

## Reticulate eruption on thighs

A 45-year-old lady presented with mottled pigmentation on the anteromedial aspect of both thighs and right leg since past three months. She had a habit of keeping a hot water bottle on her thighs and legs twice daily for 40–50 minutes for relief of polyarthralgia. At the onset, there would be only transient erythema with itching, but of late she noticed a reticulate pigmentation on the affected areas. Based on the history, the eruption was diagnosed as erythema ab igne (EAI) and we performed a provocation test with a hot water bottle for ten minutes. Interestingly she developed erythema with pruritus corresponding to the reticulate eruption on both her thighs and her right leg; thus, confirming our clinical diagnosis [Figure 1].

EAI is a reticular, telangiectatic, pigmented dermatoses occurring after long-term exposure to infrared radiation that is insufficient to produce a burn. It is commonly encountered in places with a cold climate where people have to resort to various heating devices to protect themselves from cold. Historically, EAI was commonly seen on the shins of those who worked in front of open fires or coal stoves; however, with the widespread availability of central climate control in most buildings the incidence has declined rapidly. EAI often begins as mild localized erythema, but prolonged and repeated exposure to moderate heat may result in reticulate



**Figure 1:** Reticulate pattern of erythema on the thighs following provocation with a hot water bottle

erythema, hyperpigmentation, telangiectasia, scaling and atrophy; subepidermal bullae has also been reported. EAI may appear on the exposed skin of individuals who sit too close to fireplaces, space heaters, steam radiators, and wood burning stoves. It has also been reported as a consequence of frequent hot bathing. Furniture with an inbuilt heating unit, car heaters, heating blankets, hot popcorn kernels for relief of polyarthralgia, sauna belt for reduction of obesity and cellulite and laptop computers are additional new sources of EAI which have been cited in the literature.

Histologically, EAI is similar to actinic keratosis and therefore has been referred to as “thermal keratosis”. The similarities between actinic and thermal keratosis suggest that heat induces epithelial changes as a result of clonal mutation akin to ultra violet (UV) light. The importance of EAI is not only from the point of skin discoloration but also from its potential to transform to malignant tumors. Rare instances of squamous cell carcinoma and Merkel cell carcinoma arising in EAI lesions have reported. Avoidance of heat source is of paramount importance in its management. Concurrent and short course of topical retinoids with or without topical steroids, as well as bleaching agents may help fade the color change and skin thickness.

To conclude, EAI should be considered in any patient presenting with a reticulate pigmentation on the lower limbs especially in the setting of polyarthralgia. Practitioners must be aware of the changing causes of EAI so that an appropriate history may be elicited.

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