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DERMATOLOGIC THERAPY WILEY

LETTER

Successful treatment of refractory Sneddon-Wilkinson disease (subcorneal pustular dermatosis) with infliximab

Dear Editor,

Sneddon-Wilkinson disease, also known as subcorneal pustular dermatosis (SPD), is a rare neutrophilic dermatosis clinically characterized by vesico-pustular lesions often distributed in an annular or serpiginous pattern, which may evolve in superficial erosions resolving with scaling and residual dyspigmentation.[1] It commonly involves flexural areas and abdomen in middle-aged women. Histologically is characterized by subcorneal pustules with uninvolved epidermis and negative direct and indirect immunofluorescence.[1] Clinical course is relapsing–remitting with frequent flares and, due to its rareness, no treatment guidelines are available. Dapsone represents the first-line therapy whereas corticosteroids, oral retinoids and immunosuppressants (i.e., methothrexate, cyclosporine) represent alternative treatments. In more recent years, anti-tumor necrosis factor (TNF)-α has been successfully administered in multi-drug resistant patients.[1]

We present here the case of an 80-years-old woman followed in our department for a SPD diagnosed in 2012, after the appearance of a vesicular eruption located on the abdomen, submammary area, groins and arms. The lesions had a wax and waning course, lasting for few days with periodic relapses (Figure 1A). Laboratory examinations revealed only a slight elevation of C-reactive protein (CRP, 11.2 mg/L) whereas complete blood count, immunoglobulins and biochemistry including liver and renal function were normal. A punch biopsy confirmed the diagnosis of SPD (Figure 1B) while direct and indirect immunofluorescence were negative. At the time of diagnosis the patient was treated with dapsone at 0.8–1 mg/kg/day with clinical improvement, but frequent relapses occurred, which required oral and intravenous corticosteroids administrations. Past therapies in addition to dapsone and corticosteroids included acitretin, withdrawn for a strong pruritus, cyclosporine and methotrexate suspended for

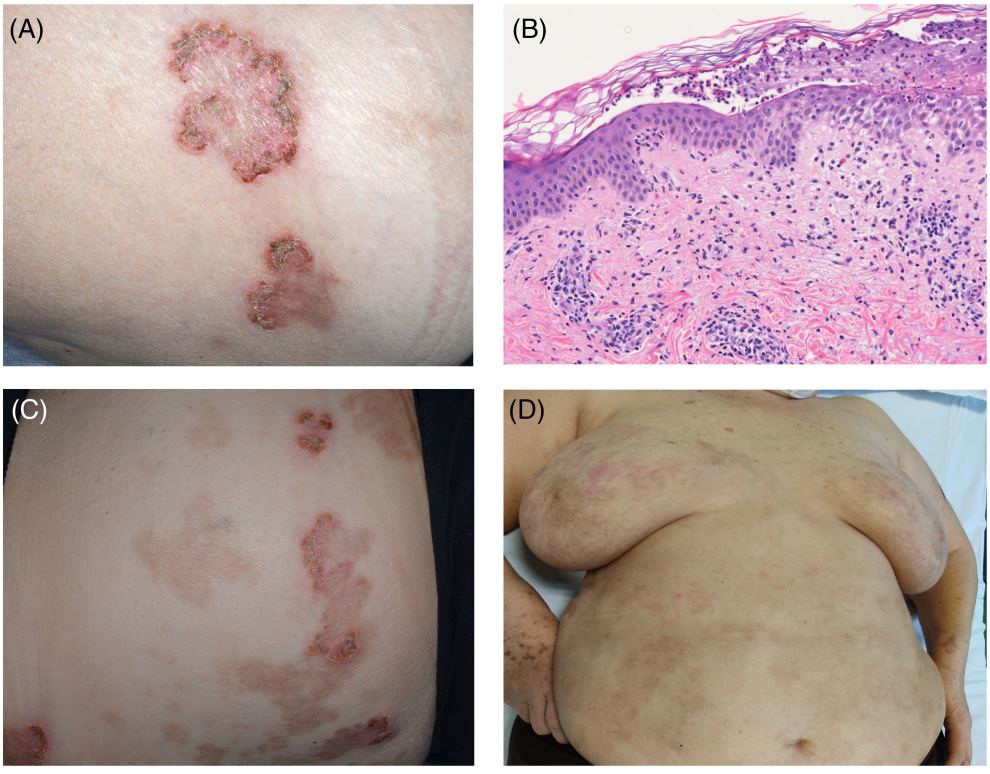

FIGURE 1 (A) erythematous serpiginous patches with central clearing and crusted edge as resolution of previous vesicular lesions located on the flank of our patient during one of her relapses; (B) histology of a vesicular lesion showing subcorneal accumulation of neutrophils with uninvolved epidermis and dermis (hematoxylin and eosin stain, ×20); (C) erythematous and serpiginous active lesions along with residual dyspigmentation on the left flank and the abdomen before the administration of infliximab; (D) only residual hyperpigmentation on the trunk, arms and mammary area after 5 months of therapy with infliximab.

