Medical Imagery

Cystic lung lesions revealing a Pneumocystis jirovecii and Aspergillus flavus co-infection in an HIV-infected patient

An untreated, HIV-infected, 39-year-old woman presented with a dry cough of 1-month duration. The physical examination was normal. A chest X-ray showed diffuse alveolo-interstitial infiltrates predominantly in the lung apex (Figure 1A). A computed tomography (CT) scan disclosed diffuse cystic lesions surrounded by ground-glass opacities (Figure 1B, C). Some cavitory lesions presented thicker walls, mimicking an ‘air crescent sign’. The patient’s CD4 count was 83 cells/μl and HIV viral load was 501 180 copies/ml. Bronchoalveolar lavage (BAL) fluid examination revealed 360 000 cells/ml, including macrophages (66%), neutrophils (32%), and eosinophils (2%), with foamy exudates suggestive of Pneumocystis pneumonia (PCP). Mycological findings confirmed Pneumocystis jirovecii cysts and trophic forms, associated with filamentous elements with culture of Aspergillus flavus. Galactomannan antigen was detected in serum and BAL fluid. Of note, there was no additional predisposing factor for invasive aspergillosis, in particular no neutropenia or corticosteroid therapy.1 Co-trimoxazole was administrated at a curative dose for 21 days, followed by secondary prophylaxis. Highly-active antiretroviral therapy was started 10 days later. The probable pulmonary invasive aspergillosis was treated with voriconazole for 3 months. The patient’s clinical condition improved rapidly. Follow-up CT showed progression towards nodular non-cavitary lesions at 6 weeks, and normalized at 3 months.

Cystic PCP is an unrecognized condition, although involving more than 30% of patients in some series.2-3 These excavations may enhance the risk of Aspergillus co-infection, rarely described in HIV-infected patients.1,4,5

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References

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