LETTERS TO THE EDITOR

Gold Salt-Induced Lung Disease

To the Editor: Lung disease is an infrequent adverse effect of gold salt therapy[1] that may produce signs and symptoms similar to those of the rheumatoid diseases it is used to treat. We present a case of gold-salt induced lung disease with cutaneous and respiratory symptoms that improved when treatment was discontinued.

The patient was a 62-year old woman who had been diagnosed with seronegative arthritis. The immunological study showed an antinuclear antibody titer of 1:160 with a homogeneous pattern, negative for rheumatoid factor and specific nuclear antigens. The patient started gold-salt therapy administered by intramuscular injection at an initial dosage of 10 mg/week, increasing to a maintenance dosage of 50 mg/week. Three weeks later (cumulative dose: 85 mg) a nonpurulent macular rash appeared on her palms, soles, bony protuberances, and trunk, followed by increasing dyspnea, leading her to consult a pneumologist. On auscultation bibasilar "Velcro" type inspiratory crackles were noted. A hemogram showed eosinophilia of 5% (227 cells/μL) and an erythrocyte sedimentation rate of 38 mm/h. Biochemistry was normal and lung function tests showed mild restriction—a forced vital capacity (FVC) of 2080 mL (82%); a forced expiratory volume in 1 second (expressed as percent of FVC) of 87% and a total lung capacity of 3330 mL (70%)—with normal diffusing capacity and gas exchange values. A high-resolution computed tomography (HRCT) scan showed bibasilar micronodular reticular abnormalities, with irregular opacities in subpleural regions and left-sided predominance (Figure). Bronchoalveolar lavage (BAL) fluid contained 15% lymphocytes with a CD4/CD8 ratio of 0.20. Microbiological analysis of the BAL was negative and transbronchial biopsy showed thickening of alveolar septa with mild inflammation and some intraluminal buds of loose connective tissue in the regions where inflammation was greatest. Suspension of treatment led to complete disappearance of the signs and symptoms described above.

In order to establish a diagnosis of gold salt-induced lung disease at least 9 of the 13 criteria described by Tomioka and King[1] must be met. In the case we report, 11 of these criteria were met. The appearance of adverse side effects is not dose dependent,[1] although generally a mean cumulative dose of 1000 mg is required. A case in which adverse effects appeared at low cumulative doses has been described, lending support to the idea that side effects are independent of dose.[2] In our patient, pharmacological toxicity initially manifested as a rash that should have prompted withdrawal of the drug.[1] Continuation of therapy in the following weeks led to the appearance of respiratory symptoms, suggesting an immunologic pathogenic mechanism common to both manifestations.[3] In such patients a HRCT scan of the chest usually shows alveolar opacities distributed throughout the bronchial tree and subpleural regions.[4] In the patient we describe radiological abnormalities were evident and in sharp contrast with near-normal lung function values. Gold salts can produce various types of interstitial lung disease: patterns of usual interstitial pneumonia, lymphoid interstitial pneumonia, bronchiolitis obliterans organizing pneumonia, and diffuse alveolar damage have been described.[6] The absence of radiographic evidence of patchy pneumonic infiltrates, the predominance of reticulonodular infiltrates in the HRCT, the lymphocytic predominance in BAL fluid with a low CD4/CD8 ratio, and the favorable outcome achieved by merely withdrawing the drug are suggestive of hypersensitivity pneumonitis, a syndrome not included in classic descriptions of gold salt-induced lung disease.

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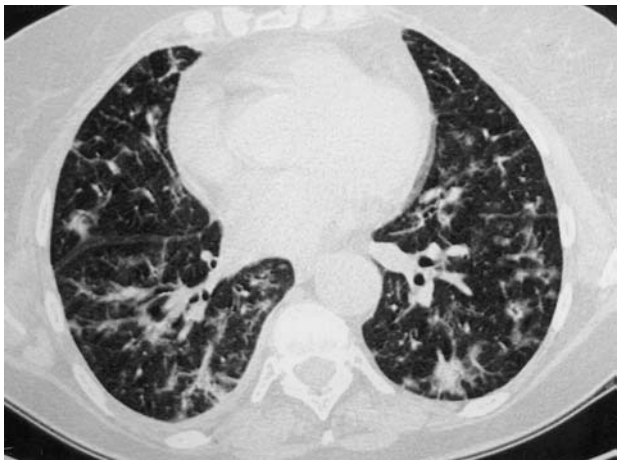

Figure. Bibasilar micronodular and peribronchial pulmonary opacities.