

Pulmonary Tb reactivation in iMCD under treatment with siltuximab: a case report

가톨릭의대 서울성모병원 혈액내과

김진하, 민기준, 조석구

Idiopathic multicentric Castleman's disease (iMCD) is a rare and potentially life-threatening lymphoproliferative disorder. It is driven by the dysregulated production of interleukin-6 (IL-6), a proinflammatory cytokine, which is directly neutralized by the anti-IL-6 monoclonal antibody, Siltuximab. Siltuximab, which is recommended as first-line therapy, has been shown to be effective and well tolerated, and serious adverse events are rare. However, herein, we report a case of a patient with iMCD treated with siltuximab who developed a rare and atypical complication of reactivation of pulmonary Tuberculosis(Tb). In Aug 2016, a patient with IgA nephropathy was diagnosed with iMCD on the basis of imaging of the neck, chest, abdomen/pelvis CT (fig. A1-6) with PET CT, and core needle biopsies of both inguinal lymph nodes, which confirmed plasma-cell type Castleman's disease. At the same time, we found a calcific scarring in the RUL on a chest CT, which was probably an old pulmonary Tb sequela. The patient received siltuximab treatment every 3 weeks from Apr 2018 onwards, and complete response after the 14th cycle of siltuximab injection in Mar 2019(fig. B1-6). In Apr 2020, after the 27th cycle of siltuximab injection, the patient visited the hospital with a complaint of dyspnea and dry cough for more than 3 weeks. Reactivation of active pulmonary Tb was confirmed by chest CT imaging(fig. D1-6), Mycobacterium Tb PCR, and AFB culture of the bronchial washing fluid. Treatment with siltuximab was stopped and first-line Tb therapy was initiated with HERZ. Chest X-rays revealed amelioration of pulmonary Tb lesions on RUL after 3 months in July 2020. As IL-6 is mainly involved in B-cell stimulation and inflammatory activation, siltuximab has little effect on T-cell-mediated immunity. However, as in this case, reactivation of pulmonary Tb should also be considered a rare, but potential complication related to T-cell-mediated immunity in long-term treatment with siltuximab, especially in countries with a high prevalence of pulmonary Tb. This case indicates the need to continue studies on the safety and tolerability of siltuximab in patients with other latent infections.

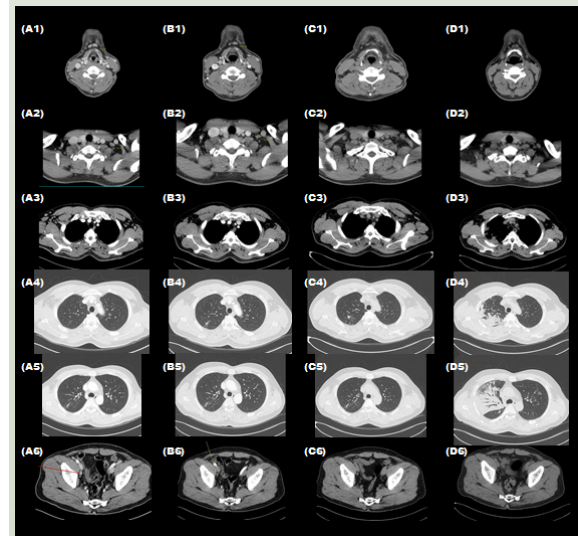


Figure 1. Neck CT, chest CT and Abdomen CT revealed a stage of Castleman's disease and chest CT revealed the reactivation for pulmonary Tuberculosis in chest CT. The first column images (A1-6) are first CTs to diagnose Castleman's disease in Aug 2016. Complete Response (CR) was confirmed after 14th Siltuximab in March 2019 (B1-6). Chest CT revealed that pulmonary Tuberculosis is suspected to re-activate in posterior segment of right upper lobe (C1-6). Pulmonary Tuberculosis aggravated and was combined pneumonia after 27th Siltuximab(D1-6)