

## HERPES ASSOCIATED ERYTHEMA MULTIFORME ANNULARIS CONCENTRICUM

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A young man had large, concentric plaques over the back and extensors of forearms for eight weeks. Past history suggested recurrent herpes labialis. Serum anti HSV-1 IgG titre was raised to 32 micrograms/l and histopathology of an active lesion suggested erythema multiforme. Symptomatic treatment and oral zinc therapy subsided EM lesions but concentric depigmentation developed after healing.

**Key Words :** Herpes simplex, Erythema multiforme

### Introduction

Herpes simplex virus (HSV) infection is a common cause of recurrent erythema multiforme (EM).<sup>1</sup> Genetic factors, stress and radiation may be associated with herpes associated erythema multiforme (HAEM).<sup>2</sup> EM usually presents as crops of erythematous papules evolving into "target" or vesiculobullous lesions over acral sites, trunk and mucous membranes. Occasionally bullae, papules and toxic epidermal necrolysis like lesions may be encountered. Spontaneous healing is usual which is often followed by hyperpigmentation or rarely depigmentation.<sup>3</sup> We report a case of HAEM with atypically big plaques showing numerous concentric rings, photosensitivity and post inflammatory depigmentation.

### Case Report

A 21-year-old man presented with the history of recurrent, itchy, annular eruptions with blistering over forearms and back, for past 8 weeks. Each episode was preceded by body ache and vesicular eruptions over both lips, suggesting herpes labialis.

Cutaneous examination revealed multiple erythematous plaques of more than 5 cm size, showing numerous concentric rings over the posterior aspect of forearms and back. Peripheral vesiculation was evident in the lesions over sun exposed areas. The healed lesions showed multiple, depigmented, concentric rings (Fig. 1) besides guttate

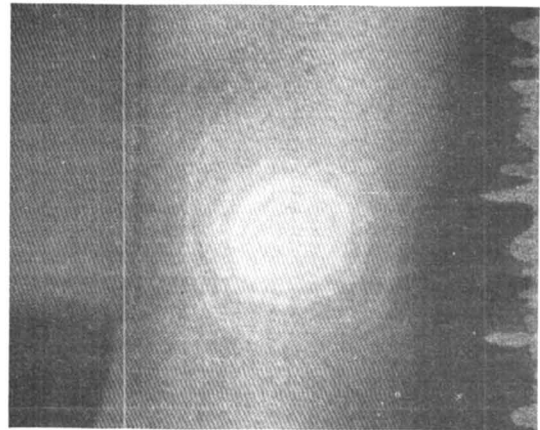


Fig. 1. Multiple depigmented concentric rings at the site of healed lesion.

depigmentation over lips. General and systemic examination was normal. Routine investigations, skin scraping for KOH mount/fungal culture, VDRL test and ELISA test for HIV were negative. Serum anti-HSV-1 IgG titre was significantly raised (32 micrograms/l). Histopathology of an active skin lesion demonstrated hydropic degeneration of basal cells, sub-epidermal

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bullae and lympho-histiocytic infiltrate around dermal blood vessels. He received symptomatic treatment and oral zinc sulphate (220 mg/day) for 6 months which resulted in complete remission of EM without recurrence during the follow up period.

## Discussion

Though target or 'iris' lesions are the hallmark of EM,<sup>1</sup> big plaques of enormous size with numerous concentric rings, photosensitivity and post-inflammatory depigmentation seen in this patient of HAEM seem to be unusual. The pathogenesis of concentric annular lesions in recurrent HAEM is still uncertain. It may be because of genetic predisposition, intermittent activation of HSV infection by endogenous or exogenous factors leading to the deposition of immune complexes in dermal blood vessels.<sup>4,5</sup> Thereafter histamine release and its degradation by N-methyl transferase within the vicinity of the characteristic cone-shaped cutaneous vasculature also contribute in the pathogenesis of EM lesions. The cause of depigmentation following EM is still unknown but it may be because of direct melanocyte toxic effect of histamine or

atomic oxygen derived from hydroxyl and superoxide ions generated within the inflammatory cells.<sup>3,6</sup> Oral zinc may control the recurrence of EM and depigmentation through immunomodulation.<sup>6</sup> The term herpes associated erythema multiforme annularis concentricum (HAEMAC) can better explain aetiology and morphology of such lesions.

## References

1. Huff JC, Weston WL, Tonnesen MG. Erythema multiforme. A critical review of characteristics, diagnostic criteria and causes. *J Am Acad Dermatol* 1983; 8: 763-75.
  2. Kampgen E, Burg G, Wank R. Association of herpes simplex virus induced erythema multiforme with HLA-DQ W3. *Arch Dermatol* 1988; 124: 1372-3.
  3. Bedi TR. Depigmenting erythema multiforme-A clinical and histopathological study. *Ind J Dermatol Venereol Leprol* 1980; 46: 117-20.
  4. Imamura S, Horo T, Yanase K, et al. Erythema multiforme : pathomechanism of papular erythema and target lesion. *J Dermatol* 1992; 19: 524-33.
  5. Kazmierowski JA, Peizner DS, Wuepper KD. Herpes simplex antigen in immune complexes of patients with erythema multiforme. *JAMA* 1982; 254:7-50.
  6. Mathur NK, Bumb RA, Agarwal US. Oral zinc in recurrent erythema multiforme with depigmentation. *Ind J Dermatol Venereol Leprol* 1984; 50: 10-2.
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