

Multiple pulmonary nodules in rheumatoid arthritis

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To the Editor,

We read the article entitled "Cavitary Pulmonary Nodules in Rheumatoid Arthritis; Case Reports and Review of the Literature" written by Kanitez et al. (1) and published in a recent issue of the European Journal of Rheumatology with great interest. Herein, we wish to contribute to this "case reports and review of the literature" by providing information regarding our published case.

We reported a case of a 45-year-old female patient who was diagnosed with rheumatoid arthritis (RA) with multiple and cavitary pulmonary nodules nine years previously (2). Unlike the first case presented in the article, both rheumatoid factor (356.4 U/mL) and anti-cyclic citrullinated peptide (>200 U/mL) were positive in our patient as well as in the second case. The antinuclear antibody and antineutrophil cytoplasmic antibody were negative in our case. The patient's medical history revealed smoking and irregular methotrexate use when she was admitted to our department with exacerbation of the disease. Biopsy was performed because of an irregular cavitary nodule and multiple pulmonary nodules; the presence of a rheumatoid nodule was confirmed on histopathological examination. The regression of pulmonary nodules was detected following rituximab treatment in our patient, similar to the first case presented by Kanitez et al. (1).

Pulmonary rheumatoid nodules may develop during the administration of methotrexate; leflunomide; and anti-TNF- α agents such as adalimumab, etanercept, infliximab, and golimumab (3). The treatment of nodules primarily consists of steroid therapy and the withdrawal of suspicious agents. Although anti-TNF- α agents are reportedly ineffective on pulmonary rheumatoid nodules, regression and stability were observed on etanercept administration (4). B lymphocytes play a key role in the extra-articular involvement associated with RA, which is indicated by their accumulation around the pulmonary rheumatoid nodules in response to rituximab (5). Glace et al. (5) evaluated the effect of rituximab in 10 patients with RA who experienced pulmonary adverse events during the administration of sulfasalazine, methotrexate, leflunomide or combination of these drugs with etanercept or adalimumab. Stabilization or decrease in the number of nodules and the decrease in the long axis of nodules after rituximab have been observed. Tocilizumab, a humanized anti-IL-6 receptor antibody, may be another treatment option for patients with RA with a pulmonary rheumatoid nodule (3, 6). Tocilizumab may lead to the regression of pulmonary nodules in patients with RA. However, the pathogenesis of the disappearance of pulmonary rheumatoid nodules remains unclear (6).

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