

# Adult Blaschkitis (Lichen Striatus) Successfully Treated With Topical Tacrolimus

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## To the Editor:

Lichen striatus is a self-limiting inflammatory dermatosis that is characteristically distributed along the Blaschko lines. It is usually seen in children although cases, with different histopathological features, have been reported in adults. In view of the characteristic clinical features of the disease in adults—with its papulovesicular aspect—it is known as blaschkitis. Subsequently, different attempts have been made to define these conditions.

A 70-year-old man with a family and personal history of atopy attended the clinic for a pruriginous multilinear papulovesicular eruption on the trunk and right leg that had appeared 6 months earlier. Treatment over the preceding month with methylprednisolone aceponate applied as a 0.1% cream had led to no improvement.

The multilinear eruption took the form of a papulovesicular eruption that followed the Blaschko lines on one side of the body; it was more intense on the leg (Figures 1A, C, and E).

Histopathological study showed a lichenoid inflammatory infiltrate that extended to the mid-dermis (Figure 2A). The composition of this infiltrate was polymorphous, with the presence of lymphocytes, plasma cells, histiocytes, and a notable presence of eosinophils. The epidermis showed irregular epidermal hyperplasia, with compact hypergranulosis and hyperkeratosis but no parakeratosis. Limited spongiosis was present. No transepidermal migration of inflammatory cells was observed. In addition, clefts were observed between the dermis and epidermis, along with basal apoptotic keratinocytes and pigmentary incontinence (Figure 2B). Perieccrine thickening of the deep dermis was observed.

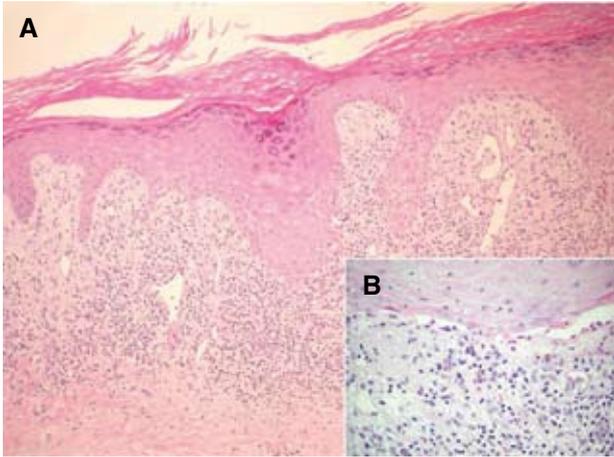
Once lichen striatus had been diagnosed, the patient was instructed to apply an ointment containing 0.1% tacrolimus twice a day for the first month to the lesions on the trunk, which disappeared, and to the legs in the second month, with the same results (Figures 1B, D, and F). After 6 months of follow-up, no recurrences had been reported.

Lichen striatus is an uncommon, self-limiting, linear dermatosis, which usually affects children and is rare in adults. It is distributed unilaterally, although some cases of bilateral distribution have been reported.<sup>1</sup> At present, given its distribution pattern, it is considered a somatic mosaicism. The cause is unknown, although an immune



**Figure 1.** (A), (C), and (E) show a papular eruption distributed along the Blaschko lines of the trunk and right leg. (B), (D), and (F) show the outcome of treatment.

mechanism has been proposed whereby killer T cells eliminate keratinocytes with a postzygotic mutation.<sup>2</sup> Lichen striatus is often associated with atopic dermatitis, and it has also been suggested that the altered immune status of these patients might act as a predisposing factor to trigger the process.<sup>2</sup> Tacrolimus, an inhibitor of inflammatory cytokine production by T cells, has been shown to be useful in the treatment of isolated cases of lichen striatus.<sup>3-5</sup> In our case, as the patient was treated in 2 different areas at 2 different times and a rapid response was obtained, the resolution of clinical symptoms can probably be attributed to topical tacrolimus and not the natural course of the disease.



**Figure 2.** (A) Lichenoid inflammatory infiltrate reaching the mid-dermis (hematoxylin-eosin,  $\times 200$ ). (B) Detail of the inflammatory infiltrate with presence of dermoepidermal clefts (hematoxylin-eosin,  $\times 200$ ).

There is no clear consensus about whether to consider lichen striatus and adult blaschkitis as the same entity. The term was initially coined by Seneor and Caro<sup>6</sup> in 1941; “adult blaschkitis” was first used in 1990 by Grosshans and Marot<sup>7</sup> for a case in an adult with a multilinear, papulovesicular, and pruriginous eruption, with histologic features of spongiotic dermatitis. In view of the appearance of similar cases and in an attempt to differentiate the entity from lichen striatus, other terms such as acquired relapsing self-healing Blaschko dermatitis<sup>8</sup> or acquired Blaschko dermatitis<sup>9</sup> have been used. Thus, blaschkitis is considered more common in adults, presents as a multilinear and bilateral papulovesicular eruption, usually on the trunk, and heals quickly though relapses are common. The histopathology is the same as that of spongiotic dermatitis. In contrast, lichen striatus is more common in children, appears more frequently on the limbs, is distributed along a single line or a few lines at most, and is usually papular without the formation of vesicles. Resolution is slower—leaving transient hypopigmentation—and recurrence is rare. Histopathological study reveals features of both lichenoid and spongiotic dermatitis. However, certain overlap of these features is common, giving rise to terms that try and encompass both aspects such as “Blaschko linear acquired inflammatory skin eruption”.<sup>2</sup>

In our opinion cases such as ours, in which there is overlap of the features that define adult blaschkitis—such as

multilinear papulovesicular lesions located on the trunk—with lichenoid histopathology with involvement of skin adnexa and features of spongiotic dermatitis, suggest that lichen striatus and blaschkitis are different expressions of the same process.<sup>10</sup> Therefore, in our case, and given the lack of other information to allow differentiation between lichen striatus and blaschkitis, we consider these terms to be synonymous.

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#### Conflicts of Interest

The authors declare no conflicts of interest.

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