicate completely and may recur, especially in immunosuppressed patients.

REFERENCES
