CAS CLINIQUE / CASE REPORT

SUCCESSFUL TREATMENT OF VON ZUMBUSCH GENERALIZED PUSTULAR PSORIASIS WITH CYCLOSPORINE AFTER ERUPTION POST ETANERCEPT INJECTION IN A PSO- PATIENT

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Ephrem G, Jour G, Smith BL. Successful treatment of Von Zumbusch generalized pustular psoriasis with cyclosporine after eruption post etanercept injection in a pso- patient. J Med Liban 2011 ; 59 (3) : 168-169.

ABSTRACT : Von Zumbusch generalized pustular psoriasis (GPP) is the most severe type of psoriasis with possible life-threatening complications. We report the case of a 22-year-old woman who presented with a severe eruption of generalized pustular psoriasis 48 hours after receiving an injection of etanercept (Enbrel®).

Ephrem G, Jour G, Smith BL. Eruption d'un psoriasis pustuleux généralisé, type Von Zumbusch, suite à l'injection d'étanercept chez un patient pso- traité avec succès par la cyclosporine. J Med Liban 2011 ; 59 (3) : 168-169.

RÉSUMÉ : Le psoriasis pustuleux généralisé, type Von Zumbusch, est la variante la plus sévère de psoriasis vulgaire avec des complications graves au pronostic parfois vital. Nous présentons le cas d'une patiente âgée de 22 ans qui s'est présentée avec un psoriasis pustuleux généralisé survenu 48 h après une injection d'étanercept (Enbrel®).

BACKGROUND

Generalized pustular psoriasis (GPP) is a serious dermatological disease characterized by fever, chills, rigors, and generalized pustule formation on the skin. If inappropriately treated, it can lead to hypoproteinemia and hypocalcemia, and in rare cases can be fatal [1]. Its etiology is unknown. Kogoj's spongiform pustule is the pathognomonic finding. GPP has been divided into two groups: with or without a history of ordinary psoriasis. Precipitating factors include infections and systemic corticosteroids [1]. We report a case of pso- GPP occurring after an injection of etanercept that was successfully treated with cyclosporine.

CASE REPORT

A 22-year-old African American woman with no history of psoriasis presented to the Dermatology Clinic complaining of pustular lesions on her face and shoulder (Figure 1). A presumptive diagnosis of pustular psoriasis was made and the patient was given an etanercept injection. The next day, her lesions worsened, became hot, erythematous, and tender, involving all her body, along with subjective fevers, chills and palpitations. On presentation, she was febrile (102 F), tachycardic (146 beats per minute), normotensive (133/72 mmHg), breathing at 15 breaths per minute. Her white blood cell count was 32,700 per microliter (absolute neutrophil count 21,000), her ASO titer 917 IU per milliliter, and her calcium level 8.8 mg/dl. She had normal chest X ray and urinalysis. She was started on intravenous fluids, diphenhydramine and vancomycin. Blood, urine, and biopsy cultures were negative for viral, bacterial or fungal growth. Histology showed Kogoj's spongiform pustule, pathognomonic for Von Zumbusch generalized pustular psoriasis. She was started on oral cyclosporine (300 mg in AM, 200 mg in PM) with total resolution of symptoms at 72 hours of cyclosporine (Figure 1).

DISCUSSION

GPP has been divided into two groups, one with a history of ordinary psoriasis (pso+ GPP) and the other without a history of psoriasis (pso- GPP). Pso- GPP more frequently occurs after infections, pso+ GPP following corticosteroid therapy. Systemic corticosteroids are potent suppressors of inflammation, and pustule formation can occur as a result of an acute inflammatory process during steroid withdrawal [2]. In this reported case, the patient is pso- but suffered an eruption after injection of an immunosuppressant (etanercept) and her workup was totally negative for any infectious process. She showed minimal response to antibiotics but had total resolution of her symptoms after initiation of another immunosuppressant (cyclosporine).

