Case 10

Leg rash along Blaschko's lines

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Patient: A 21-year-old Thai woman from Bangkok

Chief complaint: Rashes on the right leg for 3 months

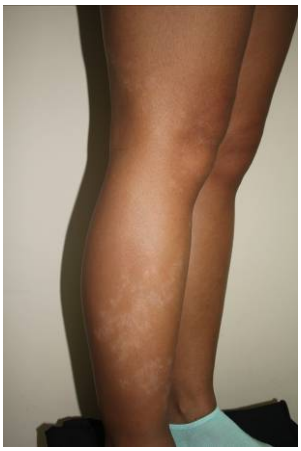
Present illness:

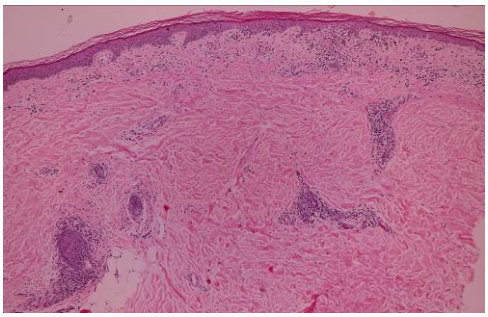
The patient noticed rash on her right leg 3 months ago. The rash spontaneously appeared in sudden onset which was mild itching and did not expand. She had no trauma and did not use any medication.

Past history: No underlying disease

Skin examination:

- Linear well-defined erythematous to brownish flat-topped papules on the right leg along Blaschko lines
- No nail abnormality





Histopathology: (S14-13481, right leg)

- Some necrotic keratinocytes, spongiosis and vacuolar alteration of basal cell layer the the epidermis
- Perivascular, periadnexal and lichenoid infiltrate of lymphocytes with some melanophages in the dermis

Diagnosis: Lichen striatus

Treatment:

- Advice about the natural history and prognosis of disease
- 0.1% Triamcinolone acetonide cream apply lesion twice daily

Discussion:

Lichen striatus (LS) is a self-limiting, acquired inflammatory dermatosis that follows the Blaschko lines. So it is synonyms as "Linear lichenoid dermatosis" or "Blaschko linear acquired inflammatory skin eruption (BLAISE)". This acquired dermatosis is found most commonly in children, especially in girls, aged 5–15 years, but can occur at any age.[1, 2] LS which was first described by Balzer and Mercier in 1898[3], mostly occurs sporadically, but there are single reports on simultaneous occurrences in related and unrelated siblings.[4, 5]

The etiology of LS is unknown, it involves multiple factors including genetic predisposition and an immunologic trigger. It is likely that the abnormal cells are silent at an early developmental stage and appear after a triggering event, which is probably a cell-mediated immunologic mechanism. The immunohistologic finding of epidermal CD8+ T cells surrounding necrotic keratinocytes in biopsy specimens implicates a cell-mediated cytotoxic reaction in the pathogenesis of LS. Additionally, it is believed that infections such as varicella and environmental factors are involved with the majority of cases occurring during Spring and Summer. Pregnancy, trauma and immunization against measles, mumps and rubella have also been reported as possible triggers.[1, 3, 6, 7]

Clinically, lesions display sudden onset and multiple clustered, flat-topped, erythematous or brownish papules measuring 2–4 mm, which are frequently scaly in appearance. These papules form a linear band that is usually solitary, unilateral and follows the Blaschko lines. This is frequently found on the extremities and less commonly on the trunk, face, and buttocks.[3, 7-9] Three morphologies of LS have been described: typical LS as in the present case; LS albus, which is characterized by hypopigmented lesions at the onset of the eruption and nail LS with longitudinal ridging, splitting.[10] The disease resolves spontaneously within 6–12 months, leaving a transitory residual hypopigmentation.

The histopathological feature of LS is a dense perivascular inflammatory infiltrate, which is sometimes band-like and composed of lymphocytes and histiocytes. Consistently, there is parakeratosis as well as hyperkeratosis. In some cases, there is an overlap of histopathological features between LS and lichen planus, so a number of authors discuss LS as a variety of lichen planus; direct immunofluorescence is thought to distinguish reliably between these two entities.[3, 8]

The clinical differential diagnoses comprise other linear eruptions that occur predominantly in childhood, most often including linear psoriasis, linear Darier disease, linear lichen planus and inflammatory linear verrucous epidermal naevus.

Due to the tendency of a self-healing process, special treatment is not needed in most cases and a 'wait-and-see' approach can be tried. Topical glucocorticoids are also used successfully as first-line treatment. Good responses are observed to topical tacrolimus and pimecrolimus.[11, 12]

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