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Infantile Scabies Masquerading as Langerhans Cell Histiocytosis

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Dear Editor:

Scabies is a contagious skin infestation caused by *Sarcoptes scabiei* burrowing into the epidermis. Scabies can cause clinical eruptions and intense pruritus with nocturnal exacerbation[1]. The presence of typical skin lesions and nocturnal pruritus enable rapid diagnosis and treatment[1]. Clinical eruptions, including scabietic nodules and visible skin burrows, can be the pathognomonic lesions of scabies[2]. However, infants and young children may present with atypical skin nodules, vesicles, and pustules that tend to be more generalized. These atypical manifestations often can be confused with seborrheic dermatitis, eczematous dermatitis, impetigo, multiple arthropod bites, and Langerhans cell histiocytosis (LCH)[3]. Here, we report the case of a 6-month-old infant with scabies who was misdiagnosed with LCH on the basis of histopathologic findings and clinical manifestations.

A 6-month-old girl presented with a 1-month history of erythematous to brownish papules and nodules on her trunk (Fig. 1A). The patient was initially treated with topical corticosteroid cream under a diagnosis of contact dermatitis. However, the lesions quickly spread to the patient's hands and feet, with scales and erythematous patches (Fig. 1B). Therefore, she underwent abdominal punch biopsy. Histopathologic findings showed cellular infiltrate within the upper dermis with a perivascular distribution consisting of histiocytes, lymphocytes, and eosinophils (Fig. 2A). The histiocytes in the upper dermis stained positive for CD1a and S-100 (Fig. 2B, C). Therefore, she was diagnosed with LCH on the basis of histopathologic findings and clinical manifestation. However, at that time, her mother complained of pruritus and presented with scabietic nodules on the interdigital web and periumbilical area. Dermoscopy-assisted skin scraping was performed on both the palm of the patient and periumbilical area of her mother, revealing mites and eggs in both lesions (Fig. 2D). Therefore, the patient's lesions were scabietic and not due to LCH. The patient was treated with 10% crotamiton cream and achieved complete remission after 1 week. After 1 month, the patient experienced relapse of the skin lesions on her hands and feet. Skin scraping was performed again and showed positive findings for scabies. The patient was re-treated with crotamiton 10% cream. At the last follow-up of 8 months, she was relapse free.

Infantile scabies can have diverse skin manifestations, making it difficult to correctly diagnose on the basis of clinical findings alone. The histopathologic findings of scabies are also nonspecific and are insufficient for diagnosis; they include eczematous reactions in the epidermis and perivascular area, and inflammatory cell infiltrate in the dermis[4]. The infiltrate usually comprises numerous histiocytes positive on CD1a and S-100 staining. Therefore, these findings can be often misdiagnosed as LCH. Meanwhile, Langerhans cell hyperplasia has been reported to be present in scabies[4]. The presence of scattered CD30+ cells, which appears in scabies, can aid the differential diagnosis[4]. In addition, using electron microscopy to assess the presence or absence of Birbeck granules, which is the hallmark of LCH, can also aid diagnosis[5].

In conclusion, clinicians should be aware of confusing infantile scabies with LCH. Careful history taking including exposure to scabies and performing CD30 staining, electron microscopy, and dermoscopy will aid diagnosis.

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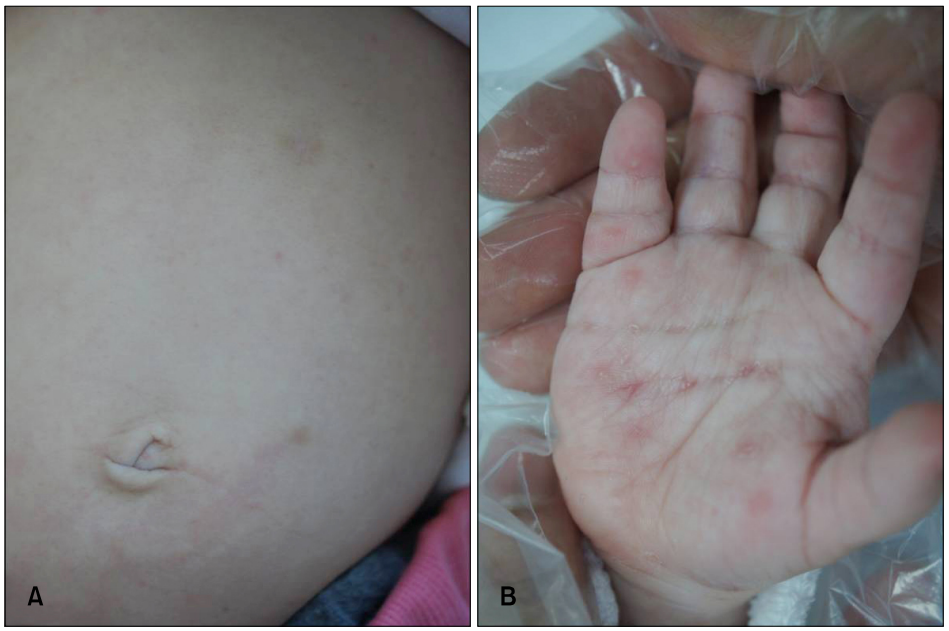

Fig. 1. (A) The patient had several erythematous to brownish papules and nodules on her trunk on the initial visit. (B) Scales and erythematous patches on the palm of the patient after 1 month from the initial visit.

