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Treatment of Recalcitrant Pyoderma Gangrenosum with Ulcerative Colitis by Adalimumab Injection

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Dear Editor:

Pyoderma gangrenosum (PG) is an uncommon, inflammatory, and non-neoplastic skin disorder characterized by painful chronic skin ulcers[1]. Recent reports have indicated that recalcitrant PG can be effectively treated with immunomodulating agents that exhibit activity against tumor necrosis factor (TNF)-α[2,3]. We herein report a case of a patient with ulcerative colitis (UC) with recalcitrant PG who failed numerous trials of immunosuppressive agents and etanercept but dramatically responded to adalimumab. A 20-year-old woman presented with a 5-year history of recurrent tender, necrotizing ulcers on the left lower leg.

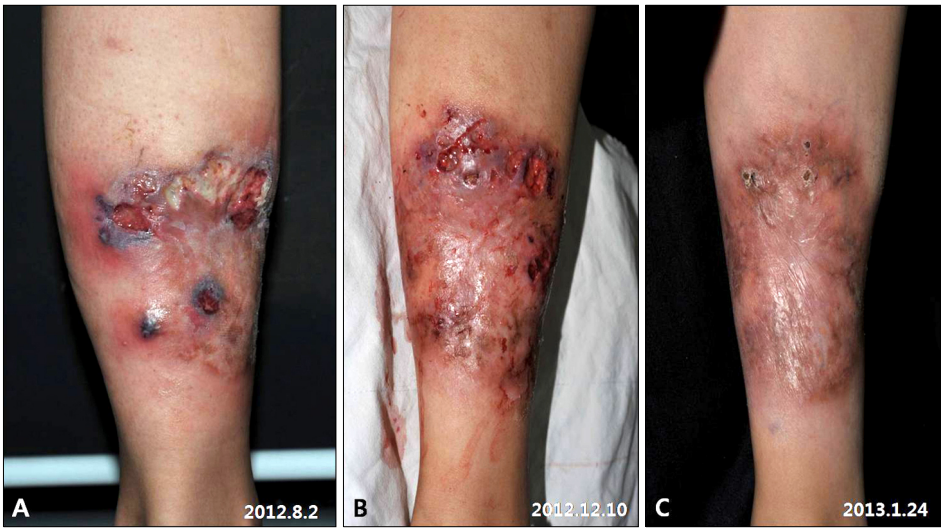

Fig. 1. (A) Initial cutaneous lesion. Five-year history of erythematous, recurrent, painful nodules and ulcers on the left lower leg. (B) Despite several months of treatment, there was only a minimal therapeutic effect. (C) After the 13th injection of etanercept, the pain and ulceration dramatically improved.

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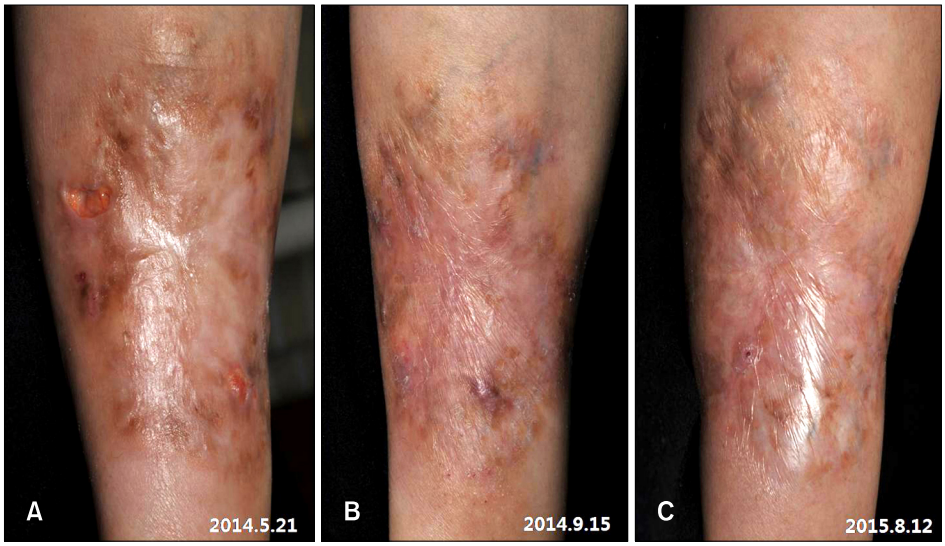

Fig. 2. (A) After 1 year of using etanercept, the skin lesion gradually worsened. Mild tenderness and a small ulceration recurred. (B) After the 8th injection of adalimumab, a clinically complete remission was obtained. (C) One year after the last (9th) injection of adalimumab, complete healing was still being maintained.

Two years before the onset of cutaneous symptoms, she was diagnosed with UC and treated with sulfasalazine with intermittent corticosteroids. Considering the characteristic skin lesions and history of UC, she was diagnosed with PG. The skin lesions did not show improvement and were resistant to multiple treatment regimens such as oral corticosteroids, cyclosporine, and systemic methylprednisolone pulse therapy (500 mg/day for 3 consecutive days) (Fig. 1A). Etanercept was then initiated as 50 mg subcutaneous injections twice weekly. After the 6th injection, there was gradual improvement of the pain and ulceration, and the skin lesions kept improving even when the etanercept dose was reduced to 25 mg weekly (Fig. 1C). After one year, however, the skin lesions worsened despite maintenance of the etanercept treatment (Fig. 2A). During this time, there was no difference in symptoms of UC while the skin lesions were aggravated. Adalimumab was then administered at a dose of 80 mg at week 0 and 40 mg at week 1, followed by 40 mg every second week. After the second administration, rapid clinical improvement was obtained with complete resolution of PG after 8 weeks of treatment. After the last (9th) treatment, the therapeutic effect was maintained for about one year with no adverse response (Fig. 2B, C). An improvement in gastrointestinal symptoms was also obtained.

Among the conventional systemic therapeutic agents for PG, corticosteroids and cyclosporine are most commonly used[1]. However, these agents often have minimal therapeutic effects and cause side effects due to continuation of systemic medication. To obtain therapeutic improvement and avoid side effects, a decision was made to begin treatment with an anti-TNF-α drug which is known for the treatment of both PG and inflammatory bowel disease[3]. At first, we chose etanercept because it is a fully human fusion protein and seems to be less susceptible to biologic fatigue[4]. There is a retrospective study evaluated antidrug antibodies of anti-TNF-α agents for 51 patients with psoriasis. After 24 weeks of treatment, etanercept showed less antidrug antibodies (0%) compared with infliximab (13.3%) and adalimumab (16.6%)[5]. In our case, the skin lesions incrementally worsened even with continuous etanercept treatment. Considering the possibility of biologic fatigue, we changed to another fully humanized TNF antibody, adalimumab, and there was a dramatic therapeutic response.

The successful treatment of PG in our patient suggests that adalimumab may be a valuable therapeutic option for patients with PG and UC who fail to respond to conventional immunosuppressive regimens and even to other TNF-α inhibitors such as etanercept.

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CONFLICTS OF INTEREST

The authors have nothing to disclose.

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