

Introduction:

Certolizumab pegol, an FDA-approved tumor necrosis factor-alpha inhibitor for psoriatic arthritis, is typically prescribed with methotrexate, a known risk factor for interstitial lung disease (ILD). We report a rare case of ILD in a patient undergoing certolizumab monotherapy without prior methotrexate exposure.

Case Description:

A 58-year-old former smoker with a history of psoriatic arthritis presented with hypoxemia and a three-month non-productive cough. Despite 14 years of stability on adalimumab monotherapy, the patient switched to certolizumab due to insurance issues, leading to a gradual worsening of shortness of breath. Physical exam revealed rales on bilateral lung bases. Chest X-ray was unremarkable, but a CT scan showed emphysema with patchy ground glass opacities, most pronounced in the upper lobes, alongside minor retained tracheal secretions. The patient required 2 L of oxygen via nasal cannula and was started on prednisone 40 mg. Further assessment with bronchoalveolar lavage yielded negative results for malignancy or pneumocystis but showed elevated neutrophilic fluid. Cultures from bronchial samples did not exhibit fungal growth. Hypersensitivity pneumonitis panels, HIV, ANCA screen, and serum IgG tests produced negative results. Complement C3 levels were normal, while complement C4 levels were decreased, and IgE levels were increased.

Based on the subacute clinical presentation, negative cultures, and ground glass appearance on the CT scan, drug-induced pneumonitis was suspected. Certolizumab was discontinued, and the patient was started on a prednisone taper with gradual improvement in his symptoms. Rheumatology referral upon discharge led to a switch to secukinumab, an IL-17-a inhibitor, for the management of his psoriatic arthritis. The patient is currently doing clinically well and is due for a repeat CT chest in 2 months to assess the status of his ILD.

Discussion:

The spectrum of TNF alpha-inhibitor-induced lung diseases varies from infectious (particularly mycobacterial) to non-infectious conditions. The case underscores the importance of thorough risk assessment when considering certolizumab, emphasizing understanding ILD risks beyond traditional factors. Factors such as pre-existing lung disease, increased age, and concurrent use of methotrexate can heighten the risk of certolizumab-induced ILD. Enduring symptoms may persist despite discontinuation of certolizumab, leading to lifelong supplemental oxygen dependence in most cases.