REVERSE KOEBNER PHENOMENON IN LEUKOCYTOCLASTIC VASCULITIS

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Sir,

Heinrich Koebner described Koebner phenomenon for the first time in psoriasis patients.[1] Since then, it has been reported in various dermatoses. Contrary to Koebner phenomenon, reverse Koebner response is the nonappearance or disappearance of the lesions of particular dermatoses at the site of injury. It is a very rare condition with only few cases reported till date.[2-4] We present to the best of our knowledge, the first case of reverse Koebner phenomenon occurring in a patient of cutaneous small vessel immune complex vasculitis.

A 32-year-old female patient presented to our outpatient department with recurrent crops of reddish palpable spots over both the lower limbs for last 6 months. She did not complain of arthralgia, abdominal pain, dyspnea or any other significant systemic symptom. On examination, multiple palpable purpura were present over both legs extending up to the thighs. There was no ulceration, necrosis, vesiculation or livido reticularis. Systemic examination was normal. Complete hemogram, liver function tests, kidney function tests, serum electrolytes, urine routine examination, stool for occult blood and chest X-ray did not reveal any abnormality. Anti-nuclear antibodies and rheumatoid factor were negative. Histopathological examination of a skin biopsy specimen taken from the purpuric lesion on left leg showed features consistent with leukocytoclastic vasculitis. Direct immunofluorescence of another skin biopsy specimen showed IgG immune complex and C3 complement deposits in vessel walls. Patient returned for follow-up after 10 days. Till then, she had not opened the pressure bandage applied at the biopsy site. After removal of the bandage, we observed that the vasculitic lesions in the bandage covered areas had disappeared [Figure 1]. There were many new lesions elsewhere over the limbs, barring the area which was covered by the bandage.

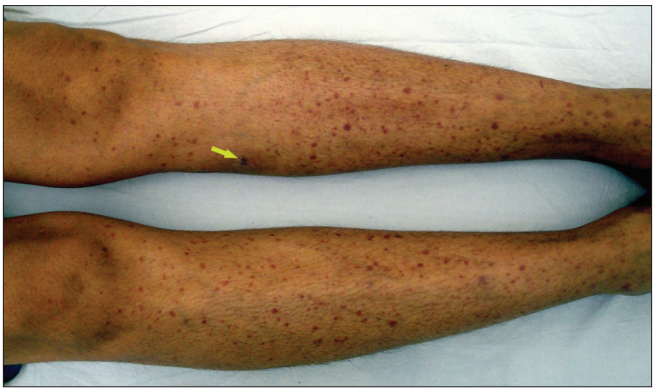

Figure 1: Multiple purpuric lesions present all over the legs, barring the area over left upper leg which was covered by pressure bandage. Arrow points to the site of biopsy

The exact etiopathogenesis of Koebner phenomenon and reverse Koebner phenomenon are poorly understood. Koebner phenomenon has been recently reviewed by Weiss *et al*.[5] Koebnerization can be induced by various modes of trauma. Chronic pressure leading to both epidermal and dermal injury is known to elicit Koebner response.[6,7] There are few reports of Koebner phenomenon occurring in patients with vasculitis.[8,9] However, there is no previous report of reverse Koebner phenomenon in vasculitis.

Reverse Koebner phenomenon is a rarely reported entity. It was first described in psoriasis patient[2] and subsequently reported in vitiligo cases.[3] Our understanding of reverse Koebner phenomenon is poor because of its scant occurrence and limited research into its pathogenesis. In our patient, purpuric lesions cleared and new lesions failed to appear at the pressure site, probably because the mechanical pressure led to diminished blood flow in the small vessels of dermis and the immune complexes

failed to deposit in adequate concentration. Consequently, adequate immune response was not elicited, which is of paramount importance for precipitation of clinical lesion. It is difficult to explain the fast clearance of the old lesions covered under the bandage.

Reverse Koebner phenomenon has never been reported before in vasculitis. Further research is needed to study the pathogenesis of this phenomenon.

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