NOTES & COMMENTS

Dupilumab-induced phenotype switching from atopic dermatitis to psoriasis

To the Editor: We read with interest the article by Tracey et al[1] reporting on the erythrodermic presentation of psoriasis in a patient treated with dupilumab. This Case Report postulated that psoriasis, a result of Th1-mediated inflammation, can develop or be exacerbated by dupilumab, perhaps because the Th2-blockade results in a shift toward a Th-1 response. We aim to further support this hypothesis by reporting on the development of new psoriatic plaques in a 73-year-old man with a long-standing history of atopic dermatitis treated with dupilumab for a nummular atopic dermatitis.

A 73-year-old white man with atopic dermatitis for many years presented with a new flare characterized by nummular, pink, crusted plaques of the arms and legs that were weeping and associated with severe pruritus. In previous flare-ups, the patient had tried clobetasol, pimecrolimus, tacrolimus, crisaborole, intramuscular triamcinolone at 60 mg, and phototherapy. Of these therapies, only clobetasol and intramuscular triamcinolone had provided the patient with relief. In an effort to treat the existing flare and to prevent recurrent flare-ups, the patient was prescribed dupilumab. He had received a loading dose of 600 mg, followed by a maintenance dose of 300 mg.

Four weeks after his loading dose of dupilumab, the patient reported that although the dupilumab initially seemed to alleviate his flare-ups, he now had worsening lesions on his arms that were different from anything he has experienced before. On examination, the patient now had well-demarcated, thick, scaly, pink plaques of the extensor surfaces of the bilateral forearms and right leg that were clinically consistent with psoriasis (Fig 1). The patient declined biopsy of these lesions.

This is not the first reported instance of psoriasis developing in a patient treated with dupilumab. Although the article by Tracey et al[1] reported on the erythrodermic presentation of psoriasis in a patient whose new-onset psoriasis was likely misdiagnosed as a worsening atopic dermatitis, other instances of new psoriasis after the initiation of dupilumab therapy for severe atopic dermatitis

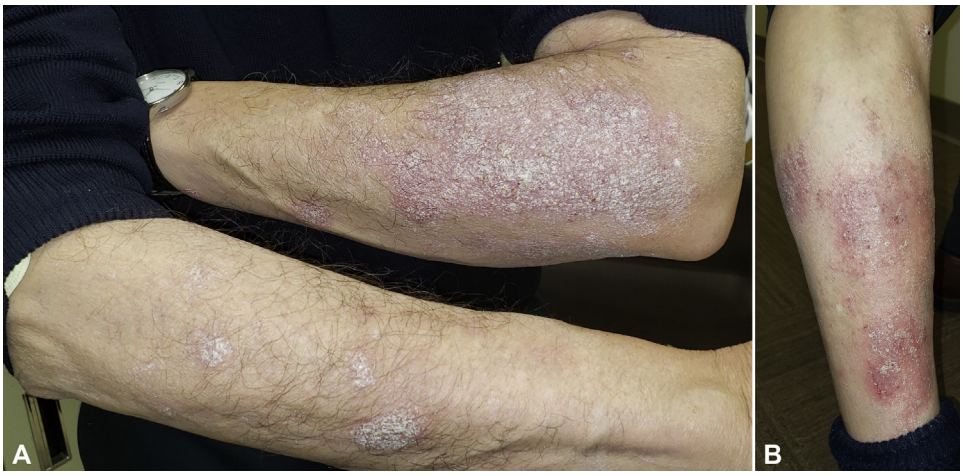

Fig 1. Development of psoriatic plaques after dupilumab therapy. **A**, The psoriatic plaques that had developed on the patient's forearms 4 weeks after the loading dose of dupilumab. **B**, An unchanged eczematous plaque on the patient's right leg, typical of the original lesions elsewhere on his body, 4 weeks after his loading dose of dupilumab.

have been reported,[2-5] similar to that in our patient. Ideally, histologic characterization of each plaque type with concomitant T-cell profiling could be conducted in future cases to elucidate the underlying pathophysiologic mechanism of this phenomenon. We hope this letter adds to the existing literature on this lesser-known adverse effect of dupilumab, prompts studies for further evaluation of how dupilumab affects the Th1/Th2 immune axis, and promotes caution when dupilumab therapy is initiated in patients with concurrent psoriasis or a predilection to develop psoriasis.

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