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Cystic lung lesions as an immune reconstitution inflammatory syndrome (IRIS) in HIV-TB co-infection?

A 33 year old man presented with a 3 week history of night sweats, fever, productive cough, and intermittent headaches. He was found to be HIV antibody positive and fully sensitive *Mycobacterium tuberculosis* was cultured from his cerebrospinal fluid, blood, and bronchoalveolar lavage fluid. He did not have *Pneumocystis jiroveci*. A thin section CT scan of his chest confirmed extensive bilateral cavitation at the apices, multiple small intrathoracic nodules, and moderate mediastinal lymphadenopathy.

Standard antituberculous treatment was commenced and he improved clinically. Four weeks later anti-HIV treatment was introduced. He became febrile again and his clinical status deteriorated with fevers up to 40°C, weight loss, and increased acute phase responses.

A repeat high resolution CT (HRCT) scan revealed new multiple pulmonary cystic lesions together with the thoracic nodules and a small right pneumothorax (fig 1). A wedge biopsy of his lung showed cysts lined by endothelium with a lymphohistiocytic infiltrate and foamy macrophages. ZN, fungal and CMV stains were negative; there were no acid fast bacilli or granulomas (fig 2).

He was started on steroids (dexamethasone) with the working diagnosis of immune reconstitution inflammatory syndrome (IRIS). Three months later he was afebrile, smear negative, culture negative, and gaining weight. A repeat HRCT scan of his chest 12 months later revealed significant resolution of the cysts. This case shows that IRIS can manifest as pulmonary cyst formation.

Figure 1 HRCT scan showing multiple pulmonary cystic lesions, thoracic nodules, and a small right pneumothorax.

Learning points

- IRIS is a serious complication of HIV treatment.
- It can manifest as pulmonary cyst formation.

Figure 2 Wedge biopsy specimen of the lung showing cysts lined by endothelium with a lymphohistiocytic infiltrate and foamy macrophages

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