

Reversal Reaction—Management with Topical Corticosteroids

TO THE EDITOR:

Mild reversal reaction in borderline Hansen's disease is often treated with analgesics and bed rest, and may require systemic steroids if the reactional state persists (³). Six borderline tuberculoid (BT) leprosy patients on dapsone monotherapy with features of mild neuritis were studied. Two similar lesions were selected from each patient and designated as A and B. Lesion A was treated with fluocinolone acetonide (0.025%) under occlusive dressing for 15 days. The lesions were assessed clinically each day, and both lesions were subjected to biopsy after 15 days. The biopsy specimens, stained by hematoxylin and eosin (H&E), were studied by the single-blind method. Twenty-four hours after application of topical steroids,

tenderness was significantly reduced over the treated lesions. Erythema and edema were less over the treated lesions compared to control lesions in three cases on day 4 and all six cases by day 6. Microscopic examination revealed less dermal edema, more compact granulomas, and less lymphatic dilatation over the treated lesions compared to controls (Figs. 1A, 1B, 2A, 2B). There was no significant alteration in the number or relative proportions of individual cells constituting the granulomas. Thus it was observed that topical steroids under occlusion rapidly controlled cutaneous manifestations of reversal reaction. Occlusion results in a 100-fold increase in the absorption of topical steroids (¹).

The granulomas induced by *Mycobacte-*



FIG. 1A. Reversal reaction following treatment showing relatively less edema, lymphatic dilatation, and compact granulomas (H&E $\times 10$).

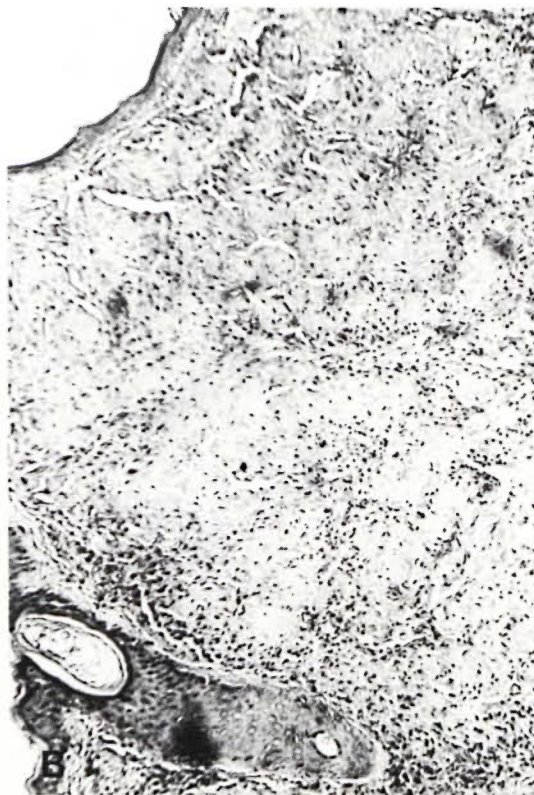


FIG. 1B. Untreated reversal reaction showing marked edema, lymphatic dilatation, and less compact granulomas (H&E $\times 10$).

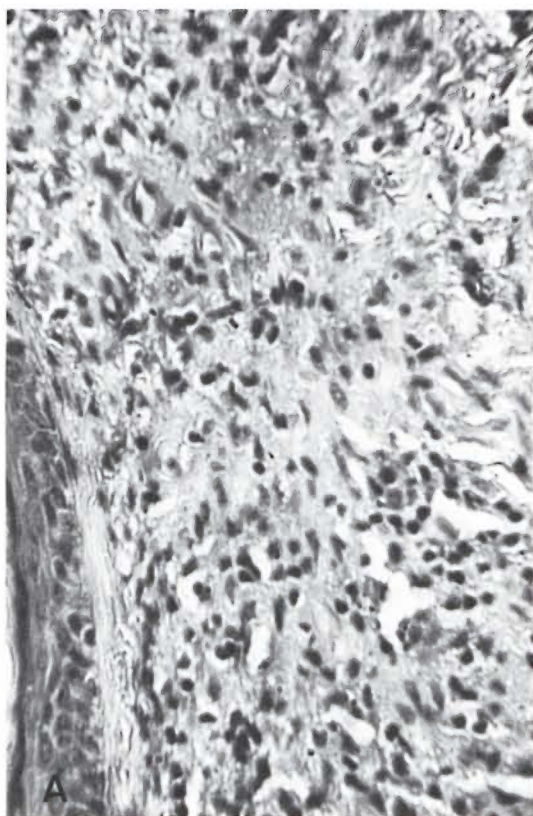


FIG. 2A. Larger magnification of Fig. 1A (H&E ×40).

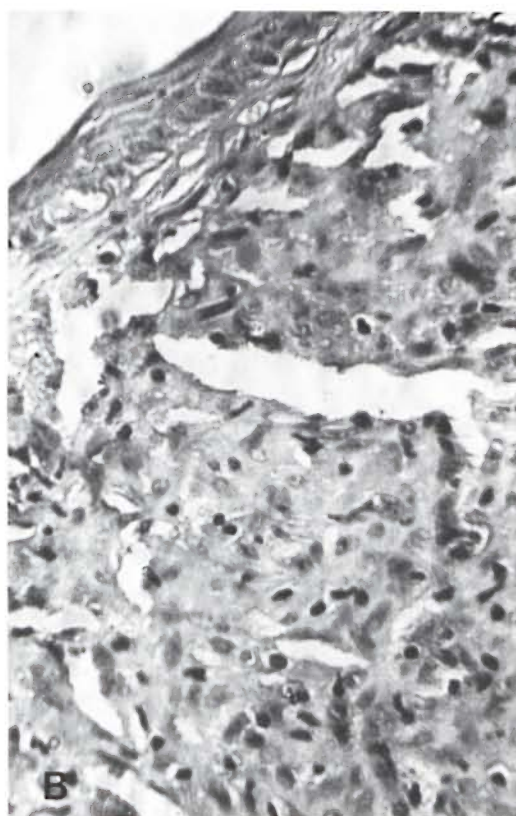


FIG. 2B. Larger magnification of Fig. 1B (H&E ×40).

rium tuberculosis (similar to granulomas induced by *M. leprae*) in sensitized animals contain short-lived replicating, steroid-sensitive T cells (²). We feel that the use of topical steroids in selected cases under strict supervision is effective in the treatment of reversal reactions. Our conclusion is based on significant clinical and histopathological improvement assessed by degree of edema, dilated lymphatics, and compactness of the granuloma (⁴). However, hospitalization, cost of topical steroids, and patient compliance may prove deterring factors under certain circumstances.

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