Erosive Lesions in the Legs of an Elderly Woman

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History and Clinical Findings

An 81-year-old woman with a history of ischemic cardiopathy and chronic venous insufficiency presented with progressive ulcerative lesions on her lower limbs, along with oedema and severe leg pain. Otherwise, her general state was good, and she reported no other symptoms. No new medication had been recently started. Previous treatment with multiple antibiotics and occlusive cures had provided little relief.

On physical examination, the patient exhibited extensive erosive and ulcerative plaques with prominent granulation tissue and yellowish crusts involving both legs [Figure 1].

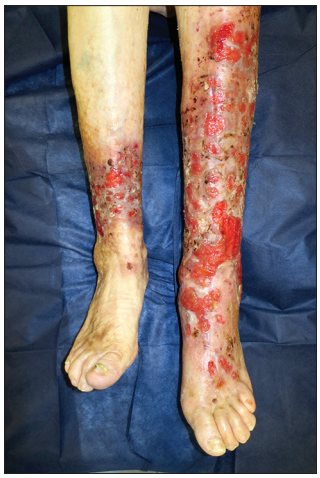

Figure 1: Clinical image of erosive hyperkeratotic plaques with prominent hypergranulation tissue and yellowish crusts

Histopathological and Microbiology Findings

Histologic examination yielded a mixed inflammatory infiltrate composed of lymphocytes and granulocytes that was consistent with granulation tissue, with no signs of tumoral proliferation [Figure 2]. No microorganisms could be seen with Gram, periodic acid–Schiff, methenamine silver and Ziehl-Neelsen stains. Tissue cultures for bacteria, fungus and mycobacteria were negative as well.

Diagnosis

Erosive pustular dermatosis of the leg.

Therapy and Clinical Course

Topical therapy with betamethasone dipropionate and gentamycin was started, along with a zinc oxide drying lotion and postural hygiene measures. Venous compression stockings were progressively introduced. After treatment initiation, the patient evolved favourably, with *Restitutio ad integrum* of the lesions after 6 months [Figure 3]. Prophylactic therapy with topical hyperoxygenated fatty acids was subsequently initiated. The patient has maintained stable with no relapses after 3 months of follow-up.

Discussion

Erosive pustular dermatosis of the leg (EPDL) is an unusual chronic inflammatory entity among amicrobial pustuloses, which is characterised by the appearance of sterile pustules, hyperkeratosis, and erosive plaques involving the legs.[1] Firstly described by Lanigan and Cotterill in 1987,[2] it is considered an analogue to erosive pustular dermatosis of the scalp (EPDS) because of their clinical and histological similarities, as well as their potential response to topical corticosteroids. However, EPDL appears to be unfamiliar among the medical community and is considered an underreported condition.[3]

EPDL typically appears in elderly patients, mostly female, and is usually related to a long-term history

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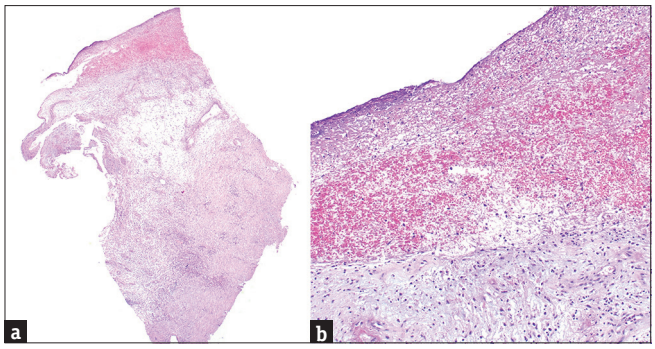

Figure 2: Histologic image of hematoxylin and eosin stain, 40x view (a) and 100x view (b), showing ulceration of the epidermis and granulation tissue with lymphocytes and granulocytes

of chronic venous insufficiency and skin atrophy.[4] Clinically, the lesions present as nonfollicular pustules that rapidly evolve to erosions and yellowish crusts on one or both legs, particularly on the middle third of the anterior aspect of the leg.[4] However, pustules are not always present, which complicates the recognition of EPDL. The course of EPDL is chronic and recurrent, and commonly refractory to a variety of medical treatments.[5]

The aetiology of EPDL is uncertain; alterations in the neutrophil chemotaxis and deficient wound healing because of chronic venous insufficiency may be involved.[1,4] Several triggering events have been proposed, such as accidental trauma, burns, prior surgery, zinc deficiency and actinic damage.[5]

The diagnosis of EPDL is mainly clinical and based on evolution, corticosteroid response, and exclusion of other clinically similar entities.[1,4,5] Histology is nonspecific, presenting with hyperkeratosis, parakeratosis, skin atrophy and erosions with a mixed inflammatory infiltrate that may include plasma cells.[5] Nevertheless, cutaneous biopsy and laboratory tests may be required for the exclusion of differential diagnoses, including bacterial or fungal infection, squamous cell carcinoma, pyoderma gangrenosum, pretibial bullous pemphigoid and other amicrobial pustular diseases such as pustular psoriasis or subcorneal pustular dermatosis.[1,4,5] Although bacteria or fungi may be isolated from the lesions, this is considered a secondary colonisation rather than a primary infection, since EPDL is unresponsive to antimicrobial therapy.[5]

High-potency topical corticosteroids are the treatment of choice and usually show rapid responses.[5] However, the high frequency of recurrence and the lack of evidence to support clear guidelines make this entity therapeutically challenging. Topical tacrolimus and topical zinc oxide have been suggested as long-term corticoid-sparing agents and for proactive therapy to prevent EPDL recurrence.[5-7] Other treatments, including topical dapsone, photodynamic therapy, systemic retinoids, cyclosporine, doxycycline, or colchicine have also shown efficacy in some cases.[4,5]

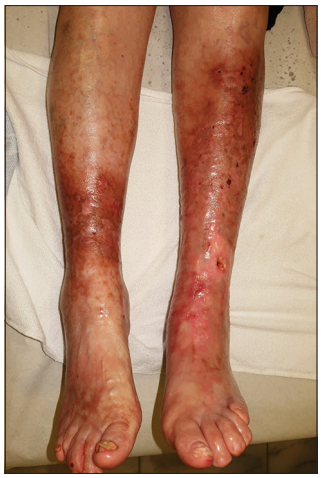

Figure 3: Clinical image with complete wound healing after 6 months of treatment

Learning Points

1. EPDL is a chronic inflammatory entity characterised by sterile pustules, hyperkeratosis, and erosive plaques involving the legs.
2. EPDL typically appears in elderly patients and is usually related to chronic venous insufficiency.
3. The diagnosis is mainly clinical and based on the chronic and recurrent course, the response to corticosteroid therapy, and the exclusion of other entities.
4. Differential diagnoses include bacterial or fungal infection, squamous cell carcinoma, pyoderma gangrenosum, pretibial bullous pemphigoid and other amicrobial pustular diseases.
5. High-potency topical corticosteroids are the treatment of choice.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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