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Clinical Image

CLINICAL IMAGE

Role of chest CT in concomitant pulmonary TB and Kaposi sarcoma in a HIV patient

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CLINICAL IMAGE

A 43-year-old human immunodeficiency virus positive (HIV+) man with a history of intravenous drug addiction was admitted to the emergency department of a community hospital in Spain suffering from fever and severe respiratory distress. The patient had been diagnosed a month ago with Kaposi sarcoma of skin and had a low CD4 count of 114 cells.

Chest X-ray showed bilateral reticulonodular interstitial infiltrates suggestive of pulmonary infection in HIV (Fig. 1a). As respiratory function was severely reduced, chest computed tomography (CT) was performed showing bilateral peripheral filling of bronchiolii and alveolii with 'tree-in-bud' configuration combined with bilateral peribronchial and peripheral spiculated nodules. Calcified hilar and mediastinal lymphadenopathy were also present (Fig. 1b).

The combination of these findings in a HIV patient with low CD4 count raised the suspicion of endobronchial spread in reactivated tuberculosis that was confirmed by gene expert positive in sputum. The presence of spiculated peribronchial and peripheral nodules is not a typical finding of tuberculosis and, in our patient suggested superimposed pulmonary invasion of Kaposi sarcoma. The patient was treated with a combination

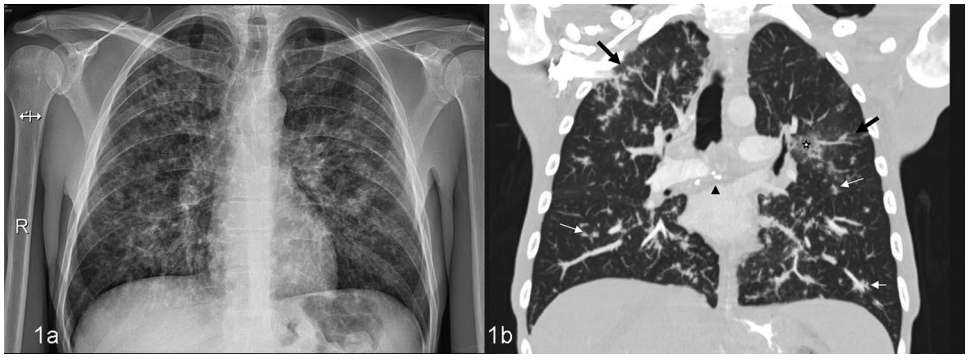

Figure 1: (**a**) Chest X-ray PA shows bilateral diffuse coarse reticulonodular pattern with small nodules scattered in both lungs; (**b**) chest CT scan with iv contrast and coronal reformat shows bilateral centilobular nodules with a tree-in-bud configuration reflecting endobronchial spread of post-primary tuberculosis (TB) infection (black arrows), ground glass infiltrates (star) and scattered nodules in both lungs of Kaposi sarcoma (white arrows) and calcified lymph nodes on mediatinum and hilia (arrowheads) indicating past TB infection.

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of anti-tuberculous therapy and also chemotherapy for Kaposi sarcoma. Pulmonary lesions remitted and CD4 count rose to 514 cells in a year.

Invasion of Kaposi sarcoma to the lungs is not common and has different presentations from the most common bilateral peribronchovascular flame-shaped dissemination around the hila [1, 2] to the one described in this case with diffuse heterogeneous nodules of different sizes.

Chest X-ray is the first imaging modality for HIV patients with pulmonary complications, although it is quite unspecific [3, 4]. This case illustrates the importance of chest CT as a valuable tool—also recommended in low resource settings—to identify subtle imaging findings in complicated cases, such as ours. CT can help in the broad differential diagnosis of pulmonary affections in HIV patients so they can be sent to a reference hospital for appropriate treatment [3, 5].

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CONFLICT OF INTEREST

I declare no conflicts of interest.

ETHICAL APPROVAL

We have purposefully totally de-identified the patient.

INFORMED CONSENT

Added in a separate file.

GUARANTOR

Mar Pérez-Peña.

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