Rheumatoid Arthritis Preceded by Interstitial Pneumonia Associated with Myelodysplastic Syndrome: A Case Report

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A 75-year-old male was admitted because of dyspnea. A chest X-ray showed interstitial shadows in both lung fields, and hematology studies revealed a normochronic anemia. Examination of bone marrow smears led to a diagnosis of myelodysplastic syndrome. The rheumatoid factor test was positive, but the patient did not have arthritis. Twenty-one months later, he began to experience joint pain and swelling, and he fulfilled the diagnostic criteria for rheumatoid arthritis. This is the first case ever reported of rheumatoid arthritis preceded by interstitial pneumonia associated with myelodysplastic syndrome. (Kitakanto Med J 2003; 53: 289`291)

Key words: rheumatoid arthritis, myelodysplastic syndrome, interstitial pneumonia

Introduction

Diagnostic criteria for the various types of myelodysplastic syndrome (MDS) have been proposed, and a detailed description of features that may help define MDS has been published.1 MDS refers to disorders in which the abnormal findings are thought to be confined to the myeloid cell series.2 Raskind et al. hypothesized that at least two events are involved in the pathogenesis of the myelodysplasia: one causing proliferation of a clone of genetically unstable pluripotent stem cells, and the other inducing chromosomal abnormalities in its descendants.3 Various rheumatic manifestations have been described in patients with MDS.4`6 However, there have been no reports rheumatoid arthritis preceded by interstitial pneumonia associated with MDS. We report the first case of rheumatoid arthritis preceded by interstitial pneumonia associated with MDS.

Case Report

A 75-year-old male was admitted to a hospital because of dyspnea. He had no history of morning stiffness, pain, or swelling of the joints. On physical examination, blood pressure was 128/82mmHg, pulse rate 83/min, and body temperature 36.1°C, and his conjunctivae were pale. Chest examination revealed Velcro rales in the inferior lung fields bilaterally. Laboratory studies showed a hemoglobin level of 9.2g/dL, hematocrit 28.8%, WBC count 4900/μL, platelet count 109,000/μL, LDH 240IU/L, RAPA 2560X, CRP, the erythrocyte sedimentation rate (ESR), the ANA test, and direct and indirect Coombs’ tests were normal. A bone marrow biopsy revealed normocellularity with erythroid hyperplasia and dysplasia, a myeloid to erythroid (M : E) ratio 4 : 1, and pseudo-Pelger anomalies of neutrophils and micromegakaryocytes. A diagnosis of myelodysplastic syndrome (MDS) was made based on these findings. A chest x-ray showed basal-predominant reticular abnormality in both lung fields (Fig. 1). Computed tomography (CT) of the chest showed reticular honeycombing in the peripheral subpleural base of both lung fields (Fig. 2). Pulmonary function testing yielded a %DLCO of 38%. Despite the positive rheumatoid factor test, the patient did not have arthritis. Twenty-one months later, he began to experience pain and swelling of the small joints of the hands and feet, and of the wrists, elbows, knees, and ankles. The patient then met the diagnostic criteria for rheumatoid arthritis, and
a diagnosis of rheumatoid arthritis preceded by interstitial pneumonia associated with MDS was made.

Discussion

Homma et al. prospectively followed 68 patients diagnosed with idiopathic interstitial pneumonia (IIP) for periods of 1 to 11 years, and 13 of them (19%) subsequently developed systemic manifestations of collagen vascular diseases (CVD) and were diagnosed as having had interstitial pneumonia as the sole presenting manifestation of collagen vascular disease (CVD-IP). Comparison with the CVD-IP patients revealed that the IIP patients were more likely to be male, to be of advanced age, to have a past history of hypertension, and to have a cough, exertional dyspnea, and digital clubbing. The CVD-IP patients had a higher ESR and a higher incidence of x-ray evidence of discoid atelectasis in the lower lung fields. However, since our patient was an older male with no past history of hypertension, no cough, no digital clubbing, had a normal ESR, and had no discoid atelectasis in the lower lung fields, the features of our patient were different from those of CVD-IP. These difference may be attributable to our patient having MDS, which are contributed to the long-term immunodysfunction found in CVD.

There is a report that the rate of complication of rheumatoid arthritis by interstitial pneumonia is 1.1%, and there is also a report that the rate of complication of rheumatoid arthritis associated with MDS by interstitial pneumonia is 11.8% (2 of the 17 patients) in patients. These reports suggest that MDS may contribute to complication by interstitial pneumonia.

This is the first report of a first case of rheumatoid arthritis preceded by interstitial pneumonia associated with MDS.

References


