A Rare Case of Lupus Vulgaris with Papulonecrotic Tuberculid and Discoid Lupus Erythematosus

Ting-Ting Wang, Hong-Jie Liu, Lin Wang

Department of Dermatovenereology, West China Hospital, Sichuan University, Chengdu, Sichuan 610041, China

To the Editor: A 48-year-old woman presented with a plaque on her left helix that had persisted for 20 years, erythemas and scales on both earlobes present for 9 months, and papules on both thighs present for 6 months. Neither she nor her family had any special history. Physical examination revealed a well-circumscribed, dark-red plaque on her left helix, and red erythema on both her earlobes, with adherent scales and red papules symmetrically distributed on both thighs with crust and scale [Figure 1a]. Routine examinations showed no abnormal findings. Pathological examination of the left helix showed that the epidermis was thin, with flattening of the rete ridges and many epithelioid granulomas with local caseous necrosis, accompanied by infiltration of lymphocytes into the dermis, multinucleated giant cells were not remarkable [Figure 1b]. In addition, acid-fast staining yielded negative results. The earlobe biopsy showed epidermal hyperkeratosis and parakeratosis, liquefaction degeneration of the basal cells, and follicular keratotic plugging, and the blood vessels and skin appendages surrounded by lymphocytes in the dermis [Figure 1c]. The thigh biopsy showed epidermal hyperkeratosis and local parakeratosis, and palisading granuloma in the dermis, accompanied by progressive necrosis of the central collagen with mucin deposition [Figure 1d]. A tuberculin (purified protein derivative [PPD]) test performed on the forearm was strongly positive. Polymerase chain reaction for *Mycobacterium tuberculosis* in both the left helix plaque and the thigh papule was negative. Therefore, a diagnosis of lupus vulgaris was made for the left helix; both earlobes were diagnosed with discoid lupus erythematosus, and both thighs with papulonecrotic tuberculid.

The patient was treated topically with 0.03% tacrolimus ointment on both auricles twice a day. At the 2-week telephonic follow-up, most erythemas and scales on both earlobes had regressed. Antituberculosis therapy (300 mg/d of isoniazid, 750 mg/d of ethambutol, and 450 mg rifapentine twice a week) was administered to her, owing to the positive PPD result. The skin lesions on the left helix and both thighs completely regressed after 2 months of antituberculosis therapy.

In our case, the histopathological findings on the thigh showed a dermal granuloma, with mucin and cellulose in the center. However, the tuberculin test was strongly positive, and the diagnosis of the ear lesions was cutaneous tuberculosis. Therefore, a diagnosis of papulonecrotic tuberculid of thigh lesion was made on the basis of all the clinical, pathological, and laboratory examinations. However, unlike true cutaneous tuberculosis, *M. tuberculosis* is not detected within the lesions of tuberculids.[1] Currently,

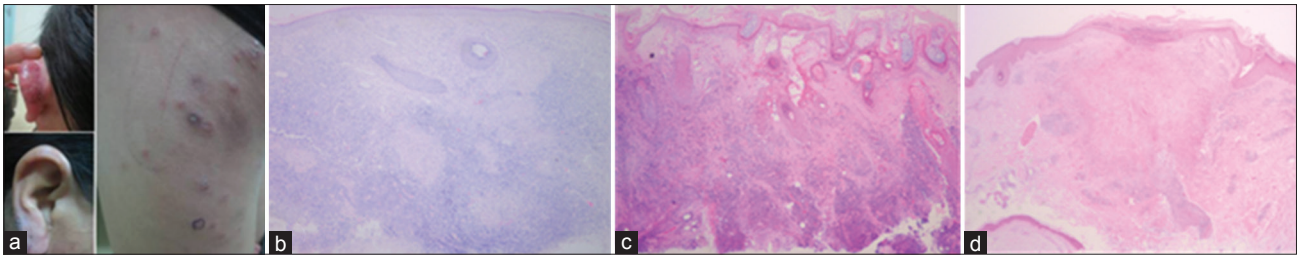

Figure 1: A dark-red plaque is seen on the left helix, along with red erythemas on both earlobes and adherent scales and red papules on both thighs with crust and scales (a). Histological examination of epithelioid granuloma in the dermis of the left helix (H and E staining, original magnification ×200; b). Histological examination of epidermal hyperkeratosis and parakeratosis, liquefaction degeneration of basal cells, and follicular keratotic plugging, with blood vessels and skin appendages surrounded by lymphocytic infiltration in the dermis of the auricle (H and E staining, original magnification ×100; c). Epidermal hyperkeratosis, local parakeratosis, and palisading granuloma in the dermis, accompanied by progressive necrosis in the central collagen with mucin deposition (H and E staining, original magnification ×100; d).

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Address for correspondence: Dr. Lin Wang, Department of Dermatovenereology, West China Hospital, Sichuan University, Chengdu, Sichuan 610041, China
E-Mail: lkzwl@126.com

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papulonecrotic tuberculid refers to conditions in which reasonable evidence supports *M. tuberculosis* etiology. Such evidence includes strong PPD reactivity and response of lesions to antituberculosis medications.[2] Three independent skin disease appeared on the same patient, we suspected that may be cutaneous tuberculosis of the left helix inspired the incidence of tuberculosis rashes on both thighs, and abnormal immune environment caused by cutaneous tuberculosis and tuberculosis rash led to the occurrence of discoid lupus erythematosus.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for her images and other clinical information to be reported in the journal.

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Conflicts of interest

There are no conflicts of interest.

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