CLINICAL CASES

BLAISE – A NEW DIRECTION IN THE DIAGNOSIS OF LINEAR ERUPTIONS IN ADULTS

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Summary

The linear distribution of cutaneous lesions in adults is a rare but clinically valuable finding for establishing a differential diagnosis. We present the case of an adult female patient, with no relevant dermatological history, who developed a unilateral, mildly pruritic, maculopapular inflammatory eruption with a clear blaschkoid pattern. Clinical and paraclinical investigations, including skin biopsy, revealed a nonspecific lichenoid dermatitis without sufficient histological criteria for classification into a well-defined entity.

In this context, a diagnosis of BLAISE (Blaschkolinear Acquired Inflammatory Skin Eruption) was considered – a recently proposed entity encom-passing acquired inflammatory dermatoses with blaschkoid distribution and variable clinical and histological features.

This case highlights the importance of recognizing this emerging spectrum and maintaining a rigorous differential diagnostic approach in adult dermatology, particularly when faced with atypical presentations that do not fit traditional patterns.

Keywords: *BLAISE, blaschkitis, lichen striatus, blaschkoid eruption, lichenoid dermatitis.*

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Introduction

Blaschko's lines represent characteristic patterns of cell migration and clonal expansion during embryonic epidermal development. These lines are not related to nervous, vascular, or lymphatic pathways but instead reflect the embryologic growth pattern of keratinocyte clones. Their configuration varies according to body region they form "V"-shaped patterns on the back, "S"-shaped on the anterior trunk, and linear trajectories along the limbs.

The origin of these patterns lies in genetic mosaicism, which results in the presence of distinct keratinocyte clones with differential susceptibility to cutaneous disorders. Under normal circumstances, these clones remain clinically silent; however, exogenous triggers such as psychological stress, viral infections, or exposure to certain medications may precipitate inflammatory or autoimmune responses along Blaschko's lines.

In adults, blaschkoid eruptions are uncommon and may correspond to various entities including lichen striatus, blaschkitis, blaschkoid lichen planus, psoriasis, and lupus erythematosus. The term BLAISE (Blaschkolinear Acquired Inflammatory Skin Eruption) has been introduced to describe acquired inflammatory dermatoses that follow these embryonic lines and exhibit overlapping clinical and histopathological characteristics, often defying strict classification into established nosological entities.

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Case presentation

A 36-year-old female patient, with no known allergies and no relevant dermatological history, developed approximately four months earlier a mildly pruritic maculopapular eruption, unilaterly distributed on the left side of the trunk, following an oblique ascending trajectory along Blaschko's lines. The onset occurred shortly after a febrile viral episode treated symptomatically. The patient had been previously evaluated by another doctor; mycological investigations were negative, and a presumptive diagnosis of parapsoriasis was raised. Topical corticosteroids and antibiotics were prescribed, without significant clinical improvement.

In April 2025, the patient presented to our department. Physical examination revealed erythematous macules and papules, some coalescing into slightly scaly plaques, arranged linearly and sinuously along the left flank, not crossing the midline. The lesions appeared discontinuous, interspersed with areas of unaffected skin, and pruritus was mild.

The initial diagnostic hypotheses included blaschkitis, lichen striatus, blaschkoid lichen planus, or linear inflammatory nevus. Histopathological examination revealed an irregularly