There are more than 110 reports of patients who developed first onset psoriasis while receiving a tumor necrosis factor (TNF) inhibitor, or who had paradoxical worsening during treatment. It is now generally accepted that the development or worsening of psoriasis during treatment with TNF antagonists can occur at any time from days to years after drug initiation. No predilection for age or sex has been statistically proven, and no clear etiology or treatment modality has gained wide acceptance. Increased interferon-α (IFNα) expression has been demonstrated in

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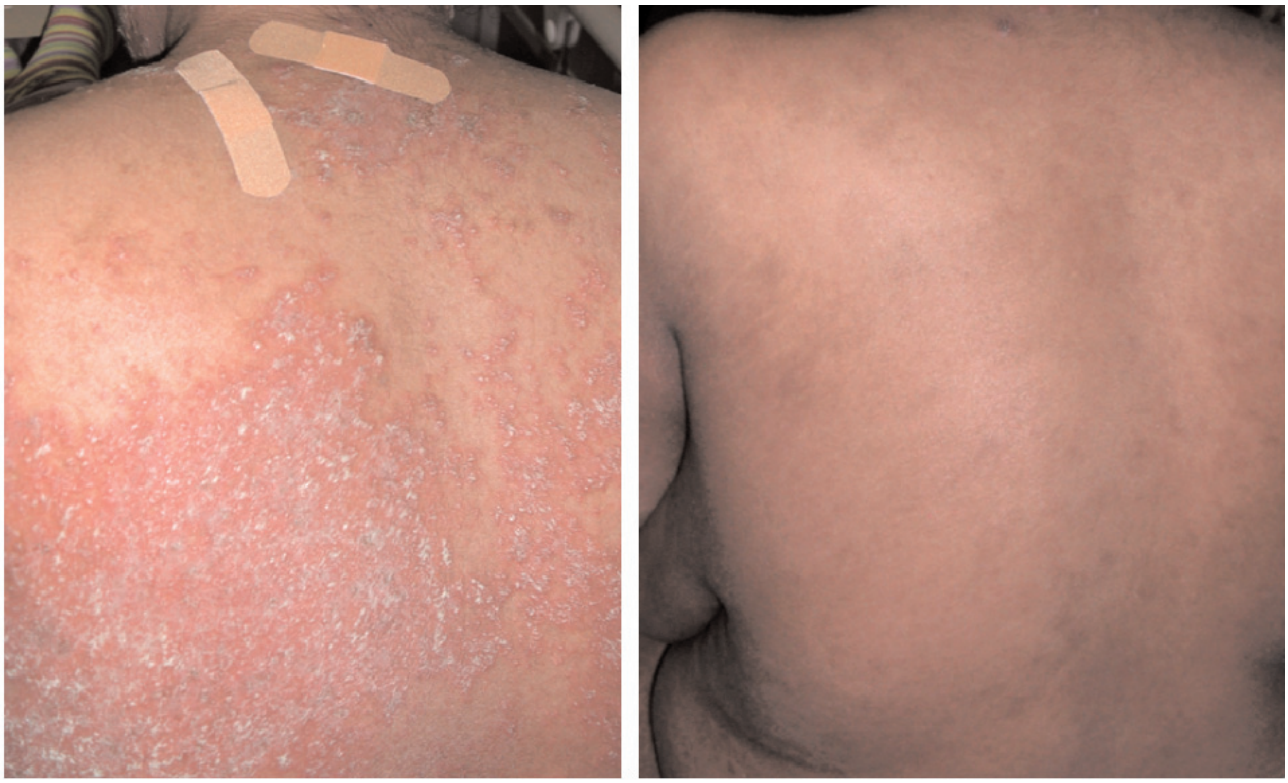

FIGURE 1. Skin presentation on admission (left) and at discharge (right).

the lesional dermal vasculature and in the perivascular lymphocytic infiltrate of these patients, implicating this cytokine in the pathogenesis of skin dysregulation [3]. In the setting of TNFα inhibition, the cytokine profile favors an increase in IFNα production originating from plasmacytoid dendritic cells (PDCs). TNFα inhibition decreases trafficking of Th1 lymphocytes, resulting in an increase in the pooling and sequestration of these cells in the peripheral circulation. Cyclosporine works through inhibition of production and release of interleukin 2 (IL-2) and consequently activation of resting T-lymphocytes. This is the most probable scenario that explains the resolution of symptoms in our patient. Cyclosporine's contribution includes the counteraction of the mobilization of the dormant T cells in addition to suppression of inflammation through inhibition of IL-2.

The controversy arises when we consider the case series of patients who were successfully treated with etanercept after eruption following discontinuation of cyclosporine [4]. Immunosuppression is the most accepted treatment strategy for GPP, but it is unclear which pathway in immunosuppression is the right one. In fact, even the exact mechanism of the disease in GPP is not well established. It is evident that the current proposed treatment recommendations [5] coming from some of the biggest registries to date need further elaboration in relation to clinical and prognostic implications. The exact mechanisms of the disease and therapy remain elusive which translates by the occurrence of flares of GPP with the use of the immunosuppressants that are supposed to treat it. More extensive biochemical analyses of the pathways in action bear the hope of significant advances in understanding and treating GPP.

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