inefficacy, and finally colchicine discontinued for severe gastrointestinal side effects.

No other relevant comorbidities were present; in September 2021 the patient experienced another relapse (Figure 1C); blood examination revealed a total white blood cell count (WBC) of 14.31 x 10^9/L with 10.3 x 10^9/L neutrophils (72% of WBC), C-Reactive Protein was 9.7 mg/L and creatinine 1.16 mg/dl while further complete blood count values, liver function, methaemoglobin, electrolytes and immunoglobulins (IgA, IgM, IgG) were all within the normal range.

Following the flare-up of the disease we decided to introduce infliximab (anti-TNFα) at the induction dose of 5 mg/kg at week 0, 2 and 6 followed by maintenance dose of 5 mg/kg every 8 weeks, in combination with dapsone (50 mg/day), while methylprednisolone was gradually tapered. A marked improved was obtained a week after the first injection; complete clinical remission was achieved after a month and maintained until her last follow-up visit in January 2022 (Figure 1D). No side effects were reported.

SPD belongs to the group of superficial neutrophilic dermatoses characterized by epidermal sterile neutrophil-rich infiltrates.[2] A significant clinical and histopathological overlap exists between SPD and the annular form of pustular psoriasis and whether these two entities represent different diseases is still a matter of debate; SPD has been classically described in middle-aged woman mainly affecting the intertriginous and flexural areas, as in our patient.[3] Its pathophysiology remains elusive but abnormal neutrophil recruitment and activation as well as the evidence of higher level of TNF- α in affected skin and sera of patients suggest that this cytokine could play a crucial role in the etiology of the disease.[2,4,5] These findings, together with the recalcitrant clinical course, have led to consider anti-TNF- α as a valuable therapy in multi-drug-resistant cases.[6–10] Voigtländer et al. were the first ones to use infliximab to successfully treat flares of SPD in a patient.[6] Other reports showed both safety and efficacy of anti TNF-α in patients with SPD associated with monoclonal gammopathy[7,8] and systemic lupus erythematosus.[9] Resistance to infliximab is reported in some cases which required dose intensification or switching to a different anti TNF- α to control the disease[5,7,8,10]; this could be explained by the production of anti-drug antibodies or a reduced adherence to injection schedule.[8]

Basing on previous reports and our experience we suggest to administer infliximab as an early and effective treatment in severe and recalcitrant cases, with a particular attention to its infusion regimen according to the clinical course, either increasing the dose or the frequencies of injections, maintaining it in combination with dapsone or other immunomodulators, and switching to other anti-TNF- α in case of loss of efficacy. Further reports and long-term follow-up of patients are needed to assess the optimal treatment regimen for this rare and challenging disease.

AUTHOR CONTRIBUTIONS

Maurizio Romagnuolo drafted, conceptualized, and designed the manuscript; Simona Muratori, Angelo Cattaneo, Chiara Moltrasio contributed to the acquisition and analysis of the data, Angelo Valerio Marzano revised it. All the authors accepted the final version of the manuscript.

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CONFLICT OF INTEREST

All authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

Maurizio Romagnuolo[1,2]
Simona Muratori[1]
Angelo Cattaneo[1]
Angelo Valerio Marzano[1,2]
Chiara Moltrasio[2,3]

[1]*Dermatology Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy*
[2]*Department of Pathophysiology and Transplantation, Università degli Studi di Milano, Milan, Italy*
[3]*Department of Medical Surgical and Health Sciences, University of Trieste, Trieste, Italy*

Correspondence
Maurizio Romagnuolo, Dermatology Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Via Pace 9, 20122 Milan, Italy.
Email: maurizio.romagnuolo@unimi.it; maurizioromagnuolo@hotmail.it

ORCID

Angelo Valerio Marzano https://orcid.org/0000-0002-8160-4169

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