Rapid Vanishing of Tumors by Withdrawal of Methotrexate in Epstein-Barr Virus-Related B cell Lymphoproliferative Disorder

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A 70-year-old woman suffering from rheumatoid arthritis for 15 years was admitted with fever and oral tumor (Picture 1A). She was treated with several immunosuppressive drugs, including methotrexate (MTX; 2 mg per week) for 6
years and low-dose prednisolone (PSL) for more than 10 years. Pathological diagnosis of the oral tumor was diffuse large B-cell lymphoma, of immunoblastic variant. EBV nuclear antigen-2 and latent infection membrane protein-1 were positive on immunohistochemical staining. Epstein-Barr virus (EBV)-DNA was also positive, indicating EBV-related B-cell lymphoproliferative disorder (EBV-B-LPD). The quantitative EBV-DNA level in peripheral blood was 120 copies per 10⁶ white blood cells and the concentration of soluble interleukin-2 receptor (s-IL2R) was 8430 IU/ml. Moderate-level liver dysfunction was detected. Computed tomography detected multiple tumors in bilateral lung bases (Picture 1B) and the liver. After discontinuing MTX and PSL, her fever disappeared and the tumors were immediately reduced (Picture 1C & D). High levels of EBV-DNA, s-IL2R and liver enzymes were rapidly normalized. EBV-B-LPD may develop in old patients with a long history of taking MTX. Cessation of MTX was thought to restore immunity against EBV affected by MTX and improved EBV-B-LPD in this case.