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Letter to the editor

Reverse koebner phenomenon in lupus tumidus erythematosus

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To the Editor,

Koebner phenomenon (KP) has been reported in different skin conditions (1). On the contrary, reverse KP is a much rarer event, corresponding to the disappearance of skin lesions after trauma or a skin punch biopsy (1). Lupus tumidus erythematosus (LTE) is a rare form of chronic cutaneous lupus erythematosus (CCLE), which typically presents as erythematous, edematous, urticarial-like nodules or plaques, sometimes annular in shape, without epidermal changes on sun-exposed areas (2). The exact pathogeneses of KP and reverse KP are not well understood (1,3). To the best of our knowledge, we present the first case of reverse KP occurring in a patient with LTE after skin biopsy. We present a 54-year-old Saudi male with a known case of type 2 diabetes mellitus, dyslipidemia, and benign prostatic hyperplasia, who presented with a slowly progressive, asymptomatic erythematous lesion on the chest for 2 years. He denied other symptoms such as oral ulcers, arthritis, fever, weight loss, and sensitivity to sunlight. Family history was unremarkable. Physical examination showed a well-demarcated erythematous crescent-shaped plaque on the mid-chest without epidermal changes (Figure 1). Laboratory studies showed positive anti-nuclear antibodies (ANA), while others, including anti-double-stranded DNA (anti-dsDNA), anti-Smith (anti-SM), anti–Sjogren's syndrome-related antigen A (anti-SSA), as well as anti–Sjogren's syndrome-related antigen B (anti-SSB), were unremarkable. A skin biopsy showed dermal lymphocytic infiltrates in a perivascular and periadnexal distribution with unremarkable epidermis (Figure 2). Alcian blue stain highlighted mucin deposition between collagen bundles throughout the entire dermis (Figure 2). The diagnosis of lupus tumidus erythematosus (LTE) was made. One week after the cutaneous biopsy, complete remission of the lesion was noticed without using any treatment, with no recurrence after 1 year follow-up (Figure 1).

LTE is a rare form of chronic cutaneous lupus erythematosus (CCLE), which typically presents as erythematous, edematous, urticarial-like nodules or plaques, sometimes annular in shape, without epidermal changes on sun-exposed areas. Mostly, it has an excellent prognosis, and its association with systemic lupus erythematosus is rare (2). Spontaneous remission of LTE lesions can occur within days to months, without resulting in pigmentary changes or scarring (2). Photoprotection, topical corticosteroids, topical calcineurin inhibitors, and intralesional steroid injection can be used in limited disease, while extensive disease can be managed with hydroxychloroquine. In resistant cases, other immunosuppressive agents can be used like methotrexate and mycophenolate mofetil (2). KP has been described in different forms of cutaneous lupus erythematosus including hypertrophic CCLE and discoid lupus erythematosus (4,5). On the other hand, reverse KP refers to the disappearance of skin lesions after trauma or skin biopsy to the skin lesions. The pathogenesis of both, KP and reverse KP, are poorly understood (1,3). However, local immunity alteration with robust response has been speculated as a mechanism for reverse KP (6). To the best of our knowledge, this is the first case describing

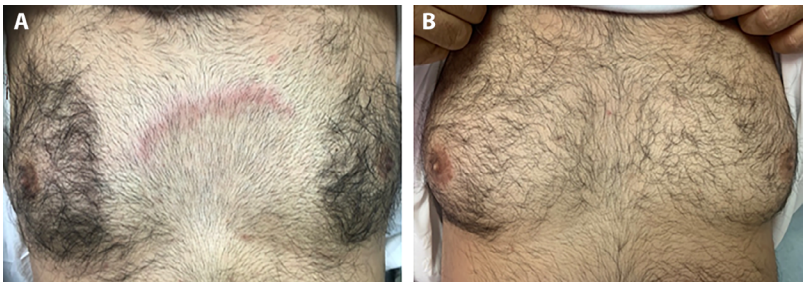

Figure 1. A) Well-demarcated erythematous crescent-shaped plaque on the mid-chest. B) Clearance after biopsy.

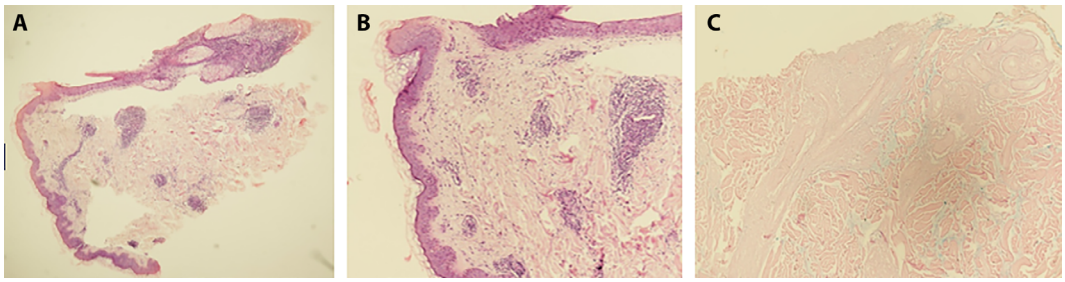

Figure 2. A) Low-power-field of the skin biopsy shows dermal perivascular and periadnexal lymphocytic infiltrates (Hematoxylin-eosin stain; x4). B) High-power-field shows unremarkable epidermis with absent vacuolar interface (Hematoxylin-eosin stain; x10). C) Alcian blue stain demonstrates mucin deposition between the collagen bundles (Alcian blue stain; x10).

the complete remission of LTE lesion after skin biopsy. We acknowledge that this paper has a limitation regarding the possibility of spontaneous remission, however, our patient had the lesion for 2 years and the only intervention was the skin biopsy which eventually, within few days, showed the proposed phenomenon. Due to the continuous progression of the skin lesion in the past two years before performing the biopsy, we believe that the skin biopsy was the cause of the remission more than the spontaneous resolution. This report emphasizes on the possibility of such phenomenon. We encourage dermatologists to observe and report this phenomenon, as it may be a potential treatment option for patients with limited LTE. The patient's examination was conducted following the principles of the Declaration of Helsinki.

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