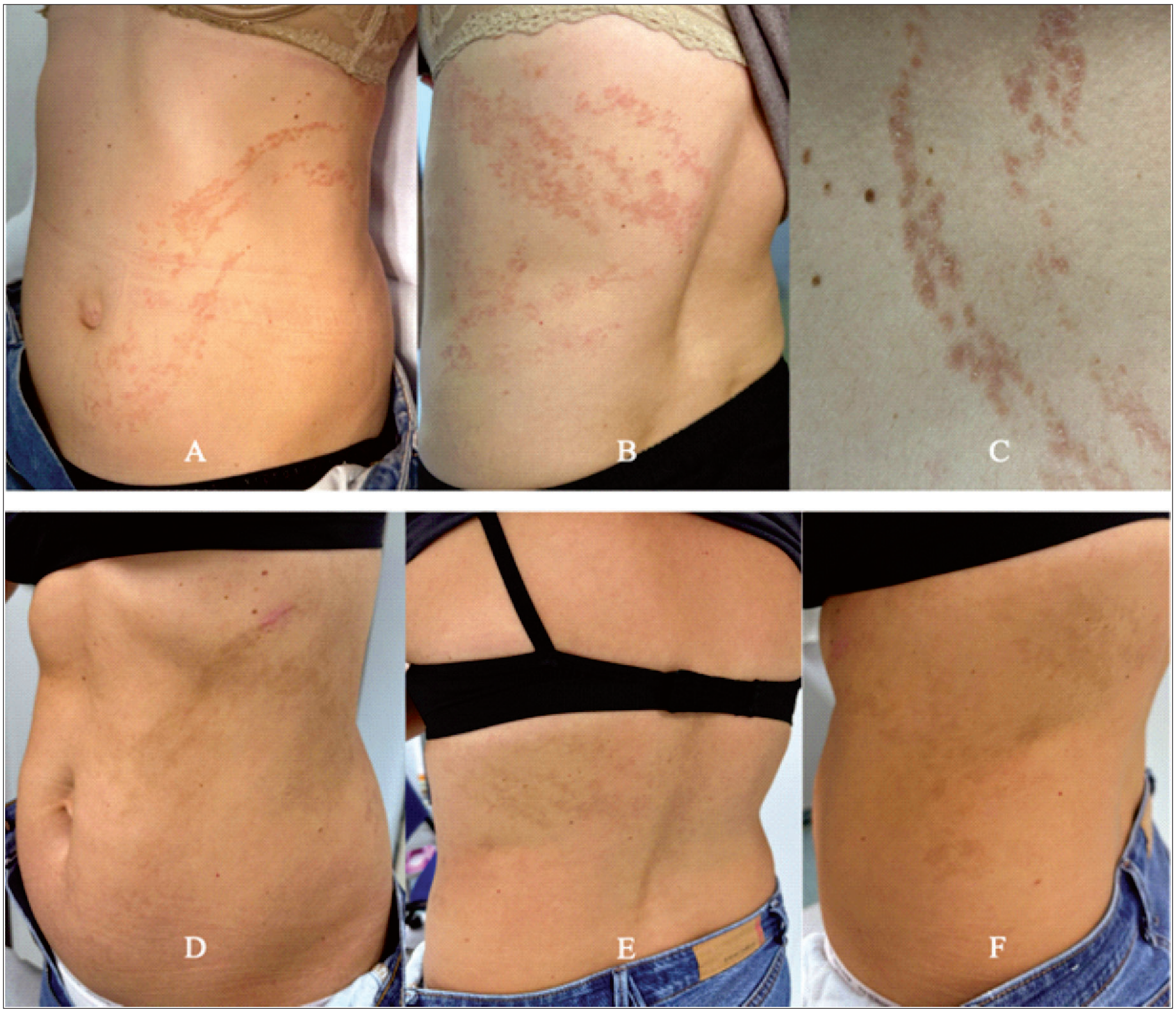

Figure 1. A,B,C. – Linear erythematous-slightly scaly eruption following Blaschko's lines, with unilateral distribution. D,E,F – Post-treatment aspect showing complete regression, with only few faint residual macules.

thickened squamous epithelium with uneven papillomatosis, mild acanthosis, mixed hyperkeratosis (ortho- and parakeratosis), focal spongiosis, basal vacuolization, and exocytosis. In the papillary dermis, a band-like inflammatory infiltrate composed of lymphocytes, histiocytes, and rare melanophages was observed. Immunohistochemistry demonstrated the presence of CD3+ T lymphocytes and S100+ dendritic cells in the epidermis and superficial dermis

This case combines features of several blaschkoid dermatoses without fully, conforming to any of them. From blaschkitis, the patient exhibited typical features: adult onset, acute post-viral onsettruncal localization, and suggestive clinical appearance, histologically associated with spongiosis and exocytosis. From lichen striatus, the case borrowed the clinical morphology, band-like lichenoid pattern on histopathology, and a slow, self-limited course with complete remission within a few months. From linear lichen planus, truncal distribution and persistence of a lichenoid pattern were shared; however, the absence of intense pruritus, violaceous coloration, and hypergranulosis excluded this classic entity.

The combination of these features – post-viral onset, blaschkoid distribution, spongiotic lichenoid pattern, and slowly favorable evolution – supports the diagnosis of BLAISE (Blaschkolinear Acquired Inflammatory Skin Eruption), an intermediate form between blaschkitis and lichen striatus. Other causes of blaschkoid eruptions, such as lupus erythematosus, psoriasis, atopic dermatitis, graft-versus-host disease, lichen nitidus, or linear inflammatory nevus, were excluded based on clinical and histological context.

Treatment consisted of narrow-band UVB phototherapy (3–4 sessions per week for one month), followed by daily topical application of a calcineurin inhibitor. The outcome was favorable, with progressive reduction of erythema and complete resolution of active lesions within approximately three months, leaving only postinflammatory hyperpigmented macules.

Discussion

BLAISE does not define a single entity but rather an umbrella term that encompasses a group of inflammatory dermatoses following Blaschko's lines, such as lichen striatus, adult blaschkitis, blaschkoid lichen planus, psoriasis, lichen nitidus, atopic dermatitis, lupus erythematosus, and graft-versus-host disease. All of these conditions share overlapping clinical and histological features, which is why they are included within the same spectrum.

This very overlap raises an important question: are we dealing with a unified spectrum or with distinct entities? On one hand, some authors argue that blaschkitis and lichen striatus are separate disorders, differing in age of onset, localization, and histopathological characteristics. On the other hand, an increasing number of studies support the concept of the BLAISE spectrum, precisely because of the existence of cases with overlapping features—such as the one described in our patient. This lack of consensus and the absence of universally accepted diagnostic criteria make BLAISE a "borderline" area within dermatology.

Conclusions

The clinical and histopathological findings support the diagnosis of BLAISE, an inflammatory cutaneous entity with intermediate features within the spectrum of blaschkoid dermatoses. Recognition of this condition contributes to a better delineation of linear dermatoses in adults and helps avoid diagnostic misinterpretations. Systematic reporting of similar cases is essential for clarifying diagnostic criteria and gaining a deeper understanding of this rare disorder.

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Conflict of interest
NONE DECLARED

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