Dermatology 2008;217:260–261

DOI: [10.1159/000149311](https://doi.org/10.1159/000149311)**Recurrent Varicella in an Adult Psoriasis Patient Treated with Etanercept**

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*Key Words*Varicella • Etanercept • Psoriasis • Tumour necrosis factor- α

Biological agents, particularly tumour necrosis factor- α (TNF- α) inhibitors, represent a major advance in the treatment of severe psoriasis [1]. We report the case of a 58-year-old male with a 20-year history of severe chronic plaque psoriasis who had been previously treated with cyclosporine, acitretin, methotrexate, PUVA, and UVB. He presented with extensive plaque psoriasis of the limbs and trunk with a Psoriasis Area and Severity Index score of 26.3. We started treatment with etanercept, a human soluble TNF- α receptor, in monotherapy at a dose of 50 mg administered subcutaneously twice a week. After 1 month of treatment, about 15 scattered, symptomless, erythematous, slightly oedematous macules with central papulovesicles appeared on the trunk, arms and face, without dermatomal clustering. There were no oral or scalp lesions, and fever or other symptoms were absent. Polymerase chain reaction examination of the vesicle fluid was strongly positive for varicella zoster virus (VZV) DNA. The patient's full blood count was normal but there was an elevation of the erythrocyte sedimentation rate (17 mm/h; normal 0–10) and C-reactive protein level (27.2 mg/l; normal 0–5). VZV immunoglobulins G and M were both positive. A chest X-ray was negative. The patient had had chickenpox at the age of 4 years. A diagnosis of a recurrent varicella induced by etanercept was made. Etanercept was stopped and the lesions were treated with a topical antiseptic solution. After 1 week the lesions were only visible as small crusts on an erythematous base, and 2 weeks later they had completely disappeared, leaving no scarring. After a discontinuation of 4 weeks, etanercept was re-administered at 50 mg twice a week, without any problems.

The history of a previous chickenpox infection (more than 50 years ago), the VZV serologic status (positive for immunoglobulins G and M), the presence of VZV DNA in the vesicle fluid, the absence of dermatomal clustering, the mild clinical course, the paucity of the lesions and the onset 1 month after starting etanercept all pleaded in favour of a recurrent varicella induced by etanercept.

The use of TNF- α -blocking agents has been associated with an increased susceptibility to infections [2]. Until now, VZV infections in patients on anti-TNF- α agents were mainly a paediatric issue, with some cases of severe primary varicella complicated by aseptic meningitis in etanercept-treated children with juvenile rheumatoid arthritis [3]. Herpes zoster [4, 5] and primary varicella [6], which can be very severe [7], have also been reported in adults receiving infliximab or adalimumab for Crohn's disease or rheumatoid arthritis. However, cases of recurrent varicella associated with TNF- α blockers have never been reported, to the best of our knowledge. In vitro studies have shown that replication of VZV and VZV antigen expression are inhibited by TNF- α and that this antiviral activity can be completely blocked by monoclonal antibodies against TNF- α [8].

Atypical recurrent varicella with disseminated lesions and without dermatomal clustering was described in immunocompromised patients with haemopathies and in paediatric renal transplant recipients treated with mycophenolate mofetil [9, 10]. As compared to classical chickenpox and relapsing varicella in children and young adults, disease manifestations were milder with fewer lesions (that all exhibited the same stage of development) [9]. Similar cases of 'breakthrough varicella' were also recently reported after immunization with a live attenuated varicella vaccine [11]. In our patient, the history of chickenpox as a child, the positive serology for VZV immunoglobulin G, and the absence of the constitutional symptoms present in primary varicella suggested a reactivation of varicella rather than a new infection.

In conclusion, we have described a case of recurrent varicella during etanercept therapy for psoriasis. This entity can thus be added to the list of cutaneous side effects of TNF- α -blocking agents [5, 12, 13]. Moreover, this case emphasizes the need for psoriasis registries to report rare side effects of psoriasis therapies [14].

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