Simultaneous pulmonary involvement, histologically proven, of sarcoidosis and rheumatoid arthritis

Sirs,

Rheumatoid arthritis (RA) and sarcoidosis are common diseases but their association seems to be rare. We experienced a case of isolated pulmonary involvement, histologically proven, of combination of sarcoidosis and RA.

A twenty-seven-year-old Caucasian female developed polyarthritis with symmetrical inflammatory synovitis of the proximal interphalangeal, metacarpophalangeal and wrists from three months. Her inflammatory markers, rheumatoid factor (RF) and anti-cyclic citrullinated peptide antibodies (CCP) were increased and therefore, RA was diagnosed on April 2004. She was initially treated with hydroxychloroquine (200 mg x 2/day) and prednisone (8 mg/day), and then with sulfasalazine. In February 2006, she presented persistent fever (38°C), asthenia; chest radiograms showed bilateral pulmonary nodules visible as diffuse subpleural and parenchymal micronodules in CT scans. Pulmonary function test demonstrated only decreased carbon monoxide transfer factor (49%). As known from the literature (1), there are many possible rheumatologic manifestations of lymphoproliferative disorders. Therefore, patients who develop unexplained arthritis should be considered for a biopsy to rule out coexistent neoplasia. A video assisted thoracic surgical (VATS) nodules biopsy was performed. The histological response was: subpleural palisading granuloma with central fibrinoid necrosis, histomorphologically referable to rheumatoid granuloma (RG). She started therapy with infliximab but it was interrupted at the second infusion for an allergic reaction. Etornercept was started (25 mg twice/week). Because of a clinical reevaluation in March 2007, a chest CT was performed showing micronodules in subpleural and basal areas and ground-glass manifestations referable to active alveolitis in superior areas. A new reading of previous histological samples of pulmonary nodules remarked non-necrotic giant cells epithelioid granulomas, well defined, often with lymphocytes vallum in intralobular septa (Fig. 1A). Granulomas were localized in the context of peribronchial tissue, interlobular septa and subpleural connective tissue. One section documented a subpleural nodular lesion characterized by a central area of fibrinoid necrosis surrounded by a tissue with histiocytes in palisading aspects and giant cells (Fig. 1B). Necrosis is usually absent in sarcoidosis, but small foci of necrosis may be seen (punctate necrosis); there were concomitant RA and sarcoidosis lesions. The HLA typing revealed the phenotypes A1, Cw7, DR10, DR13, B51. Spirometry showed a carbon monoxide transfer factor of 76%. BAL showed an increased number of CD8 (50.4%) while the number of CD4 was in ranges (44.8%). Bacteriological and cytological examination of BAL was normal. Ocular evaluation did not show lesions; ACE, lysozime and phospho-calcium metabolism were in ranges. Definitive therapy was 16 mg of prednisone and subcutaneous adalimumab (40 mg) every ten days to obtain a better complete control of the disease.

A review of the literature evidenced few cases of the association between the RA and sarcoidosis (2-8) and few cases showed simultaneous histological proof. Numerous abnormalities of the immune system have been described in patients with sarcoidosis including the presence of RF, but the co-occurrence of sarcoidosis and RA remains low (9).

Our patient had never shown signs and symptoms referable to sarcoidosis (bilateral hilar enlargement, erythema nodosus, uveitis) in presence of HLA-A1 related to sarcoidosis. Fever presented in February 2006 could have been a flare of a pre-existing sarcoidosis, which had not been diagnosed before. We treated the patient with infliximab for the presence of pulmonary rheumatoid nodulosis; because of an allergic reaction etanercept was started. After 13 months of this therapy, pulmonary TC showed a stationary prevalence.

We decided to start adalimumab after the finding of the concomitant sarcoidosis referring to recent reports of successful use of anti TNF-α (infliximab) in steroid-resistant sarcoidosis and considering patient’s allergic reaction to infliximab. In the literature, few data are available on the use of adalimumab (10). After a six-month period, the last pulmonary TC evidenced a stationary condition.

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References