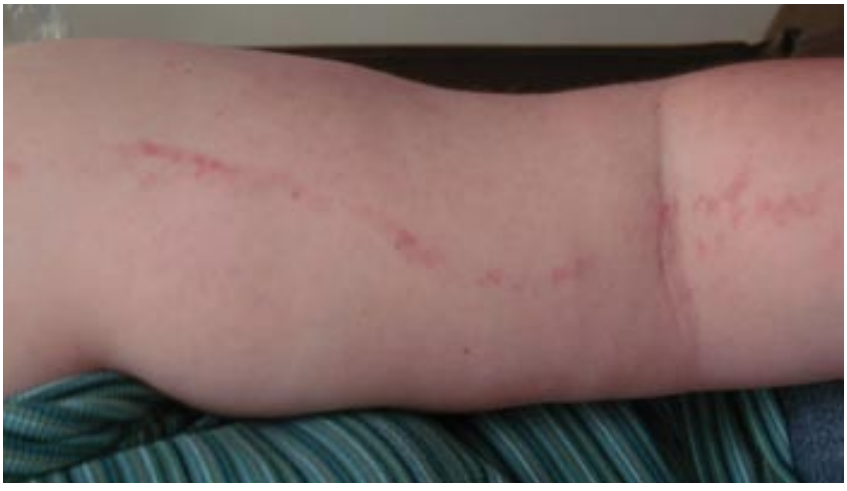
What Is Your Diagnosis?



A 13-year-old otherwise healthy adolescent girl presented with an asymptomatic linear rash on her left arm. The rash spontaneously appeared 3 months earlier with several small red bumps on the upper part of the left ventral arm. Since then, the bumps had increased in number and extended in a linear distribution down her arm. She denied having any exacerbating factors, including changes in temperature or exposure to certain soaps and detergents, and stated that no one in her family had a similar type of rash. On physical examination, multiple small erythematous papules coalescing into an 8-cm linear band were noted on the left upper arm extending to the wrist.

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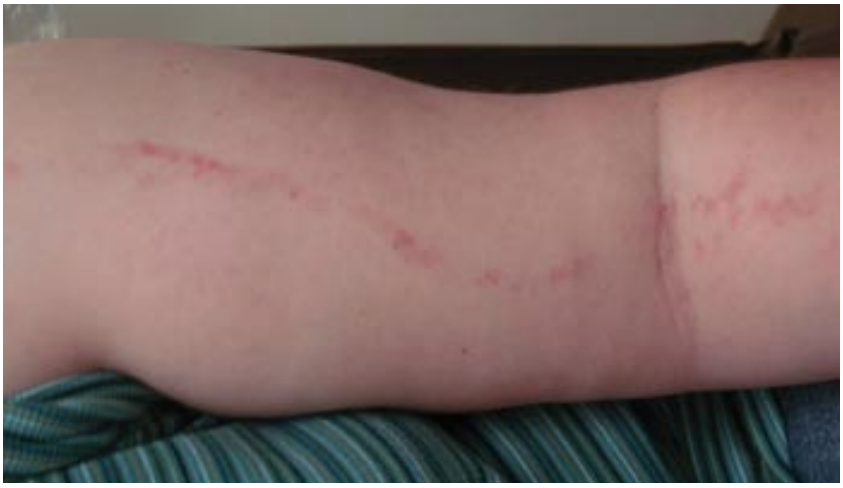
The Diagnosis: Lichen Striatus



Lichen striatus (LS) is a rare asymptomatic dermatitis of childhood that presents in a classic linear distribution. It has been suggested that LS typically follows Blaschko lines, which correspond to the direction of growth of clones of cutaneous cells from a common embryologic precursor.[1] Although the exact cause of this disorder is unknown, Taieb et al[2] hypothesized that a viral infection of the aberrant keratinocytes of LS can incite an immunologic reaction from cutaneous T cells. The inflammation from this immune response can potentially result in the lesions of LS. Consequently, the authors proposed to rename the condition *Blaschko linear acquired inflammatory skin eruption*, or BLAISE.[2]

Lichen striatus typically appears in children and adolescents aged 5 to 15 years and has a predilection for the extremities. Most cases occur in the spring and summer. Lesions are commonly described as multiple small, white to flesh-colored, flat-topped papules distributed in a unilateral linear band. The classic linear distribution can be continuous or interrupted and can progress down the extremity following Blaschko lines. The linear band may develop a curved appearance as it follows Blaschko lines. If the lesions progress down a digit, the nail may be

Select Differential Diagnostic Considerations for a Linear Rash on a Child

Condition	Characteristics
Lichen striatus	Multiple white to flesh-colored, flat-topped papules in a linear distribution; plaque can be continuous or interrupted and may follow Blaschko lines
Linear porokeratosis	Linear plaque with a well-demarcated keratotic border; may follow Blaschko lines
Lichen nitidus	Small, discrete, flesh-colored, pinhead-sized papules; may appear in a linear distribution in areas of scratch or trauma
Verruca plana	Small flat-topped papules that can be slightly erythematous; linear distribution due to autoinoculation from scratching or trauma may be noted
Lichen simplex chronicus	Hypertrophic plaques with lichenification from frequent scratching

involved. Nail involvement can appear as longitudinal ridging and splitting, onycholysis, nail loss, and nail-plate thinning.[3]

Histopathologically, a lichenoid inflammatory infiltrate consisting of lymphocytes, histiocytes, and melanophages within the dermal papillae would exist. The overlying epidermis may be acanthotic and spongiotic. The deeper lymphocytic infiltrate may extend into the eccrine glands.

Diagnosis often is made on clinical grounds. Although treatment is not necessary, the use of medium-strength topical corticosteroids may shorten the duration of the lesions.[4] Usually, lesions spontaneously remit after 6 to 9 months. Nail involvement also improves with time. Darker-skinned patients may have some residual hypopigmentation in the involved areas. Recurrence of LS is unlikely.

Our patient was educated about the condition and its self-limited nature. The patient returned for a follow-up examination 6 months later and the rash had completely resolved.

In addition to LS, the differential diagnostic considerations for a linear rash on a child include linear porokeratosis, lichen nitidus, verruca plana, lichen simplex chronicus, linear psoriasis, linear lichen planus, and inflammatory linear verrucous epidermal nevus (Table).

REFERENCES

1. Aloi F, Solaroli C, Pippione M. Diffuse and bilateral lichen striatus. *Pediatr Dermatol*. 1997;14:36-38.
2. Taieb A, el Youbi A, Grosshans E, et al. Lichen striatus: a Blaschko linear acquired inflammatory skin eruption. *J Am Acad Dermatol*. 1991;25:637-642.
3. Leposavic R, Belsito DV. Onychodystrophy and subungual hyperkeratosis due to lichen striatus. *Arch Dermatol*. 2002;138:1099-1100.
4. Kennedy D, Rogers M. Lichen striatus. *Pediatr Dermatol*. 1996;13:95-99.