Erythema Multiforme: a Clinico-Dermoscopic-Histopathological Correlation of Evolving Targetoid Lesions

Shreya Deoghare[1], Devayani Pol[1]

1 Department of Dermatology, Venerology and Leprosy, Patil Medical College and Hospital & Research Centre, Pune, India

Corresponding author: Shreya Deoghare, Department of Dermatology, Venerology and Leprosy, Dr. D. Y. Patil Medical College and Hospital & Research Centre, Sant Tukaram Nagar, Pimpri, Pune, India – 411018 Ph No: +91- 9325307311, E-mail: shreyadeoghare@yahoo.co.in

Case presentation

A 32-year-old male was diagnosed with recurrent erythema multiforme secondary to orolabial herpes. Dermoscopy (polarised light, Dermlite DL4) of evolving targetoid lesions is shown in Figure 1.

Teaching point

The central ruptured vesicle is seen as a central circular yellowish-pink area on dermoscopy and correlates with subepidermal split on histopathology. The black pigmentation is seen as brown-black colored dots and clods on dermoscopy and correlates with necrotic keratinocytes along dermo-epidermal junction on histopathology. A well-defined urticaria-like erythematous plaque is seen on dermoscopy as structureless homogenous pink-white area obliterating the normal pigment network and correlates with papillary oedema on histopathology.

We discovered that, in the absence of treatment, the size of individual lesions increases as the time since the onset of the lesion increases. This is associated with dermoscopic feature of increase in the number and density of black-brown dots and clods, that we have termed as "splash of ink" appearance in fully evolved targetoid lesions, which could indicate ongoing damage to basal keratinocytes and melanocytes and thus disease activity. Dermoscopy can be used to determine the relative age of targetoid lesions. The size of the targetoid
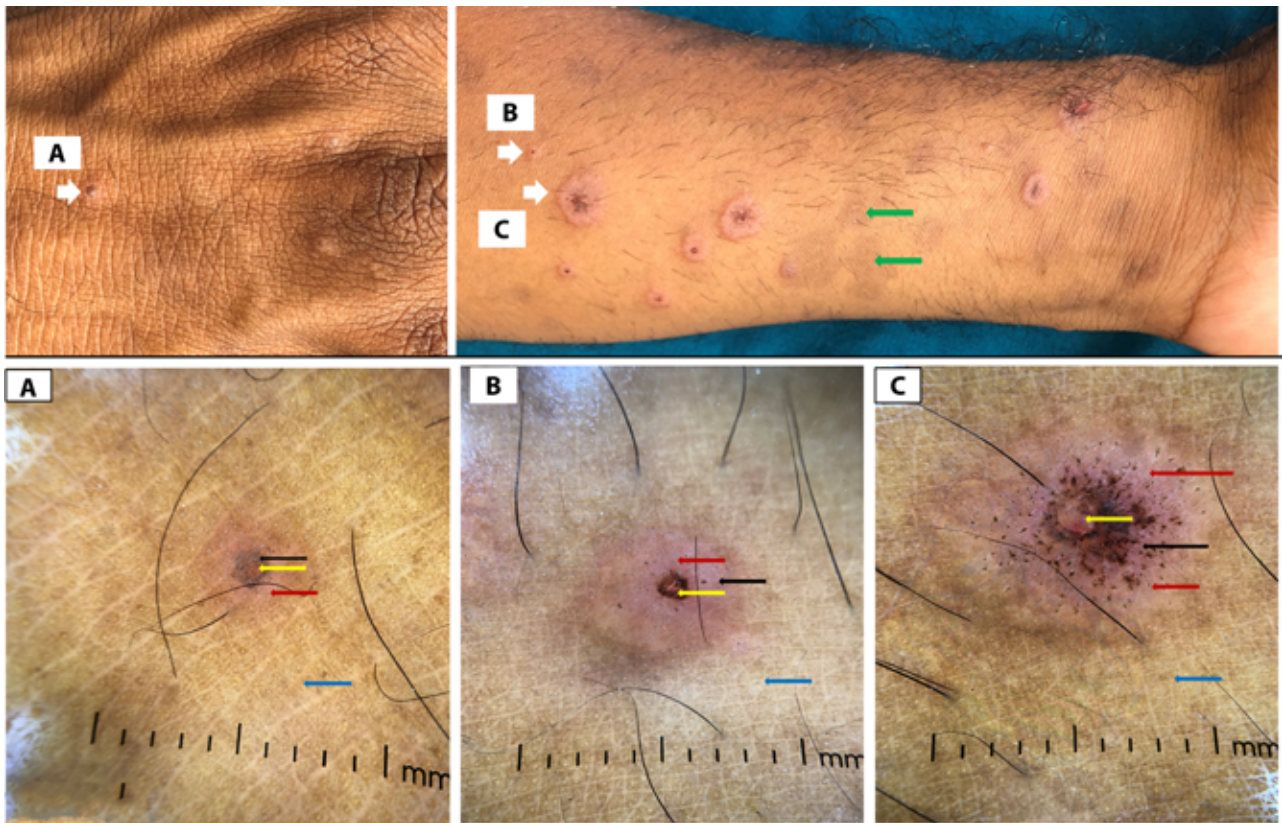
Figure 1. (A) A 32-year-old male presented with erythema multiforme presented with multiple targetoid lesions (white arrow) and post-inflammatory hyperpigmented patches (green arrow). Dermoscopy (polarised light, Dermlite DL4) of targetoid lesions of erythema multiforme: newest lesion - onset one day back (B), onset two days back (C) and oldest lesion - onset three days back (D). Yellow arrow: Central circular yellowish-pink area, black arrow: Brown-black colored dots and clods clustered regularly at center with irregular distribution at periphery, red arrow: Structureless homogenous pink-white area obliterating normal pigment network, blue arrow: pigmented reticular lines (pigment network) of normal skin.

lesion and the size of "splash of ink" appearance indicates the evolution of the individual lesion. Targetoid lesions with the earliest onset will have largest size and "splash of ink" appearance and vice-versa. We believe that regardless of the cause of EM, its morphological appearance will be consistent in all cases, and treatment will result in fading of "splash of ink" appearance. However, further studies are needed to validate this.

References

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