

Blaschkoid Unilateral Patch on the Chest

Ersilia M. DeFilippis, MD; Garrett Desman, MD; George I. Varghese, MD



A 26-year-old man presented with erythematous, scaly, grouped papules along the right side of the chest of 3 weeks' duration, extending to the flank following a blaschkoid distribution on the right side of the chest and not crossing the midline. He reported occasional irritation but otherwise was asymptomatic. His medical history was unremarkable and he was not taking any medications. He also denied trauma to the area.

What's the diagnosis?

- a. blaschkitis
- b. inflammatory linear verrucous epidermal nevus
- c. lichen planus
- d. lichen striatus
- e. psoriasis

From the Department of Dermatology, Weill Cornell Medical College, New York, New York.

The authors report no conflict of interest.

Correspondence: George I. Varghese, MD, 2315 Broadway, 2nd Floor, New York, NY 10024 (giv9006@med.cornell.edu).

The Diagnosis: Lichen Striatus

Lichen striatus (LS) is an acquired and self-limited linear inflammatory dermatosis that most frequently occurs in children and less commonly in adults.¹⁻³ Clinically, it is characterized by the sudden onset of an eruption consisting of slightly pigmented, erythematous, flat-topped papules with minimal scaling. These papules quickly coalesce to form a linear band that extends along a limb, the trunk, or the face, within Blaschko lines.^{1,4} In the adult form, patients tend to experience more diffuse lesions as well as severe pruritus with higher rates of relapse. It occasionally manifests in a dermatomal manner.¹

The differential diagnosis includes other linear acquired inflammatory dermatoses such as blaschkitis, lichen planus, inflammatory linear verrucous epidermal nevus, and psoriasis. Blaschkitis has been described as a rare dermatosis that occurs along the Blaschko lines, affecting adults preferentially over children. Controversy exists whether blaschkitis and lichen striatus are the same disease or 2 separate entities.⁵ Clinically, both blaschkitis and lichen striatus can present with multiple linear papules and vesicles predominantly on the trunk. In blaschkitis, there is a predilection for males, with an older mean age at onset of 40 years.⁵ Lesions quickly resolve over months with frequent relapse compared to lichen striatus, which can persist for months to years.

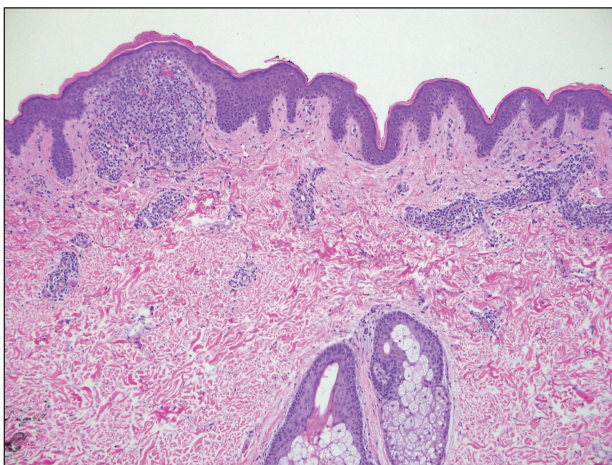


Figure 1. Several dense bandlike foci of lymphohistiocytic infiltrates along the dermoepidermal junction with spongiosis, basal cell liquefactive degeneration, and pigmentary incontinence (H&E, original magnification $\times 10$).

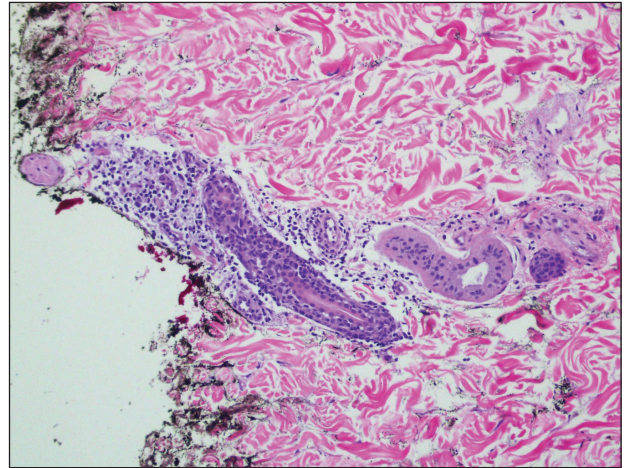


Figure 2. Deep dermal perivascular and periadnexal extension was present (H&E, original magnification $\times 40$).

Histopathologically, blaschkitis demonstrates spongiosis, usually without involvement of the adnexal structures. Lichenoid and spongiotic changes with adnexal extension are the hallmark features of lichen striatus. In our patient, biopsy showed several dense bandlike foci of lymphohistiocytic infiltrates along the dermoepidermal junction with spongiosis, basal cell liquefactive degeneration, and pigmentary incontinence (Figure 1). The focal areas were surfaced by parakeratotic and orthohyperkeratotic scale. Deep dermal perivascular and periadnexal extension was present (Figure 2). Periodic acid-Schiff stain was negative for fungi.

The pathogenesis of lichen striatus is not entirely understood, but it has been postulated that trauma, vaccinations, or viral infections may induce loss of immunologic tolerance to keratinocytes.¹ This loss of tolerance can result in a T cell-mediated autoimmune reaction against malpighian cells, which show genetic mosaicism and are arranged along Blaschko lines.^{1,3} Familial cases also have been reported, suggesting that there may be an epigenetic mosaicism that contributes to this group of skin diseases.^{6,7}

Lichen striatus tends to resolve on its own after approximately 6 to 9 months.⁸ Treatment typically consists of application of topical corticosteroids.¹ Cases also have been successfully treated with tacrolimus and pimecrolimus.^{1,8} Our patient was treated with a midpotency topical steroid with improvement of the appearance but not complete resolution.

REFERENCES

1. Campanati A, Brandozzi G, Giangiacomi M, et al. Lichen striatus in adults and pimecrolimus: open, off-label clinical study. *Int J Dermatol*. 2008;47:732-736.
2. Lee DY, Kim S, Kim CR, et al. Lichen striatus in an adult treated by a short course of low-dose systemic corticosteroid. *J Dermatol*. 2011;38:298-299.
3. Hofer T. Lichen striatus in adults or “adult blaschkitis”? there is no need for a new naming. *Dermatology*. 2003;207:89-92.
4. Shepherd V, Lun K, Strutton G. Lichen striatus in an adult following trauma. *Australas J Dermatol*. 2005; 46:25-28.
5. Müller CS, Schmaltz R, Vogt T, et al. Lichen striatus and blaschkitis reappraisal of the concept of blaschkolinear dermatoses. *Br J Dermatol*. 2011;164:257-262.
6. Yaosaka M, Sawamura D, Iitoyo M, et al. Lichen striatus affecting a mother and her son. *J Am Acad Dermatol*. 2005;53:352-353.
7. Jackson R. The lines of Blaschko: a review and reconsideration: observations of the cause of certain unusual linear conditions of the skin. *Br J Dermatol*. 1976;95:349-360.
8. Sorgentini C, Allevato MA, Dahbar M, et al. Lichen striatus in an adult: successful treatment with tacrolimus. *Br J Dermatol*. 2004;150:776-777.