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## Perforating Lichen striatus

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A case of lichen striatus with transepidermal elimination of clusters of necrotic keratinocytes is reported. On the basis of the morphologic findings, we suggest that transepidermal elimination may be a mechanism of healing in some cutaneous lichenoid eruptions. (Received July 3, 1987.)

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Lichen striatus (LS) is a fairly common dermatosis of childhood, manifested by an asymptomatic unilateral eruption of erythematous, scaly papules 1 to 3 mm in diameter, in a linear arrangement, usually covering one-third or more of an extremity. Histopathologically LS shows a chronic perivascular inflammatory infiltrate, papillary edema of varying intensity and a patchy subepidermal lymphocytic infiltrate (1, 2). Epidermal changes (exocytosis, spongiosis and parakeratosis) are considered to be a secondary event (3). Dyskeratotic keratinocytes, that represent individual epidermal cell necrosis, have been reported in over 50% of cases (4).

We report a case of LS of the upper extremity in which the proximally-located papules resolved spontaneously. Histologically, the resolving lesions showed transepidermal elimination of clusters of necrotic keratinocytes. The above findings suggest that transepidermal elimination may occasionally represent a healing mechanism of lichenoid reactions.

## CASE REPORT

An otherwise healthy 9-year-old girl was seen for evaluation of an asymptomatic linear dermatosis on the left upper extremity. The cutaneous lesions had appeared on the left anterior aspect of the chest 9 months earlier. The dermatosis slowly progressed to involve the upper third of the left arm, while the initial thoracic lesions regressed, leaving hypopigmented macules.

Physical examination revealed a linear, erythematous eruption consisting of numerous white-yellowish scaly papules, 1 to 2 mm in diameter, that extended in a linear fashion over the inner aspect of the left arm. A 4 mm punch-biopsy was performed. Histopathological examination revealed a superficial and mid-dermal lymphocytic infiltrate that was rather diffuse in the papillary dermis. These changes were interpreted as consistent with LS. By serial sectioning, an adjacent papule showed a large cluster of apoptotic keratinocytes and lymphocytes, migrating in the epidermis, being eliminated superficially by epidermal perforation (Fig. 1, 2).

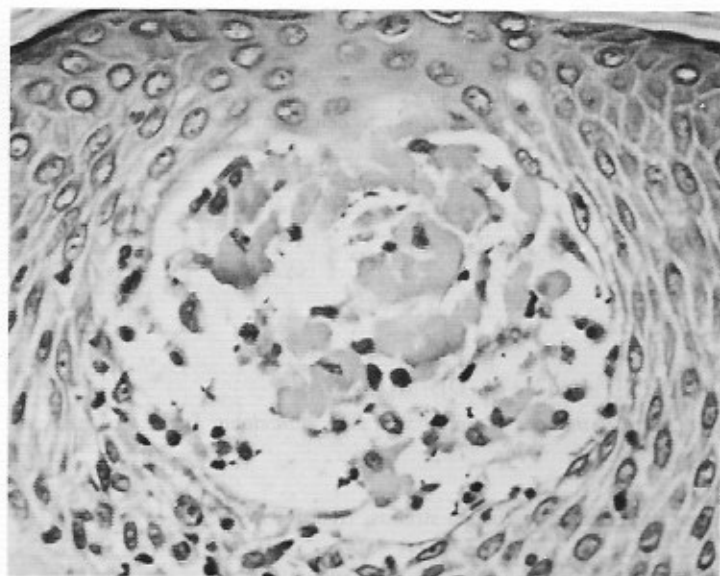


Fig. 1. Cluster of necrotic keratinocytes and lymphocytes migrating in the epidermis. H&E,  $\times 300$ .

## COMMENT

The phenomenon of transepidermal elimination is the main histopathologic feature in a group of disorders (perforating diseases) (5), but it may also be observed as a secondary event in various cutaneous conditions (6), including granulomatous diseases (granuloma annulare, necrobiosis lipidica, rheumatoid nodules, sarcoidosis), infectious processes (schistosomiasis, chromoblastomycosis), dermatosis associated with calcification (pseudoxanthoma elasticum, calcinosis cutis), pigmented diseases (melanocytic nevi, malignant melanoma), mucinoses, etc.

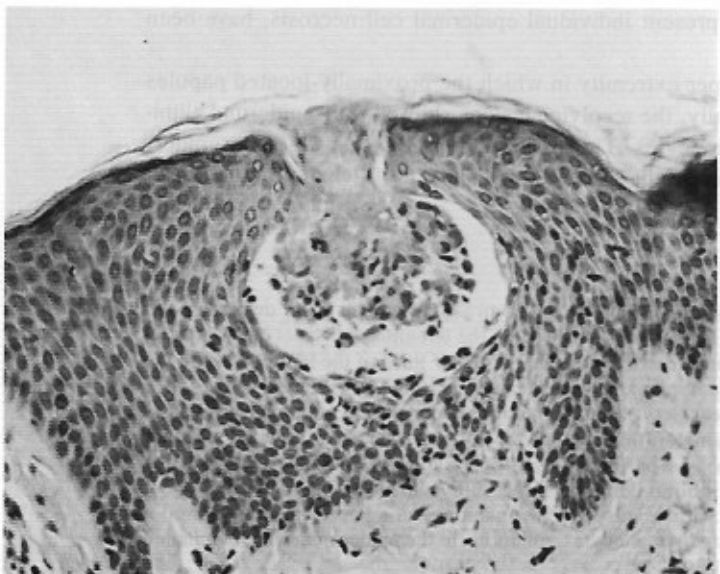


Fig. 2. Focus of transepidermal elimination of the material shown in Fig. 1. H&E,  $\times 150$ .

As far as lichenoid tissue reactions are concerned, the phenomenon of transepidermal elimination has only occasionally been reported. In 1981, Bardach (7) published a case of perforating lichen nitidus in a 8-year-old boy. Hanau & Sengel (8) described the first case of perforating lichen planus in 1984. In both reports the extruded material seemed to be formed by hyaline bodies, as in our case.

The clinicopathologic findings in the present case suggest that clusters of necrotic keratinocytes are pushed up during the epidermal remodelling, following the acute phase of lichenoid reaction, until they are eliminated. The extrusion of necrotic material may be a mechanism of healing of lichenoid eruptions. In view of this report we believe that LS should be added to the list of dermatoses in which transepidermal elimination has been demonstrated.

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## Polymorphous Light Eruption: Eliciting and Inhibiting Wavelengths

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Przybilla B, Galosi A, Heppeler M, Ruzicka T, Ring J. Polymorphous light eruption: Eliciting and inhibiting wavelengths. *Acta Derm Venereol (Stockh)* 1988; 68: 173-176.

In 38 patients with polymorphous light eruption (PLE) photoprovocation tests were performed by applying 100 J/cm<sup>2</sup> of UV-A to the extensor side of the upper arm on three consecutive days. Test sites were divided into four areas by covering the patients' skin with Schott glass filters WG 320, WG 335, WG 360, and GG 385 (or GG 395). In 17 patients typical skin lesions could be provoked in at least one test field. 10 patients reacted either at all test sites or at shorter wavelengths (simultaneously higher doses) only. In the remaining 7 patients test reactions did not occur underneath filters with lower cut-off points, whereas skin lesions were induced by radiation deprived of the shorter wavelengths passing through these filters. This observation suggests an inhibitory effect of shorter wavelengths in these cases. (Received June 25, 1987.)

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Polymorphous light eruption (PLE) is a common skin disease affecting up to 10% of the population (1). Characteristically, skin lesions develop after intensive irradiation in skin