

Pulmonary toxicity due to alemtizumab`s infusion. diagnostic and treating dilemma

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Introduction: Alemtizumab is a novel monoclonal antibody indicative for active relapsing remitting multiple sclerosis. Alemtizumab targets CD52 protein of mature B and T lymphocytes, leading to their depletion. The most notable adverse events are immune mediated conditions like idiopathic thrombocytopenic purpura, thyroid disorders or nephropathies and also infusion-associated reactions. Case description: A 21 year old woman showed at the fourth day of alemtizumab infusion acute chest pain, cough and shortness of breath with no fever. The x-ray detected lung consolidation at both sides and the following computer tomography (CT) confirmed the lower lobar consolidations with focal ground-glass opacity and numerous small opacities through lungs. The differential diagnosis included pneumonia, infection of pneumocystis carinii and drug-induced interstitial lung disease (DILD). Alemtizumab was withdrawn and antibiotic treatment was initiated. The next day the patient was improved as did the imaging exams, so antibiotics discontinued and she got only supportive care and corticosteroids. Ten days later the new CT was normal and symptoms had totally been resolved. Discussion: Alemtizumab could cause pulmonary toxicity and immune inflammation to the lungs maybe due to drug specific antibodies or T cells. But how easy is to diagnose DILD in a patient under immunosuppression treatment excluding other etiologies considering the lack of consensus for a diagnostic approach in patients with DLID? How should been determined the prognosis? Because alemtizumab is an immunosuppression drug with increased risk to cause infections have the antibiotics a place in the DILD`s treatment? Is there a risk for relapse in future rechallenge with alemtizumab.