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Linear Lichen Sclerosus Mimicking the Halo Nevus

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Dear Editor:

A 35-year-old male presented with asymptomatic, well-defined ivory patches with a central slight brown pigmented area on the right side of his neck, which had persisted for 3 months (Fig. 1). The lesions were distributed in a linear pattern and showed induration on palpation. The patient reported a history of alopecia areata, hypertension, type 2 diabetes mellitus, and fatty liver. At first, clinical diagnosis of halo nevus was made. Histologic findings of the biopsy specimen, obtained from the peripheral hypopigmented area, showed hyperkeratosis, atrophic epidermis, and perifollicular lymphocytic infiltrations (Fig. 2A, B). In this hypopigmented area, a Fontana–Masson stain showed decrease of melanin in the basal layer of epidermis. In the specimen of the central pigmented area, a few pigmented cells, follicular plugging, perifollicular lymphocytic infiltration, and edematous homogenized superficial dermis were observed (Fig. 2C, D). Finally, the patient was diagnosed with lichen sclerosus (LS). The hypopigmented lesions improved with topical tacrolimus application. We received the patient's consent form about publishing all photographic materials.

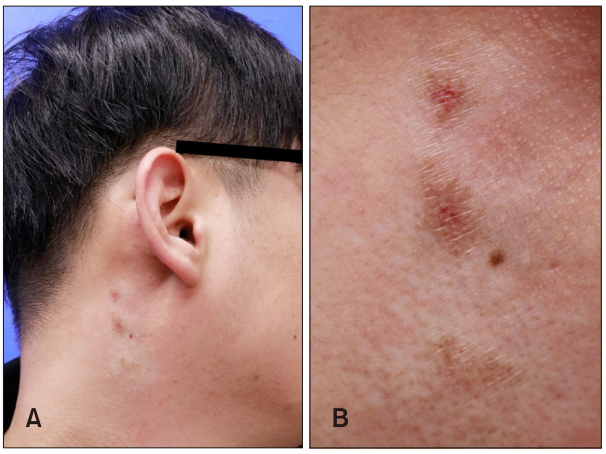

Fig. 1. (A) Well-defined, linear, and ivory patches with central slight brown pigmented area on the neck. (B) Atrophic surface of the patches is shown.

Extragenital LS is generally characterized by white, often atrophic patches on the neck, shoulders, and upper part of the trunk. Extragenital disease seems to affect approximately 15% of the patients and most frequently occurs in adult females. In contrast, as in our case, extragenital LS in young males is extremely rare[1].

The cause of LS is not fully understood and may include genetic, hormonal, irritant, and infectious components. Patients with LS often have a personal or family history of other autoimmune disease such as thyroid diseases, pernicious anemia, or alopecia areata. Circulating antibodies targeting the extracellular matrix 1 protein and basement membrane zone have been found in LS, and associated autoimmune diseases are frequent[1].

The underlying mechanism of hypopigmented area of LS is presumed to be secondary to inflammation. According to Carlson et al.[2], it seems to be the consequence of a combination of factors. One factor is a block in the transfer of melanin granules to keratinocytes from melanocytes. The other factor is that it may be related to the inflammatory-mediated inhibition of melanogenesis.

Meanwhile, the distribution of LS along the lines of Blaschko has been described in extragenital cases[3]. In disorders affecting skin areas corresponding to the lines of

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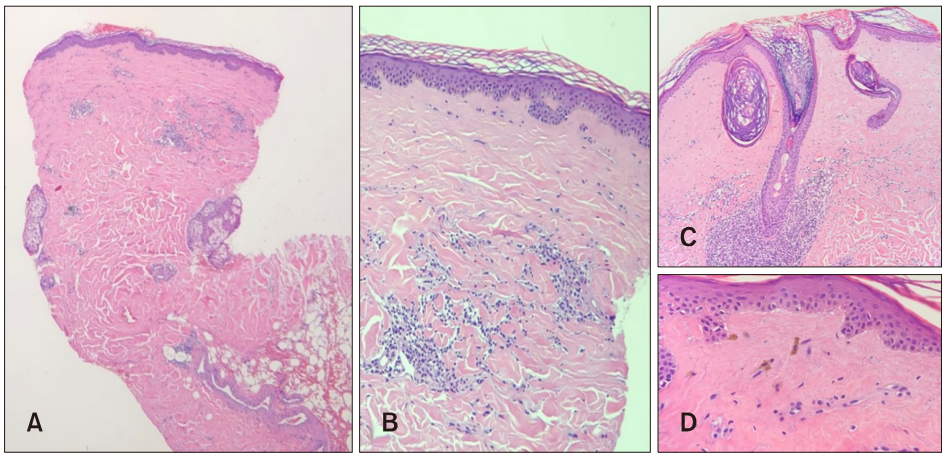

Fig. 2. (A) Hyperkeratosis, epidermal thinning with loss of the normal rete ridge pattern, and condensation of the dermal collagen (H&E, ×40). (B) Closed-up view revealed dermal fibrosis and superficial interstitial infiltrates (H&E, ×100). (C) Follicular plugging, perifollicular lymphocytic infiltration, and edematous homogenized superficial dermis (H&E, ×100). (D) Liquefaction degeneration of the basal layer and a few pigmented cells in the superficial dermis (H&E, ×200).

Blaschko, it is believed that two distinct cell clones arise early in embryogenesis, often produced by genetic mosaicism. Lichen striatus, linear lichen planus, linear scleroderma, and linear atrophoderma are types of dermatitis that occur along the lines of Blaschko[4]. Linear extragenital LS is an exceptionally rare form of LS.

The lesions in our patient were multiple, linear, and oval nevi centrally, with peripheral margins of hypopigmentation, mimicking a halo nevus. The neck is a common location in both LS and the halo nevus. However, this is the first case in Korea and only one case of halo nevus-like appearance of LS has been reported to date[5]. In the previous case, the LS lesion was solitary, whereas in the present patient, three lesions showed a contiguous linear arrangement. We report a unique case of multiple, linear arranged, halo nevus-like extragenital LS in a young male.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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