# Induction of Pustular Lesions During Infliximab Therapy for Crohn's Disease

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*Sir,*

Infliximab is a chimerical monoclonal antibody that has rapidly become a highly useful tool in the therapeutic management of a variety of inflammatory conditions. Its effects are due to the blockade of tumour necrosis factor (TNF)-α on the surface of inflammatory cells and soluble TNF-α. This cytokine is known to play a relevant role in autoimmune diseases, rheumatoid arthritis (RA), inflammatory bowel disease and psoriasis (1).

Infliximab may cause both systemic and local adverse effects. We wish to report an unusual cutaneous side effect.

## CASE REPORT

A 40-year-old patient with an 18-month medical history of ileal Crohn's disease with perianal fistulae presented recently at our clinic. He had started infliximab therapy in the previous 2 weeks and was referred to us for assessment of pustular lesions that had appeared on his palms and soles after receiving his third dose of infliximab. He had not previously suffered from similar lesions and his personal and familiar history was negative for psoriasis.

Examination revealed erythematous areas with rounded clusters of pustules on both palms and soles (Fig. 1) and nummular erythematous plaques with pustular lesions on his abdomen, back and limbs.

No other systemic symptoms were noticeable and features suggesting a SAPHO (synovitis, acne, pustulosis, hyperostosis and osteitis) syndrome were not evident.

His blood count and biochemistry parameters were all within the normal ranges, except for the white blood cell count, the erythrocyte sedimentation rate and the C-reactive protein levels, which were slightly raised.

A skin biopsy taken from the palmar aspect of his left hand was consistent with psoriatic palmoplantar pustulosis. Infliximab was stopped and topical treatment with a combination of calcipotriene and betamethasone was started, leading to a remarkable improvement in the patient's lesions. However, psoriatic lesions worsened again and became widespread during the following weeks.

## DISCUSSION

Infliximab can cause a variety of adverse effects, including nausea, headache, cough, infusion reactions, infections, lymphoproliferative disorders, serum sickness-like reactions, lupus-like syndrome and a variety of cutaneous manifestations (2).

The onset or worsening of pustular psoriasis (PP) during treatment with anti-TNF drugs has been reported previously in patients with RA, ankylosing spondylitis, spondylarthropathy, Shulman's syndrome, Behçet's syndrome, psoriasis and ulcerative colitis (1). PP in patients with Crohn's disease while receiving treatment with infliximab has been reported recently by Takahashi et al. (3).

The development of infliximab-induced pustules is usually seen several months after the start of the therapy (4). It is currently considered a class adverse effect by some authors (1, 4) and it has also been reported with etanercept and adalimumab (1). However, the patho-mechanism is not yet understood. It seems paradoxical that the same agent can both cure and induce the same condition.

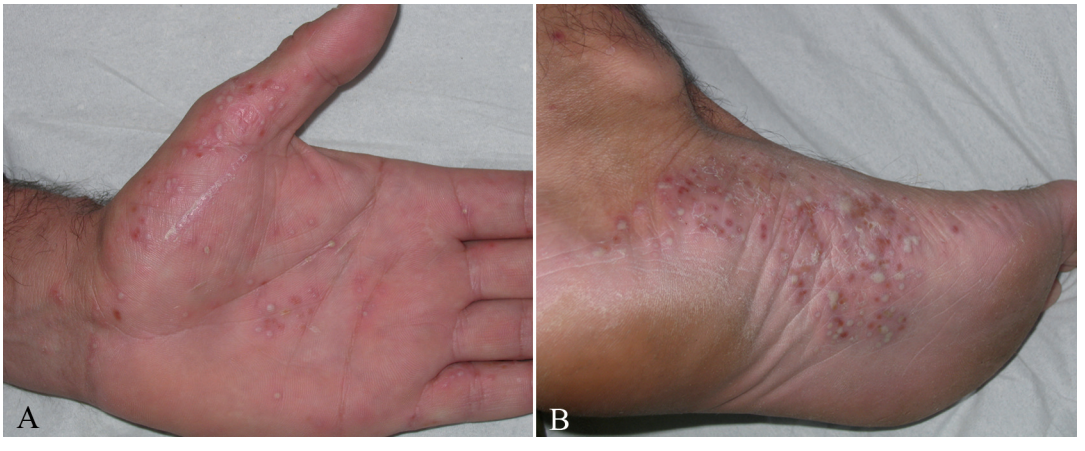


*Fig. 1.* Clusters of pustules arising from erythematous plaques on (A) the left palm and (B) the left sole.


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Speculatively it could be the result of cytokine disequilibrium in patients on this treatment (5). A possible role of smoking has been suggested by some authors (6).

Conversely, anti-TNF agents have been proposed to be involved in the development of Crohn's disease in psoriasis patients receiving this therapy. Several authors have suggested that the correlation between psoriasis and Crohn's disease is stronger than would be expected by chance (7).

The management of a pustular eruption observed in the course of anti-TNF treatment is currently based on individual reports and small series. The patient's response to subsequent doses of infliximab or other anti-TNF drugs is unpredictable (8) and thus pustular lesions may worsen, remain stable or even improve (9) with the continuation of the therapy. Withdrawal or dose-reduction of infliximab induced remission only in some patients (4, 10). Recurrence of the lesions after discontinuation of infliximab and subsequent re-initiation has been observed (4). Some authors have suggested avoiding anti-TNF agents in patients with PP (11).

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