



ADVERSE DRUG REACTIONS, INCLUDING SJS, TEN

SEVERE EOSINOPHILIA AS A RARE SIDE EFFECT OF METHOTREXATE IN A PATIENT WITH ERYTHRODERMIC PSORIASIS: THE FIRST CASE REPORT

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Background: Methotrexate (MTX) is an effective and relatively safe treatment in psoriasis. We herein describe a severe reversible eosinophilia alone during MTX therapy in a patient with erythrodermic psoriasis.

Observation: A 20-year-old male with a six-year history of psoriasis vulgaris. His condition was getting worse and became erythroderma in few weeks. He was treated with MTX 15mg/week. One week later, he came back with severe fatigue and intense pruritus. His body was covered by a bright erythema with white scales. Treatment with MTX was continued at the same dose. Routine blood tests revealed normal excepting an increased eosinophil proportion at 34.8% ($4.63 \times 10^3/\text{mm}^3$). He also had fever at 39°C, severe itchy and dark erythroderma. Blood culture was negative, chest radiography, hs-CRP were normal. His eosinophil increased to 56.6% ($6.31 \times 10^3/\text{mm}^3$). Total IgE was at 444.4 UI/mL (normal < 130 UI/mL). The serum tests for antibodies against Strongiloides (IgG/IgM), Gnathostoma spinigerium (IgG), Toxocara canis (IgG), Fasciola spp (IgG) were negative. Scabies infection was excluded by a negative skin scraping. The histopathologic features revealed a psoriasiform hyperplasia, a minor interface changes and remarkably infiltrated eosinophils within dermis layer. Record of his previous hospitalization showed a normal eosinophil count before starting MTX. Taken together, an eosinophilia due to MTX was recognized and MTX cessation was decided. The eosinophil counts rapidly decreased and backed to normal in 2 weeks without any specific treatment. He was getting better with no fever, itch relief and improvement of psoriatic lesions.

In the concept of severe disease, the robust suppression of Th1 and Th17 activity due to





MTX may induce a secondary imbalance of immune system that subsequently lead to a reactive eosinophilia through a Th2 downstream pathway.

Key message: Dermatologists should be aware of a severe peripheral eosinophilia, a rare but possible life-threatening side effect.