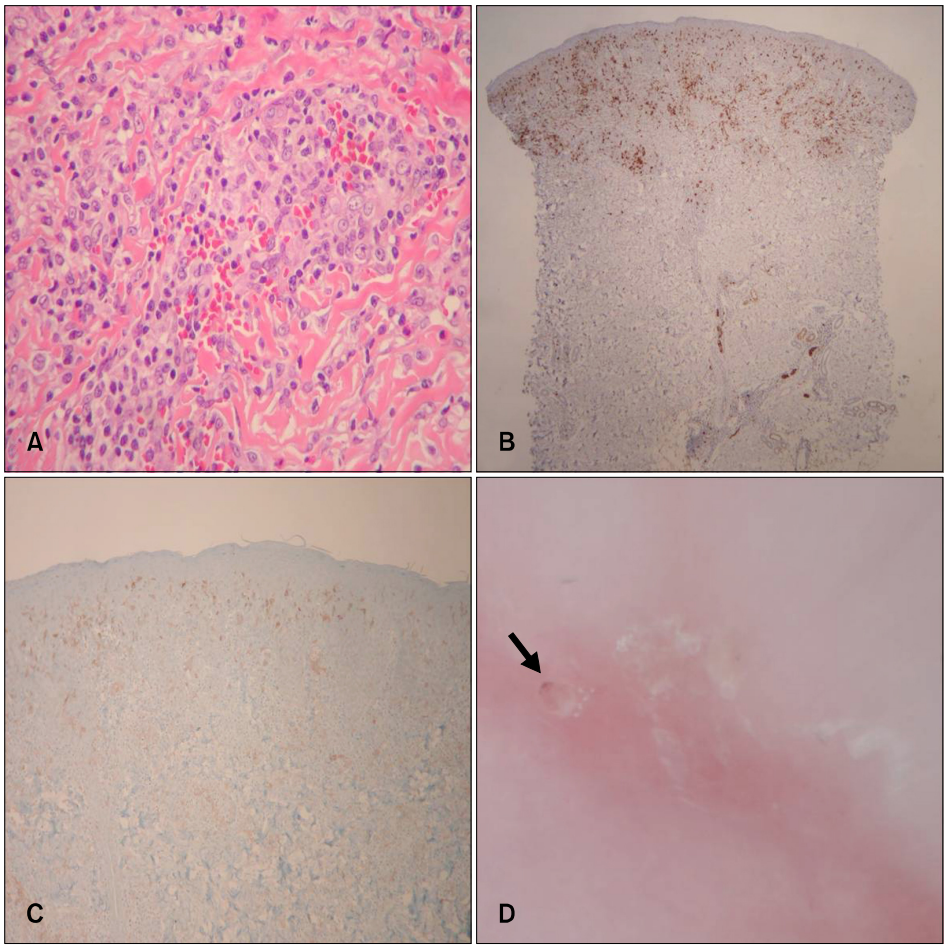

Fig. 2. (A) The dermal infiltration was composed of Langerhans cells admixed with lymphocytes and eosinophils (H&E stain, ×200). (B, C) Immunophenotyping demonstrated the majority of the histiocytic cells to be S-100 (B, ×40) and CD1a (C, ×100) positive. (D) Under dermoscopic magnification, a hanglider-like triangle indicating the scabies mites' head (arrow) was observed in the patient's palm.

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Novel Treatment Using Intradermal Radiofrequency and Hyaluronic Acid Filler to Correct Marionette Lines

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Dear Editor:

Aging results in anatomical changes to the face. The main change observed in the lower third of the face is ptosis of the labial commissure, which results in a triangular depressed area at the corner of the mouth, increased mentolabial sulcus, the formation of marionette lines, decreased the concavity between the jaw and neck, and noticeable platysma banding[1]. Cosmetic rejuvenation to correct marionette lines has evolved. Over the past five years, intradermal radiofrequency (RF) has become a common modality for reducing cutaneous sagging and wrinkling. A recent study[2] demonstrates combination therapy with hyaluronic acid (HA) filler and intradermal RF results in greater and longer improvement of the nasolabial folds than HA monotherapy. Therefore, we tested intradermal RF and HA filler combination therapy with the aim of increasing volume and correcting marionette lines.

A 40-year-old woman unhappy with her marionette lines sought therapy (Fig. 1A). She had never received filler injection or laser resurfacing. The first step of therapy involved intradermal RF treatments using new device (INNOfill; Pacific Pharma, Korea) at 18 W (level 7, 1 MHz, 5 passes) with an insulation-coated 27-gauge needle electrode. The needle electrode was inserted along the marionette lines using a fanning technique. After delivering the RF energy, HA filler (Juvederm; Allergan, Irvine, CA, USA) was injected by linear threading. Slight bleeding occurred at the insertion site, but this was resolved within several hours. The treatment was successful, and she was very satisfied with the cosmetic outcome (Fig. 1B).

New bipolar RF device is used in combination with HA

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